# **EPIC® Connectors- Rectangular,** Circular and Pin & Sleeve



## **EPIC®** Connectors- Rectangular, Circular and Pin & Sleeve

| EPIC® Rectangular Connectors   |   |     |  |  |  |  |  |
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# **EPIC® Connectors- Rectangular,** Circular and Pin & Sleeve

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#### Rectangular Industrial Connectors: Technical Data Overview

Lapp offers 11 series of rectangular connectors. The rectangular overview section will help determine the series which best suits your application. An explanation of rectangular connectors is in the Technical Data section.

Once the appropriate series has been determined turn to the referenced section in the catalog. The EPIC® Rectangular Series is set up in the following structure.

- The inserts (plugs and receptacles) are shown by number of contacts. All available terminations are shown.
- · Please remember when choosing crimp terminated plugs & receptacles, the contacts have to be ordered separately. The appropriate contacts and tools immediately follow the plugs and receptacles.
- · Immediately following each group of plugs and receptacles are the housings (hoods and bases) which fit these connectors. The hoods and bases are grouped by number and position of levers to ensure compatibility. Metric parts and all diagrams are shown in the main HA & HBE Housing Sections.

#### EPIC® RECTANGULAR HOUSINGS

Specifications:

DIN 43652

Temperature Range: -40°C to +125°C Protection class:

NEMA 4, 4X; IP65

Material:

NEMA 4: HBE 6 - 48, HA 10 - 64: aluminum alloy, powder coated (grey), locking levers and bolts made of zinc plated steel. HA 3/4: Die cast zinc, powder coated or thermoplastic flame retardant

material rated UL 94 V-0 (Grey or Black Plastic).

NEMA 4X: HBE 6 - 48 EP, HA 10 - 64 EP: Environmentally Protected: aluminum alloy,

powder coated (black), locking levers and bolts made of stainless steel.

#### **EPIC® HBE SERIES**

#### STANDARD GREY (NEMA 4, IP 65)

#### **EP BLACK COATING (NEMA 4X) NPT**





PG





**METRIC** 

#### **EPIC® HA SERIES**

PG **DIE CAST ZINC** (NEMA 4, IP65)



**NPT PLASTIC** (NEMA 4, IP 65)



**METRIC DIE CAST ZINC** (NEMA 4, IP65)



STANDARD GREY (NEMA 4, IP 65)













<sup>\*\*</sup> Please note that all the rectangular plugs and receptacles either fit into a HBE or HA Series housing.

#### Rectangular Industrial Connectors: Technical Data Overview



#### EPIC® RECTANGULAR PLUGS & RECEPTACLES

#### **EPIC® HA**



# of Contacts: 3, 4, 10,16, 32, 48,

64 (+PE)

600V Rated Voltage: Rated Current: 10A (HA 3/4),

14A (HA 10 - 48)

**Termination** Screw Wire Size: AWG 20 - 14

(0.5 - 2.5 mm<sup>2</sup>)

#### **EPIC® HBE**



# of Contacts: 6, 10, 16, 24, 32, 48 (+PE)

Rated Voltage: 600V Rated Current: 16A

Termination: Screw, Crimp, Cage clamp Wire Size: AWG 20 - 14 (0.5 - 2.5 mm<sup>2</sup>)

AWG 20 - 12 (0.5 - 4 mm<sup>2</sup>)-Crimp

#### **EPIC® HD**

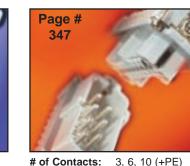


# of Contacts: 7, 8, 15, 25, 40, 50,

64, 80, 128 (+PE) Rated Voltage: 600V

**Rated Current:** 10A Termination: Crimp Wire Size: AWG 22 - 14 (0.14 - 2.5 mm<sup>2</sup>)

**EPIC® STA** 



**EPIC® HBVE** 

# of Contacts: 6, 14, 20, 40

Rated Voltage: 48V Rated Current: 10A

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Screw, Solder Termination: Wire Size: AWG 20 - 16

(0.5 - 1.5 mm<sup>2</sup>)

(+PE)

600V

16A

Screw

AWG 20 - 14

(0.5 - 2.5 mm<sup>2</sup>)

#### **EPIC® MC**



# of Contacts: 2 - 280 (+PE) Rated Voltage: 63 - 1000V Rated Current: 10 - 82A

Termination: Crimp/Coax/ Fiber Optic/Screw

Wire Size: AWG 28 - 6 (0.06 - 10 mm<sup>2</sup>)

#### **EPIC® HDD**



144, 216 (+PE)

Rated Voltage: 600V Rated Current: 8.5A Termination: Crimp Wire Size: AWG 22 - 14 (0.14 - 2.5 mm<sup>2</sup>)

#### **EPIC® HBS**

Rated Voltage:

**Rated Current:** 

Termination:

Wire Size:

# Page #

# of Contacts: 6, 12 (+PE) Rated Voltage: 600V Rated Current: 35A Termination: Screw Wire Size: AWG 20 - 10 (0.5 - 6.0 mm<sup>2</sup>)

#### **MIXED POWER**



4 Pwr, 4 Pwr & 2 # of Contacts: Sgl, 4 Pwr & 8 Sgl

Rated Voltage: 600V Rated Current: 16 - 80A Termination:

Wire Size: up to AWG 6 (Pwr) up to AWG 14 (Sgl)

#### **EPIC® HEE**



10, 18, 32, 46, # of Contacts: 64, 92 (+PE)

Rated Voltage: 600V **Rated Current:** 16A Termination: Crimp Wire Size:

AWG 20 - 12 (0.5 - 4.0 mm<sup>2</sup>)

#### **EPIC® HQ**



# of Contacts: 5 (+PE) Rated Voltage: 600V **Rated Current:** 16A Termination: Crimp Wire Size:

AWG 20 - 14 (0.5 - 2.5 mm<sup>2</sup>)

**® LAPP GROUP** 

## Rectangular Industrial Connectors: Quick Select Chart



|                     |                                       | НА           | HQ  | STA    | HBE         | HEE | HBS        | HBVE | HD        | HDD | MC                                    | MP         |
|---------------------|---------------------------------------|--------------|-----|--------|-------------|-----|------------|------|-----------|-----|---------------------------------------|------------|
|                     | 3                                     | X            |     |        |             |     |            | Х    |           |     |                                       |            |
|                     | 3<br>4<br>5<br>6<br>7                 | ^            | Х   |        |             |     |            |      |           |     |                                       |            |
|                     | 6                                     |              |     | Х      | Х           |     | X          | Х    | Y         |     |                                       |            |
|                     | 8                                     |              |     |        |             |     |            |      | X         |     |                                       |            |
|                     | 8<br>10<br>12                         | Х            |     |        | Х           | Х   | X          | Х    |           |     |                                       |            |
|                     | 14                                    |              |     | Х      |             |     | , A        |      |           |     |                                       |            |
|                     | 15<br>16                              | Х            |     |        | X           |     |            |      | Х         |     |                                       |            |
|                     | 18                                    | ^            |     |        | ^           | X   |            |      |           |     |                                       |            |
|                     | 20                                    |              |     | Х      | X           |     |            |      |           | X   |                                       |            |
| +                   | 24<br>25<br>32                        |              |     |        |             |     |            |      | Х         |     |                                       |            |
| # of Contacts + PE  | 32<br>40                              | Х            |     | X      | Х           | Х   |            |      | X         |     |                                       |            |
| ont                 | 42                                    |              |     | Α      |             |     |            |      | ^         | Х   |                                       |            |
| ၂                   | 46<br>48                              | Х            |     |        | X           | X   |            |      |           |     |                                       |            |
| #                   | 50                                    |              |     |        |             |     |            |      | X<br>X    |     |                                       |            |
|                     | 64<br>72                              | Χ            |     |        |             | Χ   |            |      | X         | Х   |                                       |            |
|                     | 80                                    |              |     |        |             |     |            |      | Х         | ,   |                                       |            |
|                     | 92<br>108                             |              |     |        |             | X   |            |      |           | Х   |                                       |            |
|                     | 128                                   |              |     |        |             |     |            |      | Х         |     |                                       |            |
|                     | 144<br>216                            |              |     |        |             |     |            |      |           | X   |                                       |            |
|                     | 216<br>2-280                          |              |     |        |             |     |            |      |           |     | Х                                     | , , ,      |
|                     | 4 Pwr/ 0 Signal<br>4 Pwr/ Signal      |              |     |        |             |     |            |      |           |     |                                       | X          |
|                     | 4 Pwr/ Signal<br>4 Pwr/ 8 Signal      |              |     |        |             |     |            |      |           |     |                                       | X<br>X     |
| e ed                | 48V                                   |              |     | Х      |             |     |            |      |           |     |                                       |            |
| Rat                 | 600V                                  | Х            | Х   |        | Х           | Х   | Х          | Х    | X         | Х   | X                                     |            |
| UL Rated<br>Voltage | 63-1000V<br>380- 600V                 |              |     |        |             |     |            |      |           |     | , , , , , , , , , , , , , , , , , , , | X          |
|                     | 7A                                    |              |     |        |             |     |            |      | X (TB)    |     |                                       |            |
| <b>5</b>            | 854                                   |              |     | .,     |             |     |            |      |           | Х   |                                       |            |
| UL Rated<br>Current | 10A<br>14 A                           | X (3/4)<br>X |     | Χ      |             |     |            |      | Х         |     |                                       |            |
| L'R                 | 16A                                   |              | Χ   |        | Х           | Χ   |            | Х    |           |     |                                       |            |
| > ~                 | 10A<br>14 A<br>16A<br>35A<br>10 - 82A |              |     |        |             |     | X          |      |           |     | Х                                     |            |
|                     | 16 - 80A                              |              |     |        |             |     |            |      |           |     |                                       | Х          |
| Termination<br>Type | Cage Clamp                            |              |     |        | Х           |     |            |      |           |     | Х                                     |            |
| nati                | Crimp                                 | V            | Х   | V      | X<br>X<br>X | Х   | X          | X    | Х         | Х   | X<br>X<br>X                           | X          |
| ابة ك               | Screw<br>Solder                       | Χ            |     | X<br>X |             |     | ^          | ^    |           |     | ^                                     | ^          |
| <u> </u>            | Terminal Block                        |              |     |        | Х           |     |            |      | Х         |     |                                       |            |
|                     | 20 - 16                               |              |     | Х      |             |     |            |      | X (TB)    |     |                                       |            |
| AW                  | 22 - 14<br>20 - 14                    | Х            | X   |        | Х           |     |            | X    | X (Crimp) | Х   |                                       |            |
| , e                 | up to 14                              | ,            | ^   |        |             |     |            | ^    |           |     |                                       | X (Signal) |
| Siz                 | 20 - 12<br>20 - 10                    |              |     |        | X (Crimp)   | Х   | X          |      |           |     |                                       |            |
| Wire Size (AWG)     | 30 - 6                                |              |     |        |             |     |            |      |           |     | Х                                     |            |
|                     | up to 6                               | 225          | 256 | 260    | 271         | 240 | 339        | 347  | 363       | 205 | 115                                   | X (Power)  |
|                     | Page #                                | 235          | 230 | 260    | 2/1         | 319 | <b>339</b> | 347  | 362       | 395 | 415                                   | 450        |

Rectangular Industrial Connectors: Quick Select Chart



#### TERMINATE YOUR OLFLEX® CABLE WITH THE RIGHT CONNECTOR

| Nire Gauge<br>AWG | # Conductors<br>w/ Ground | НА           | STA<br>10A     | HBE<br>16 A    | HEE<br>16A     | HBS<br>35 A    | HBVE<br>16A     | HD<br>10A    | HDD<br>8.5 A   | HQ<br>16 A | MC                   | MP     |
|-------------------|---------------------------|--------------|----------------|----------------|----------------|----------------|-----------------|--------------|----------------|------------|----------------------|--------|
| 6                 | 3                         |              |                |                |                |                |                 |              |                |            | MC2                  | Power  |
|                   | 4                         |              |                |                |                |                |                 |              |                |            | MC2                  | Power  |
|                   | 5                         |              |                |                |                |                |                 |              |                |            |                      | Power  |
| 8                 | 3                         |              |                |                |                |                |                 |              |                |            | MC2/MC3              | Power  |
|                   | 4                         |              |                |                |                |                |                 |              |                |            | MC2/MC3              | Power  |
|                   | 5                         |              |                |                |                |                |                 |              |                |            | MC3 x 2              | Power  |
| 10                | 3                         |              |                |                |                | HBS6           |                 |              |                |            | MC2/MC3              | Power  |
|                   | 4                         |              |                |                |                | HBS6           |                 |              |                |            | MC2/MC3              | Power  |
|                   | 5<br>7                    |              |                |                |                | HBS6<br>HBS6   |                 |              |                |            | MC3 x 2<br>MC3 x 2   | Power  |
| 12                | 2                         |              |                | HBE6           |                | HBS6           |                 |              |                |            | MC3                  |        |
| 12                | 3                         |              |                | HBE6           |                | HBS6           |                 |              |                |            | MC3                  |        |
|                   | 4                         |              |                | HBE6           |                | HBS6           |                 |              |                |            | MC3/MC4/MC5          |        |
|                   | 5                         |              |                | HBE6           |                | HBS6           |                 |              |                |            | MC4/MC5              |        |
|                   | 7                         |              |                | HBE6           |                | HBS6           |                 |              |                |            | MC3 x 2              |        |
| 14                | 2                         | HA3          |                | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC3                  | Signal |
|                   | 3                         | HA3          |                | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC3                  | Signal |
|                   | 4                         | HA3          |                | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC3/MC4/MC5          | Signal |
|                   | 5                         | HA4          |                | HBE6           |                | HBS6           | HBVE6           | HD7          |                | HQ5        | MC4/MC5              | Signal |
|                   | 7                         | HA10         |                | HBE6           | HEE10          | HBS6           | HBVE6           | HD7          |                |            | MC10                 | Signal |
|                   | 9                         | HA10         |                | HBE10          | HEE10          | HBS12          | HBVE10          | HD8          |                |            | MC10                 | Signal |
|                   | 12                        | HA16         |                | HBE16          | HEE18          | HBS12          |                 | HD15         |                |            | MC10 x 2             |        |
|                   | 18                        | HA32         |                | HBE24          | HEE18          |                |                 | HD24         | HDD24          |            | MC10 x 2             |        |
|                   | 25                        | HA32         |                | HBE24          | HEE32          |                |                 | HD24         | HDD24          |            | MC10 x 3             |        |
| 16                | 2                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC3                  | Signal |
|                   | 3                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC3                  | Signal |
|                   | 4                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC3/MC4/MC5          | Signal |
|                   | 5                         | HA4          | STA6           | HBE6           |                | HBS6           | HBVE6           | HD7          |                | HQ5        | MC4/MC5              | Signal |
|                   | 7                         | HA10         | STA6           | HBE6           | HEE10          | HBS6           | HBVE6           | HD7          |                |            | MC10                 | Signal |
|                   | 9                         | HA10         | STA14          | HBE10          | HEE10          | HBS12          | HBVE10          | HD8          |                |            | MC10                 | Signal |
|                   | 12                        | HA16         | STA14          | HBE16          | HEE18          | HBS12          |                 | HD15         | LIDDO4         |            | MC10 x 2             |        |
|                   | 18                        | HA32         | STA20          | HBE24          | HEE18          |                |                 | HD24         | HDD24          |            | MC10 x 2             |        |
|                   | 25<br>34                  | HA32<br>HA48 | STA40          | HBE24<br>HBE48 | HEE32          |                |                 | HD24         | HDD24          |            | MC10 x 3             |        |
|                   | 41                        | HA48         | STA40<br>STA40 | HBE48          | HEE46<br>HEE46 |                |                 | HD40<br>HD40 | HDD42<br>HDD42 |            | MC10 x 4<br>MC10 x 4 |        |
|                   | 50                        | HA64         | 31A40          | пос40          | HEE64          |                |                 | HD50         | HDD72          |            | MC10 x 4             |        |
|                   | 60                        | HA64         |                |                | HEE64          |                |                 | HD64         | HDD72          |            | MC10 x 6             |        |
|                   | 61                        | HA64         |                |                | HEE64          |                |                 | HD64         | HDD72          |            | MC10 x 6             |        |
| 18                | 2                         | HA3          | STA6           | HBE6           | HELOT          | HBS6           | HBVE3           | HD7          | 110012         | HQ5        | MC4                  | Signal |
| .0                | 3                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC4                  | Signal |
|                   | 4                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC4/MC5              | Signal |
|                   | 5                         | HA4          | STA6           | HBE6           |                | HBS6           | HBVE6           | HD7          |                | HQ5        | MC4/MC5              | Signal |
|                   | 7                         | HA10         | STA6           | HBE6           | HEE10          | HBS6           | HBVE6           | HD7          |                |            | MC10                 | Signal |
|                   | 9                         | HA10         | STA14          | HBE10          | HEE10          | HBS12          | HBVE10          | HD8          |                |            | MC10                 | Signal |
|                   | 12                        | HA16         | STA14          | HBE16          | HEE18          | HBS12          |                 | HD15         |                |            | MC10 x 2             |        |
|                   | 18                        | HA32         | STA20          | HBE24          | HEE18          |                |                 | HD24         | HDD24          |            | MC10 x 2             |        |
|                   | 25                        | HA32         | STA40          | HBE24          | HEE32          |                |                 | HD24         | HDD24          |            | MC10 x 3             |        |
|                   | 34                        | HA48         | STA40          | HBE48          | HEE46          |                |                 | HD40         | HDD42          |            | MC10 x 4             |        |
|                   | 41                        | HA48         | STA40          | HBE48          | HEE46          |                |                 | HD40         | HDD42          |            | MC10 x 4             |        |
|                   | 50                        | HA64         |                |                | HEE64          |                |                 | HD50         | HDD72          |            | MC10 x 5             |        |
|                   | 61                        | HA64         |                |                | HEE64          |                |                 | HD64         | HDD72          |            | MC10 x 6             | L      |
| 20                | 2                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC4                  | Signal |
|                   | 3                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC4                  | Signal |
|                   | 4                         | HA3          | STA6           | HBE6           |                | HBS6           | HBVE3           | HD7          |                | HQ5        | MC4/MC5              | Signal |
|                   | 5                         | HA4          | STA6           | HBE6           | UEF40          | HBS6           | HBVE6           | HD7          |                | HQ5        | MC4/MC5              | Signal |
|                   | 7<br>9                    | HA10         | STA6           | HBE6           | HEE10          | HBS6           | HBVE6<br>HBVE10 | HD7          |                |            | MC10                 | Signal |
|                   |                           | HA10<br>HA10 | STA14<br>STA14 | HBE10          | HEE10          | HBS12          |                 | HD8          |                |            | MC10                 | Signal |
|                   | 10<br>12                  | HA16         | STA14          | HBE10<br>HBE16 | HEE10<br>HEE18 | HBS12<br>HBS12 | HBVE10          | HD15<br>HD15 |                |            | MC10<br>MC20         |        |
|                   | 12<br>18                  | HA32         | STA14          | HBE24          | HEE18          | HESTZ          |                 | HD24         | HDD24          |            | MC20                 |        |
|                   | 24                        | HA32         | STA40          | HBE24          | HEE32          |                |                 | HD24         | HDD24          |            | MC20 x 2             |        |
|                   | 24<br>25                  | HA32         | STA40          | HBE24          | HEE32          |                |                 | HD24         | HDD24          |            | MC20 x 2             |        |
|                   | 34                        | HA48         | STA40          | HBE48          | HEE46          |                |                 | HD40         | HDD42          |            | MC20 x 2             |        |

Please note that the amperage for all series listed in black can be found at the top of the column.

4 Amps, 10 Amps, 14 Amps, 16 Amps, 20 Amps, 25 Amps, 50 Amps, 80 Amps, 83 Amps

Notes: 1) The above chart shows the relationship between cable wire gauge and conductor count with connector contact count. Final connector selection and application suitability will depend on voltage and current limits of the cable and connector

<sup>2)</sup> The MC Series modular connector offers a wide variety of mix-and-match combinations. The combinations shown in the chart are offered as suggestions based on providing a solution in the smallest housing size.



Rectangular Industrial Connectors: Quick Select Chart



#### TERMINATE YOUR OLFLEX® CABLE WITH THE RIGHT CONNECTOR

| Wire Gauge<br>AWG | # Conductors w/ Ground | НА | STA<br>10 A | HBE<br>16 A | HEE<br>16 A | HBS<br>35 A | HBVE<br>16 A | HD<br>10A    | HDD<br>8.5 A | HQ<br>16 A | МС           | MP |
|-------------------|------------------------|----|-------------|-------------|-------------|-------------|--------------|--------------|--------------|------------|--------------|----|
| 22                | 2                      |    |             |             |             |             |              | HD7          |              |            |              |    |
| w/ or w/o gnd     | 3                      |    |             |             |             |             |              | HD7          |              |            |              |    |
|                   | 4                      |    |             |             |             |             |              | HD7          |              |            |              |    |
|                   | 5                      |    |             |             |             |             |              | HD7          |              |            | MC10         |    |
|                   | 7                      |    |             |             |             |             |              | HD7          |              |            | MC10         |    |
|                   | 8                      |    |             |             |             |             |              | HD7          |              |            | MC10         |    |
|                   | 10<br>12               |    |             |             |             |             |              | HD15<br>HD15 |              |            | MC10         |    |
|                   | 14                     |    |             |             |             |             |              | HD15         |              |            | MC20<br>MC20 |    |
|                   | 15                     |    |             |             |             |             |              | HD15         |              |            | MC20         |    |
|                   | 16                     |    |             |             |             |             |              | HD15         |              |            | MC20         |    |
|                   | 18                     |    |             |             |             |             |              | HD24         | HDD24        |            | MC20         |    |
|                   | 20                     |    |             |             |             |             |              | HD24         | HDD24        |            | MC20         |    |
|                   | 21                     |    |             |             |             |             |              | HD24         | HDD24        |            | MC20         |    |
|                   | 25                     |    |             |             |             |             |              | HD24         | HDD24        |            | MC20 x 2     |    |
|                   | 28                     |    |             |             |             |             |              | HD40         | HDD42        |            | MC20 x 2     |    |
|                   | 30                     |    |             |             |             |             |              | HD40         | HDD42        |            | MC20 x 2     |    |
|                   | 32                     |    |             |             |             |             |              | HD40         | HDD42        |            | MC20 x 2     |    |
|                   | 36                     |    |             |             |             |             |              | HD40         | HDD42        |            | MC20 x 2     |    |
|                   | 40                     |    |             |             |             |             |              | HD40         | HDD42        |            | MC20 x 2     |    |
|                   | 44                     |    |             |             |             |             |              | HD50         | HDD72        |            | MC20 x 3     |    |
|                   | 50                     |    |             |             |             |             |              | HD50         | HDD72        |            | MC20 x 3     |    |
|                   | 61                     |    |             |             |             |             |              | HD64         | HDD72        |            | MC20 x 3     |    |
|                   | 5                      |    |             |             |             |             |              |              |              |            | MC10         |    |
| 24, 26            | 7                      |    |             |             |             |             |              |              |              |            | MC10         |    |
| w/ or w/o gnd     | 8                      |    |             |             |             |             |              |              |              |            | MC10         |    |
|                   | 10                     |    |             |             |             |             |              |              |              |            | MC10         |    |
|                   | 12                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 14                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 15                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 16<br>18               |    |             |             |             |             |              |              |              |            | MC20<br>MC20 |    |
|                   | 20                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 21                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 25                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 28                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 30                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 32                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 36                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 40                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 44                     |    | 1           |             |             |             |              |              |              |            | MC20 x 3     |    |
|                   | 50                     |    |             |             |             |             |              |              |              |            | MC20 x 3     |    |
|                   | 61                     |    |             |             |             |             |              |              |              |            | MC20 x 3     |    |
|                   | 10                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 12                     |    |             |             |             |             |              |              |              |            | MC20         |    |
| 28                | 14                     |    |             |             |             |             |              |              |              |            | MC20         |    |
| w/ or w/o gnd     | 15                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 16                     |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 18<br>20               |    |             |             |             |             |              |              |              |            | MC20         |    |
|                   | 20                     |    |             |             |             |             |              |              |              |            | MC20<br>MC20 |    |
|                   | 25                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 28                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 30                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 32                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 36                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 40                     |    |             |             |             |             |              |              |              |            | MC20 x 2     |    |
|                   | 44                     |    |             |             |             |             |              |              |              |            | MC20 x 3     |    |
|                   | 50                     |    |             |             |             |             |              |              |              |            | MC20 x 3     |    |
|                   | 61                     |    |             |             |             |             |              |              |              |            | MC20 x 3     |    |

Please note that the amperage for all series listed in black can be found at the top of the column.

4 Amps, 10 Amps, 14 Amps, 16 Amps, 20 Amps, 25 Amps, 50 Amps, 80 Amps, 83 Amps

Notes: 1) The above chart shows the relationship between cable wire gauge and conductor count with connector contact count. Final connector selection and application suitability will depend on voltage and current limits of the cable and connector

<sup>2)</sup> The MC Series modular connector offers a wide variety of mix-and-match combinations. The combinations shown in the chart are offered as suggestions based on providing a solution in the smallest housing size.



Rectangular Industrial Connectors: Technical Data Overview



#### PLUGS & RECEPTACLES WITH THEIR MATING HA HOUSINGS

|          | PLUGS & RECEPTACLES |      |        |        |  |  |  |  |  |
|----------|---------------------|------|--------|--------|--|--|--|--|--|
| HOUSINGS | HA                  | HQ   | STA    | HD     |  |  |  |  |  |
| HA 3/4   | HA 3/4              | HQ 5 | STA 6  | HD 7/8 |  |  |  |  |  |
| HA 10    | HA 10               |      | STA 14 | HD 15  |  |  |  |  |  |
| HA 16    | HA 16               |      | STA 20 | HD 25  |  |  |  |  |  |
| HA 32    | HA 32               |      | STA 40 | HD 50  |  |  |  |  |  |
| HA 48    | HA 48               |      |        |        |  |  |  |  |  |
| HA 64    | HA 64               |      |        |        |  |  |  |  |  |

#### PLUGS & RECEPTACLES WITH THEIR MATING HBE HOUSINGS

|          |        | PLUGS & RECEPTACLES |        |         |        |         |         |              |  |  |
|----------|--------|---------------------|--------|---------|--------|---------|---------|--------------|--|--|
| HOUSINGS | HBE    | HEE                 | HBS    | HBVE    | HD     | HDD     | MC      | Mixed Pwr    |  |  |
| HBE 6    | HBE 6  | HEE 10              |        |         |        | HDD 24  | 2       |              |  |  |
|          |        |                     |        |         |        |         | Modules |              |  |  |
| HBE 10   | HBE 10 | HEE 18              |        | HBVE 3  |        | HDD 42  | 3       |              |  |  |
|          |        |                     |        |         |        |         | Modules |              |  |  |
| HBE 16   | HBE 16 | HEE 32              | HBS 6  | HBVE 6  | HD 40  | HDD 72  | 5       | 4 Pwr/ 0 Sgl |  |  |
|          |        |                     |        |         |        |         | Modules | 4 Pwr/ 2 Sgl |  |  |
| HBE 24   | HBE 24 | HEE 46              |        | HBVE 10 | HD 64  | HDD 108 | 7       | 4 Pwr/8 Sgl  |  |  |
|          |        |                     |        |         |        |         | Modules |              |  |  |
| HBE 32   | HBE 32 | HEE 64              | HBS 12 |         | HD 80  | HDD 144 | 10      |              |  |  |
|          |        |                     |        |         |        |         | Modules |              |  |  |
| HBE 48   | HBE 48 | HEE 92              |        |         | HD 128 | HDD 216 | 14      |              |  |  |
|          |        |                     |        |         |        |         | Modules |              |  |  |

#### **APPROVALS**

EPIC® rectangular connectors shall comply with all applicable requirements of Underwriters Laboratory (UL) Standards 1977 and 498, VDE Standard 0110 for creepage and clearance distances and VDE Standard 0627 for the connector design. The HD and HDD series is developed according to DIN Standard 43652.

The recognized UL file number and Canadian Standards Associations (CSA) for EPIC® CONTACT® connectors are:

UL recognized file #E75770 CSA certified file #LR53004-1

EPIC® connectors meet IP 65, NEMA 4, 4X and NEMA 12 standards only when in the mated condition.



#### **HA Series**



**HA Series** 



#### TECHNICAL DATA

Number of Contacts: 3, 4, 10, 16, 32, 48, 64 (+PE) Screw Termination: HA 3/4:

 Rated Voltage:
 VDE:
 400V EPIC® HA 3/4
 0.5 - 2.5 mm² (AWG: 20 - 14) for solid wire or

250V EPIC® HA 10 - 64 stranded wire with short wire end ferrule and UL: 600V EPIC® HA 3 - 64 without insulation

CSA: 600V EPIC® HA 3 - 64 HA 10 - 64:

SEV: 250V EPIC® HA 3 - 64

• 0.5 - 1.5 mm² (AWG: 20 - 14): for solid wire or stranded wire with wire end ferrule and with

Rated Current: VDE: 10A EPIC® HA 3/4 stranded wire with wire end ferrule and with insulation.

16A EPIC® HA 10 - 64
 0.75 - 2.5 mm² (18 - 14 AWG): for stranded wire
 UL: 10A EPIC® HA 3/4 without wire end ferrule (requires insert with wire

14A EPIC® HA 10 - 64 protection)

CSA: 10A EPIC® HA 3/4 **Temperature Range:** -40°C - 125°C **Contacts:** Copper alloy, silver plated

SEV: 16A EPIC® HA 3 - 64 **Contact Resistance:** 1.5 - 4 mOhm **Pollution Level:** 3 **Test Voltage:** 4 kv

Dimensioning Transient: 4 kV Mating Cycles: 100 (higher mating cycles depending on the

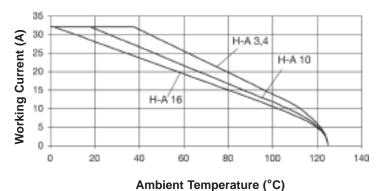
application)

#### HA INSERTS: DERATING CURVES

#### 1.5 mm<sup>2</sup> (16 AWG)

#### Working Current (A) H-A3 20 15 H-A 10 10 H-A 16 5 0 0 20 60 80 100 120 140 Ambient Temperature (°C)

#### 2.5mm<sup>2</sup> (14 AWG)

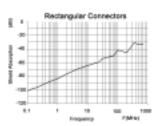


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#### **EMC PROTECTION**



|  | PG/NPT  | Metric  |
|--|---------|---------|
| HA 10 Panel Mount Base                   | 70.7000 | 79.7000 |
| HA 10 Surface Mount & Cable Coupler Hood | 70.7020 | 79.7020 |
| HA 16 Panel Mount Base                   | 70.7001 | 79.7001 |
| HA 16 Surface Mount & Cable Coupler Hood | 70.7021 | 79.7021 |



EMC Shielding is retrofittable.

#### **HA Housings**

**Housings**:

Specifications: DIN 43652 Temperature Range: -40°C to +125°C

Protection class: IP 65: HA 3/4, 10, 16, 32, 48, 64

Material: HA 3/4: Die cast zinc, powder coated/ Thermoplastic flame retardant material rated UL 94 V-0

HA 10 - 64: aluminum alloy, powder coated

#### **STANDARD GREY COATING (NEMA 4)**







**DIN 50262** 

HA 3/4: Die cast zinc, powder coated (Grey)

Thermoplastic flame retardant material rated UL 94 V-0 (Grey or Black Plastic).





**METRIC** 



**DIN 50262** 

HA 10 - 48: Aluminum alloy, powder coated (grey), locking levers and bolts made of zinc plated steel. For industrial applications in demanding environments.

#### **BLACK COATING (Environmentally Protected) NEMA 4X**





**METRIC** 

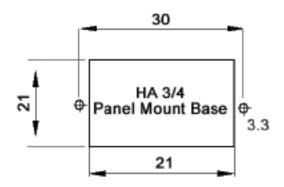


**DIN 50262** 

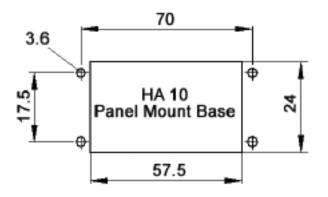
**EP:** Environmentally Protected:

HA 10 - 48: Aluminum alloy, powder coated (black), locking levers and bolts made of stainless steel. For industrial applications in extremely demanding environments with aggressive atmospheres.

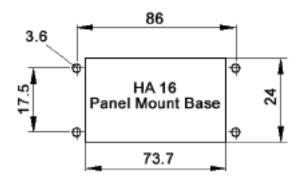
#### HA Panel Cut-Outs For Panel Mount Bases



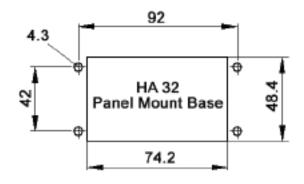
Fits the following plugs & receptacles: HA 3, HA 4, HQ 5, STA 6, HD 7, and HD 8 Series.



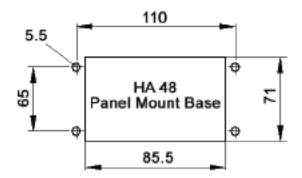
Fits the following plugs & receptacles: HA 10, STA 14, and HD 15 Series.



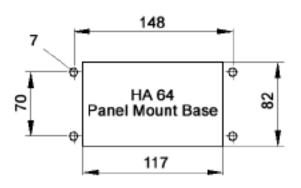
Fits the following plugs & receptacles: HA 16, STA 20 and HD 25 Series.



Fits the following plugs & receptacles: HA 32, STA 40 and HD 50 Series.



Fits the following plugs & receptacles: HA 48 Series.



Fits the following plugs & receptacles: HA 64 Series.

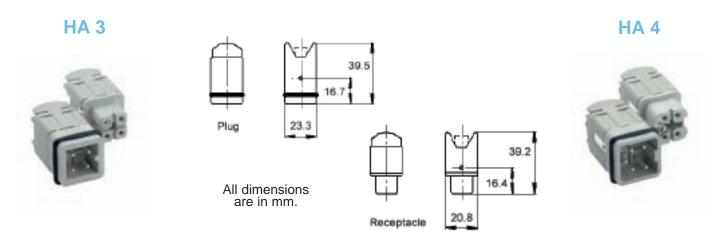
All dimensions are in mm.



HA 3&4 Plugs & Receptacles
HA 3&4 Housings: Single Lever on Base

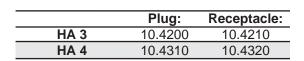


#### **SCREW TERMINATED INSERTS**











SIDE ENTRY

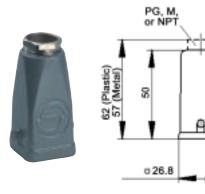




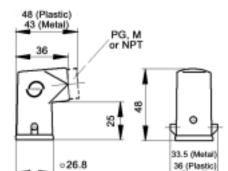
Coding Pin: 10.4513

#### **HOODS**

#### **TOP ENTRY**







All dimensions are in mm.

#### **TOP ENTRY HOODS**

| Material            | Size of Entry |      |        | Without Cal | ole Gland | With Cable Gland |         |  |
|---------------------|---------------|------|--------|-------------|-----------|------------------|---------|--|
| Material            |               |      |        | NPT         | Metric    | PG               | Metric  |  |
|                     | PG            | NPT  | Metric | Part #      | Part #    | Part #           | Part #  |  |
| Zinc Die Cast       | 11            | 1/2" | 20     | 10.5121 NP  | -         | 10.4265          | 19.4265 |  |
| Black Plastic       | 11            | 1/2" | 20     | 10.4255 NP  | 19.4255   | 10.4267          | -       |  |
| <b>Grey Plastic</b> | 11            | 1/2" | 20     | 10.4260 NP  | 19.4260   | 10.4264          | -       |  |

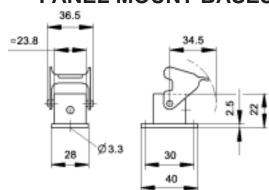
HA 3&4 Housings: Single Lever on Base

#### **SIDE ENTRY HOODS**

| B# = 4 = v² = 1      | Size of Entry |      |        | Without Cal | ole Gland | With Cable Gland |         |  |
|----------------------|---------------|------|--------|-------------|-----------|------------------|---------|--|
| Material             |               |      |        | NPT         | Metric    | PG               | Metric  |  |
|                      | PG            | NPT  | Metric | Part #      | Part #    | Part #           | Part #  |  |
| <b>Zinc Die Cast</b> | 11            | 1/2" | 20     | 10.5123 NP  | -         | 10.4275          | 19.4275 |  |
| <b>Black Plastic</b> | 11            | 1/2" | 20     | 10.4273 NP  | 19.4273   | 10.6206          | -       |  |
| <b>Grey Plastic</b>  | 11            | 1/2" | 20     | 10.4270 NP  | 19.4720   | 10.4271          | -       |  |

#### PANEL MOUNT BASES



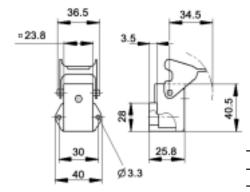


| Grey | Metal |
|------|-------|
| 10.4 | 1225  |

| Black Plastic | Grey Plastic |
|---------------|--------------|
| 10.4222       | 10.4220      |

All dimensions are in mm.

#### **ANGLED PANEL MOUNT BASES**



All dimensions are in mm.

| Grey Metal | Black Plastic | <b>Grey Plastic</b> |
|------------|---------------|---------------------|
| 10.4235    | 10.4231       | 10.4230             |



#### **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



| Material:           | Thermoplastic Resin or Aluminum       | Ten   | nperature: - | -40°C to 125°C |  |  |
|---------------------|---------------------------------------|-------|--------------|----------------|--|--|
| Covers for F        | Panel Mount or Surface Mount Bases/   | and   | Part #       | Part #         |  |  |
| Cable Coupl         | er Hoods                              |       | with string  | without string |  |  |
| <b>Dust Cover</b> 1 | for HA 3/4 Housings with Male Insert  |       | 10.4304      | 10.4300        |  |  |
| <b>Metal Dust C</b> | Cover for HA 3/4 Housings with Male I | nsert | 10.5130      | -              |  |  |
| <b>Dust Cover</b> 1 | for HA 3/4 Housings with Female Inse  | rt    | 10.4301      | 10.4303        |  |  |
| (includes ga        | sket)                                 |       |              |                |  |  |
| <b>Metal Dust C</b> | Cover for HA 3/4 Housings with Femal  | е     |              |                |  |  |
| Insert (inclu       | des gasket)                           |       | 10.5131      | -              |  |  |

HA 3&4 Housings: Single Lever on Base

#### **SURFACE MOUNT BASES**

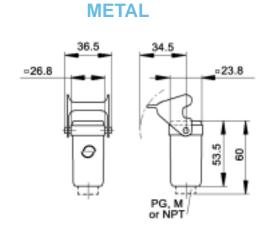
METAL PLASTIC



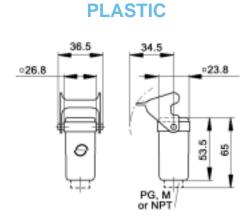
| ΑII | dimen | sions | are | in | mm. |
|-----|-------|-------|-----|----|-----|
|     |       |       |     |    |     |

|                      | Siz   | e of I | Entry  | Without Cal | ole Gland | With Cable Gland |         |  |
|----------------------|-------|--------|--------|-------------|-----------|------------------|---------|--|
| Material             | erial |        |        | NPT         | Metric    | PG               | Metric  |  |
|                      | PG    | NPT    | Metric | Part #      | Part #    | Part #           | Part #  |  |
| <b>Zinc Die Cast</b> | 11    | 1/2"   | 20     | 10.5127 NP  | -         | 10.4245          | 19.4245 |  |
| <b>Black Plastic</b> | 11    | 1/2"   | 20     | 10.5117 NP  | 19.5118   | 10.4247          | -       |  |
| <b>Grey Plastic</b>  | 11    | 1/2"   | 20     | 10.4240 NP  | 19.4241   | 10.4242          | -       |  |

#### **CABLE COUPLER HOODS**







All dimensions are in mm.

| BM = 4 = v! = I      | Siz | e of I | Entry  | Without Cal | ole Gland | With Cable Gland |         |  |
|----------------------|-----|--------|--------|-------------|-----------|------------------|---------|--|
| Material             |     |        |        | NPT         | Metric    | PG               | Metric  |  |
|                      | PG  | NPT    | Metric | Part #      | Part #    | Part #           | Part #  |  |
| <b>Zinc Die Cast</b> | 11  | 1/2"   | 20     | 10.5129 NP  | 19.5129   | 10.4295          | 19.4295 |  |
| <b>Black Plastic</b> | 11  | 1/2"   | 20     | 10.4292 NP  | 19.4292   | 10.6203          | -       |  |
| <b>Grey Plastic</b>  | 11  | 1/2"   | 20     | 10.4290 NP  | 19.4290   | 10.4291          | -       |  |

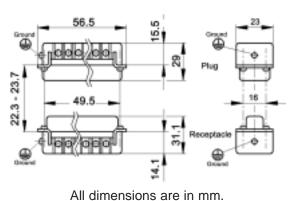
HA 10 Plugs & Receptacles

HA 10 Housings: Single Lever on Base

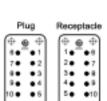


#### **SCREW TERMINATED INSERTS**





Panel Cut-Out (Insert Only)



View from cable side

42.5

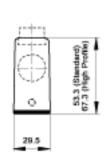
These inserts fit in the HA 10 Series Housings.

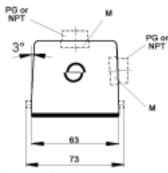
|                               | Plug:   | Receptacle: |
|-------------------------------|---------|-------------|
| HA 10 with Wire Protection    | 10.4401 | 10.4411     |
| HA 10 without Wire Protection | 10.4400 | 10.4410     |

#### **HOODS**

#### **TOP ENTRY**











All dimensions are in mm.

#### STANDARD PROFILE

| Position of | Siz  | e of | Entry  | Standa    | ard Grey C | oating  | Black Coating (EP) |            |         |  |
|-------------|------|------|--------|-----------|------------|---------|--------------------|------------|---------|--|
| Cable Entry |      | NDT  | Matria | PG        | NPT        | Metric  | PG                 | NPT        | Metric  |  |
|             | PG   | NPT  | Metric | Part #    | Part #     | Part #  | Part #             | Part #     | Part #  |  |
| Top Entry   | 13.5 | 1/2" | 20     | 10.446010 | 10.4460 NP | 19.4460 | -                  | -          | -       |  |
|             | 16   | 1/2" | 25     | 10.446110 | 10.4461 NP | 19.4461 | 70.4610            | 70.4610 NP | 79.4610 |  |
| Side Entry  | 16   | 1/2" | 20     | 10.445010 | 10.4450 NP | 19.4450 | 70.4630            | 70.4630 NP | 79.4630 |  |
|             | 21   | 3/4" | 25     | 10.445510 | 10.4455 NP | 19.4455 | -                  | -          | -       |  |

#### **HIGH PROFILE**

| Position of | Siz | e of | Entry  | Standard Grey Coating |            |         | Black Coating (EP) |            |         |  |
|-------------|-----|------|--------|-----------------------|------------|---------|--------------------|------------|---------|--|
| Cable Entry |     |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |  |
|             | PG  | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |  |
| Top Entry   | 16  | 1/2" | 20     | 70.4602               | 70.4602 NP | 79.4602 | 70.4612            | 70.4612 NP | 79.4612 |  |
|             | 21  | 3/4" | 25     | 70.4604               | 70.4604 NP | 79.4604 | 70.4614            | 70.4614 NP | 79.4614 |  |
| Side Entry  | 16  | 1/2" | 20     | 70.4622               | 70.4622 NP | 79.4622 | 70.4632            | 70.4632 NP | 79.4632 |  |
|             | 21  | 3/4" | 25     | 70.4624               | 70.4624 NP | 79.4624 | 70.4634            | 70.4634 NP | 79.4634 |  |

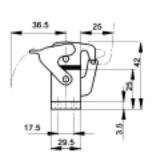
Metric hoods do not come with a neck.

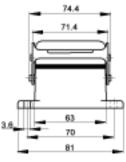


HA 10 Housings: Single Lever on Base

#### **PANEL MOUNT BASES**







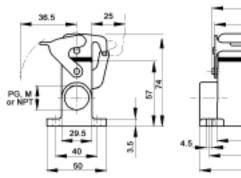


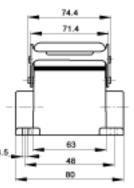
All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |  |  |
|--------------------------------|-----------------------|--------------------|--|--|
| Panel Mount without Dust Cover | 10.4420               | 70.4425            |  |  |
| Panel Mount with Dust Cover    | 70.4440               | 70.4445            |  |  |

#### **SURFACE MOUNT BASES**









All dimensions are in mm.

#### WITHOUT DUST COVER

| Number of | Siz | e of | Entry  | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |  |
|-----------|-----|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|--|
| Entries   | PG  | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |  |
| 1 Entry   | 16  | 1/2" | 20     | 10.4481      | 10.4481 NP    | 19.4481          | 70.4472            | 70.4472 NP    | 79.4472          |  |
|           | 21  | 3/4" | 25     | 10.4480      | 10.4480 NP    | 19.4480          | 70.4474            | 70.4474 NP    | 79.4474          |  |
| 2 Entries | 16  | 1/2" | 20     | 10.4501      | 10.4501 NP    | 19.4501          | 70.4482            | 70.4482 NP    | 79.4482          |  |
|           | 21  | 3/4" | 25     | 10.4500      | 10.4500 NP    | 19.4500          | 70.4484            | 70.4484 NP    | 79.4484          |  |

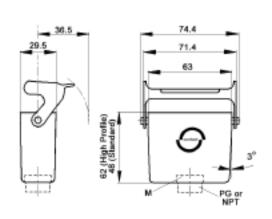
#### WITH DUST COVER

| Number of | Siz | e of | Entry  | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |  |
|-----------|-----|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|--|
| Entries   | PG  | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |  |
| 1 Entry   | 16  | 1/2" | 20     | 70.4552      | 70.4552 NP    | 79.4552          | 70.4572            | 70.4572 NP    | 79.4572          |  |
|           | 21  | 3/4" | 25     | 70.4554      | 70.4554 NP    | 79.4554          | 70.4574            | 70.4574 NP    | 79.4574          |  |
| 2 Entries | 16  | 1/2" | 20     | 70.4562      | 70.4562 NP    | 79.4562          | 70.4582            | 70.4582 NP    | 79.4582          |  |
|           | 21  | 3/4" | 25     | 70.4564      | 70.4564 NP    | 79.4564          | 70.4584            | 70.4584 NP    | 79.4584          |  |

HA 10 Housings: Single Lever on Base

#### **CABLE COUPLER HOODS**







All dimensions are in mm.

| D Cl.    | Siz  | e of | Entry  | Standard Grey Coating |            |         | Black Coating (EP) |            |         |  |
|----------|------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|--|
| Profile  |      |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |  |
|          | PG   | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |  |
| Standard | 13.5 | 1/2" | 20     | 10.4390               | 10.4390 NP | 19.4390 | -                  | -          | -       |  |
|          | 16   | 1/2" | 25     | 70.4500               | 70.4500 NP | 79.4500 | 70.4510            | 70.4510 NP | 79.4510 |  |
| High     | 21   | 3/4" | 25     | 70.4504               | 70.4504 NP | 79.4504 | 70.4514            | 70.4514 NP | 79.4514 |  |

Metric hoods do not come with a neck.

#### **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

|   | Part #      | Part #         |
|---|-------------|----------------|
| Description                                       | with string | without string |
| Dust Cover for HA 10 Panel Mount or Surface       | 10.4575     | 10.4577        |
| Mount Base/ Cable Coupler hoods (includes gasket) |             |                |
| Dust cover for HA 10 Hoods                        | 10.4576     | 10.4578        |

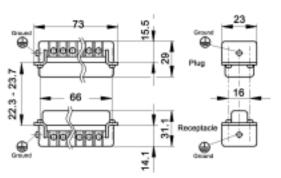
HA 16 Plugs & Receptacles

HA 16 Housings: Single Lever on Base

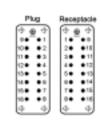


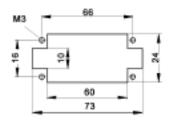
#### **SCREW TERMINATED INSERTS**











View from cable side

All dimensions are in mm.

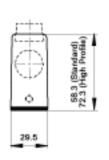
These inserts fit in the HA 16 Series Housings.

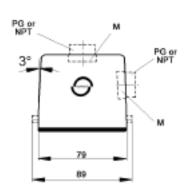
|                               | Plug:   | Receptacle: |
|-------------------------------|---------|-------------|
| HA 16 with Wire Protection    | 10.5300 | 10.5310     |
| HA 16 without Wire Protection | 10.5320 | 10.5330     |

#### **HOODS**

#### **TOP ENTRY**











#### STANDARD PROFILE

| Position of | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|-------------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| Cable Entry |               |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |
|             | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| Top Entry   | 16            | 1/2" | 20     | 10.565010             | 10.5650 NP | 19.5650 | 70.4910            | 70.4910 NP | 79.4910 |
|             | 21            | 3/4" | 25     | 10.565210             | 10.5652 NP | 19.5653 | -                  | -          | -       |
| Side Entry  | 16            | 1/2" | 20     | 10.564010             | 10.5640 NP | 19.5640 | 70.4930            | 70.4930 NP | 79.4930 |
|             | 21            | 3/4" | 25     | 10.564510             | 10.5645 NP | 19.5645 | -                  | -          | -       |

#### **HIGH PROFILE**

| Position of Size of Entry |    |      | Standard Grey Coating |         |            | Black Coating (EP) |         |            |         |
|---------------------------|----|------|-----------------------|---------|------------|--------------------|---------|------------|---------|
| Cable Entry               |    |      |                       | PG      | NPT        | Metric             | PG      | NPT        | Metric  |
|                           | PG | NPT  | Metric                | Part #  | Part #     | Part #             | Part #  | Part #     | Part #  |
| Top Entry                 | 16 | 1/2" | 20                    | 70.4902 | 70.4902 NP | 79.4902            | 70.4912 | 70.4912 NP | 79.4912 |
|                           | 21 | 3/4" | 25                    | 70.4904 | 70.4904 NP | 79.4904            | 70.4914 | 70.4914 NP | 79.4914 |
| Side Entry                | 16 | 1/2" | 20                    | 70.4922 | 70.4922 NP | 79.4922            | 70.4932 | 70.4932 NP | 79.4932 |
|                           | 21 | 3/4" | 25                    | 70.4924 | 70.4924 NP | 79.4924            | 70.4934 | 70.4934 NP | 79.4934 |

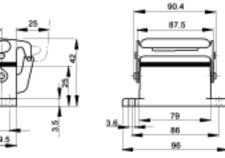
Metric hoods do not come with a neck.



HA 16 Housings: Single Lever on Base

#### PANEL MOUNT BASE



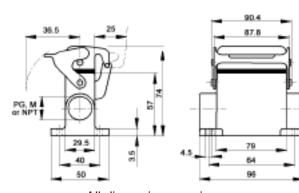




| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.4620               | 70.4725            |
| Panel Mount with Dust Cover    | 70.4740               | 70.4745            |

#### **SURFACE MOUNT BASES**







All dimensions are in mm.

#### WITHOUT DUST COVER

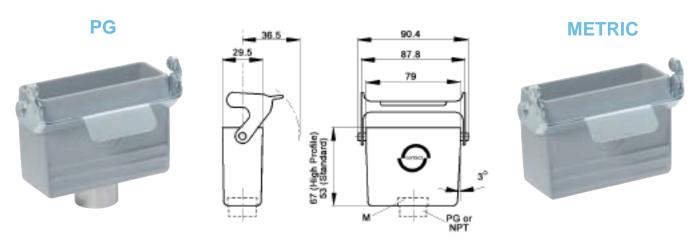
| Number of      | Size of Entry |      |        | Stand   | Standard Grey Coating |         |         | Black Coating (EP) |         |  |
|----------------|---------------|------|--------|---------|-----------------------|---------|---------|--------------------|---------|--|
| <b>Entries</b> |               | NDT  |        | PG      | NPT                   | Metric  | PG      | NPT                | Metric  |  |
|                | PG            | NPT  | Metric | Part #  | Part #                | Part #  | Part #  | Part #             | Part #  |  |
| 1 Entry        | 16            | 1/2" | 20     | 10.5671 | 10.5671 NP            | 19.5671 | 70.4772 | 70.4772 NP         | 79.4772 |  |
|                | 21            | 3/4" | 25     | 10.5670 | 10.5670 NP            | 19.5670 | 70.4774 | 70.4774 NP         | 79.4774 |  |
| 2 Entries      | 16            | 1/2" | 20     | 10.5681 | 10.5681 NP            | 19.5681 | 70.4782 | 70.4782 NP         | 79.4782 |  |
|                | 21            | 3/4" | 25     | 10.5680 | 10.5680 NP            | 19.5680 | 70.4784 | 70.4784 NP         | 79.4784 |  |

#### WITH DUST COVER

| Number of | Size of Entry |      |        | Stand        | Standard Grey Coating |                  |              | Black Coating (EP) |                  |  |
|-----------|---------------|------|--------|--------------|-----------------------|------------------|--------------|--------------------|------------------|--|
| Entries   | PG            | NPT  | Metric | PG<br>Part # | NPT<br>Part #         | Metric<br>Part # | PG<br>Part # | NPT<br>Part #      | Metric<br>Part # |  |
| 1 Entry   | 16            | 1/2" | 20     | 70.4852      | 70.4852 NP            | 79.4852          | 70.4872      | 70.4872 NP         | 79.4872          |  |
|           | 21            | 3/4" | 25     | 70.4854      | 70.4854 NP            | 79.4854          | 70.4874      | 70.4874 NP         | 79.4874          |  |
| 2 Entries | 16            | 1/2" | 20     | 70.4862      | 70.4862 NP            | 79.4862          | 70.4882      | 70.4882 NP         | 79.4882          |  |
|           | 21            | 3/4" | 25     | 70.4864      | 70.4864 NP            | 79.4864          | 70.4884      | 70.4884 NP         | 79.4884          |  |

HA 16 Housings: Single Lever on Base

#### **CABLE COUPLER HOODS**



All dimensions are in mm.

|          | Size of Entry |      | Standard Grey Coating |              |               | Black Coating (EP) |              |               |                  |
|----------|---------------|------|-----------------------|--------------|---------------|--------------------|--------------|---------------|------------------|
| Profile  | PG            | NPT  | Metric                | PG<br>Part # | NPT<br>Part # | Metric<br>Part #   | PG<br>Part # | NPT<br>Part # | Metric<br>Part # |
| Standard | 16            | 1/2" | 20                    | 10.5630      | 10.5630 NP    | 19.5630            | 70.4810      | 70.4810 NP    | 79.4810          |
|          | -             | -    | 25                    | -            | -             | 19.5632            | -            | -             | -                |
| High     | 16            | 1/2" | 20                    | 70.4802      | 70.4802 NP    | 79.4802            | 70.4812      | 70.4812 NP    | 79.4812          |
|          | 21            | 3/4" | 25                    | 70.4804      | 70.4804 NP    | 79.4804            | 70.4814      | 70.4814 NP    | 79.4814          |

Metric hoods do not come with a neck.

#### **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



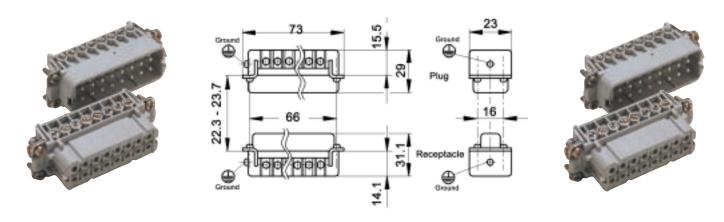
Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #      | Part #         |
|--|-------------|----------------|
| Description  | with string | without string |
| <b>Dust cover for HA 16 Panel Mount or Surface Mount</b> | 10.4695     | 10.4697        |
| Base/ Cable Coupler hoods (includes gasket)              |             |                |
| Dust cover for HA 16 Hoods                               | 10.4696     | 10.4698        |

HA 32 Plugs & Receptacles

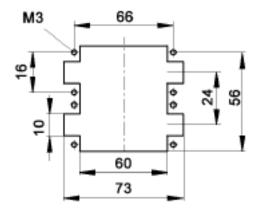


#### **SCREW TERMINATED INSERTS**

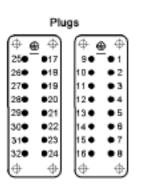


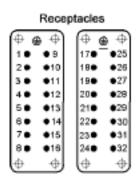
All dimensions are in mm.

## Panel Cut-out (Insert only)



#### View from cable side





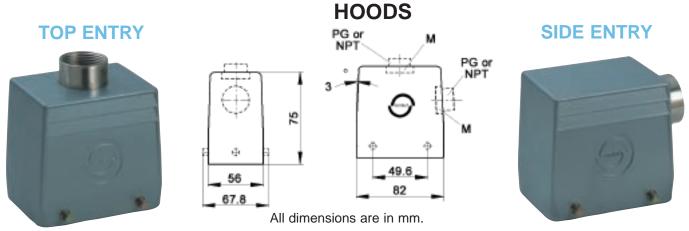
#### 2 Sets of HA 16 Inserts

|                                 | Plug:   | Receptacle: |
|---------------------------------|---------|-------------|
| #1-16: with Wire Protection     | 10.5300 | 10.5310     |
| #17-32: with Wire Protection    | 10.5400 | 10.5410     |
| #1-16: without Wire Protection  | 10.5320 | 10.5330     |
| #17-32: without Wire Protection | 10.5420 | 10.5430     |

These inserts fit in the HA 32 Series Housings.



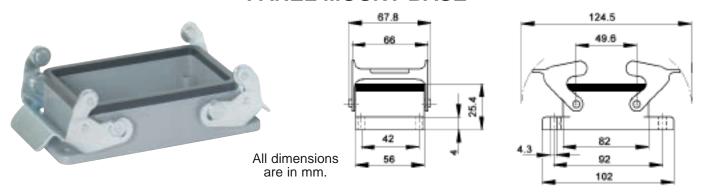
HA 32 Housings: Double Levers on Base



| Position of | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Top Entry   | 21            | 3/4" | 25     | 10.5820               | 10.5820 NP    | 19.5820          | 70.5212            | 70.5212 NP    | 79.5212          |
|             | 29            | 1"   | 32     | 10.5830               | 10.5830 NP    | 19.5830          | 70.5214            | 70.5214 NP    | 79.5214          |
| Side Entry  | 21            | 3/4" | 25     | 10.5760               | 10.5760 NP    | 19.5760          | 70.5232            | 70.5232 NP    | 79.5232          |
|             | 29            | 1"   | 32     | 10.5770               | 10.5770 NP    | 19.5770          | 70.5234            | 70.5234 NP    | 79.5234          |

Metric hoods do not come with a neck.

#### PANEL MOUNT BASE



| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.4720               | 70.5025            |

#### **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**

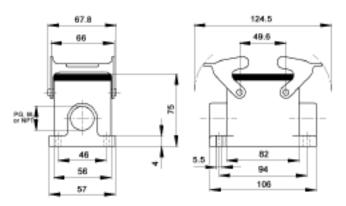


| Material:         | Thermoplastic Resin         | Temperat      | ure:            | -40°(     | C to 125°C            |
|-------------------|-----------------------------|---------------|-----------------|-----------|-----------------------|
|                   |                             |               | Part<br>with st | #<br>ring | Part # without string |
| <b>Dust cover</b> | for HA 32 Panel Mount or \$ | Surface Mount | 10.48           | 15        | 10.4817               |
| Base / Cab        | le Coupler hoods            |               |                 |           |                       |
| <b>Dust cover</b> | for HA 32 Hoods (includes   | gasket)       | 10.48           | 16        | 10.4818               |

HA 32 Housings: Double Levers on Base

#### **SURFACE MOUNT BASE**





All dimensions are in mm.

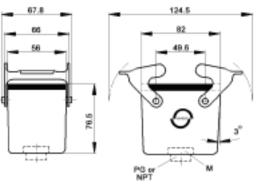
| Number of         | Siz | e of | Entry  | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |
|-------------------|-----|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|
| Entries           | PG  | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| 1 Entry with      | 21  | 3/4" | 25     | 10.4740      | 10.4740 NP    | 19.4740          | 70.5072            | 70.5072 NP    | 79.5072          |
| <b>Dust Cover</b> | 29  | 1"   | 32     | 10.4741      | 10.4741 NP    | 19.4741          | 70.5074            | 70.5074 NP    | 79.5074          |
| 2 Entries with    | 21  | 3/4" | 25     | 10.4820      | 10.4820 NP    | 19.4820          | 70.5082            | 70.5082 NP    | 79.5082          |
| <b>Dust Cover</b> | 29  | 1"   | 32     | 10.4821      | 10.4821 NP    | 19.4821          | 70.5084            | 70.5084 NP    | 79.5084          |

Metric bases do not come with a neck.

#### **CABLE COUPLER HOODS**

PG







**METRIC** 

All dimensions are in mm.

| Siz | e of I | Entry  | Stand   | ard Grey Co | oating  | Blac    | ck Coating | (EP)    |
|-----|--------|--------|---------|-------------|---------|---------|------------|---------|
|     |        |        | PG      | NPT         | Metric  | PG      | NPT        | Metric  |
| PG  | NPT    | Metric | Part #  | Part #      | Part #  | Part #  | Part #     | Part #  |
| 21  | 3/4"   | 25     | 10.5880 | 10.5880 NP  | 19.5880 | 70.5110 | 70.5110 NP | 79.5110 |
| 29  | 1"     | 32     | 10.5885 | 10.5885 NP  | 19.5885 | 70.5112 | 70.5112 NP | 79.5112 |

Metric hoods do not come with a neck.

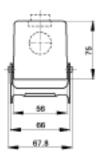


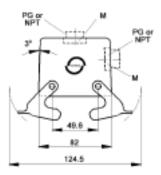
HA 32 Housings: Double Levers on Hood

#### **HOODS**

**TOP ENTRY** 







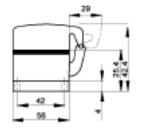


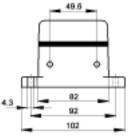
| Position of | Siz | e of | Entry  | Standa  | ard Grey Co | oating  | Black Coating (EP) |            |         |
|-------------|-----|------|--------|---------|-------------|---------|--------------------|------------|---------|
| Cable Entry |     |      |        | PG      | NPT         | Metric  | PG                 | NPT        | Metric  |
|             | PG  | NPT  | Metric | Part #  | Part #      | Part #  | Part #             | Part #     | Part #  |
| Top Entry   | 21  | 3/4" | 25     | 10.5840 | 10.5840 NP  | 19.5840 | 70.5262            | 70.5262 NP | 79.5262 |
|             | 29  | 1"   | 32     | 10.5850 | 10.5850 NP  | 19.5850 | 70.5264            | 70.5264 NP | 79.5264 |
| Side Entry  | 21  | 3/4" | 25     | 10.5780 | 10.5780 NP  | 19.5780 | 70.5282            | 70.5282 NP | 79.5282 |
|             | 29  | 1"   | 32     | 10.5790 | 10.5790 NP  | 19.5790 | 70.5284            | 70.5284 NP | 79.5284 |

Metric hoods do not come with a neck.

#### PANEL MOUNT BASE







| Standard Grey Coating |               |  |  |  |  |  |
|-----------------------|---------------|--|--|--|--|--|
| With Cover            | Without Cover |  |  |  |  |  |
| 70.5030               | 10.4731       |  |  |  |  |  |

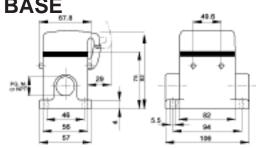
## Black Coating (EP) With Dust Cover

70.5035

**SURFACE MOUNT BASE** 



Metric bases do not come with a neck.



| Number of         | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Entries           | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| 1 Entry with      | 21            | 3/4" | 25     | 70.5152               | 70.5152 NP    | 79.5152          | 70.5172            | 70.5172 NP    | 79.5172          |
| <b>Dust Cover</b> | 29            | 1"   | 32     | 70.5154               | 70.5154 NP    | 79.5154          | 70.5174            | 70.5174 NP    | 79.5174          |
| 2 Entries with    | 21            | 3/4" | 25     | 70.5162               | 70.5162 NP    | 79.5162          | 70.5182            | 70.5182 NP    | 79.5182          |
| <b>Dust Cover</b> | 29            | 1"   | 32     | 70.5164               | 70.5164 NP    | 79.5164          | 70.5184            | 70.5184 NP    | 79.5184          |

HA 48 Plugs & Receptacles

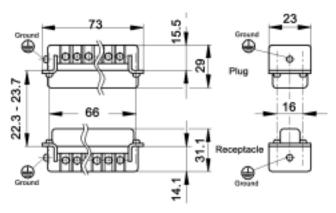


#### **SCREW TERMINATED INSERTS**



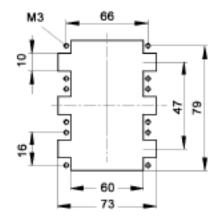


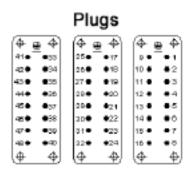


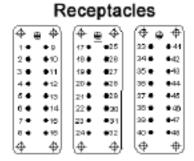


Panel Cut-Out (Inserts Only)

View from cable side







3 Sets of HA 16 Inserts

All dimensions are in mm.

|                                 | Plug:   | Receptacie: |
|---------------------------------|---------|-------------|
| #1-16: with Wire Protection     | 10.5300 | 10.5310     |
| #17-32: with Wire Protection    | 10.5400 | 10.5410     |
| #33-48: with Wire Protection    | 10.5401 | 10.5411     |
| #1-16: without Wire Protection  | 10.5320 | 10.5330     |
| #17-32: without Wire Protection | 10.5420 | 10.5430     |
| #33-48: without Wire Protection | 10.5421 | 10.5431     |

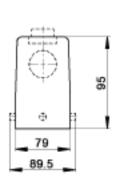
These inserts fit in the HA 48 Series Housings.

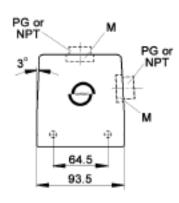
HA 48 Housings: Double Levers on Base

#### **HOODS**

**TOP ENTRY** 









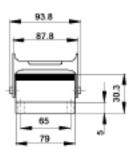
All dimensions are in mm.

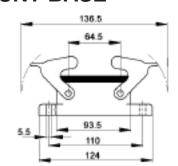
| Position of | Siz | e of | Entry  | Standard Grey Coating |               |                  |  |
|-------------|-----|------|--------|-----------------------|---------------|------------------|--|
| Cable Entry | PG  | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # |  |
| Top Entry   | 29  | 1"   | 32     | 10.6318               | 10.6318 NP    | -                |  |
| Side Entry  | 29  | 1"   | 32     | 10.6308               | 10.6308 NP    | 19.6308          |  |

Metric hoods do not come with a neck.

#### PANEL MOUNT BASE

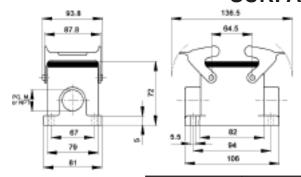






Standard Grey Coating 10.6255

#### **SURFACE MOUNT BASE**



Metric bases do not come with a neck.

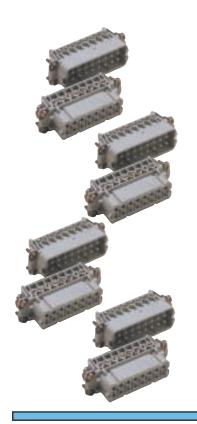


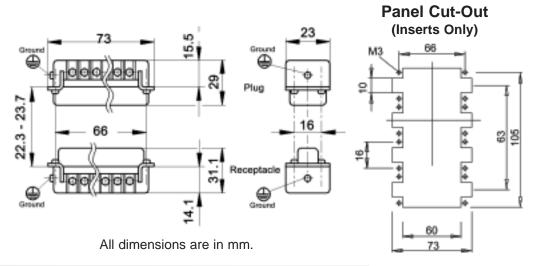
| Number of      | Siz | e of | Entry  | Standard Grey Coating |            |         |  |
|----------------|-----|------|--------|-----------------------|------------|---------|--|
| <b>Entries</b> |     |      |        | PG                    | NPT        | Metric  |  |
|                | PG  | NPT  | Metric | Part #                | Part #     | Part #  |  |
| 1 Entry        | 29  | 1"   | 32     | 10.6338               | 10.6338 NP | 19.6338 |  |
| 2 Entries      | 29  | 1"   | 32     | 10.6348               | 10.6348 NP | 19.6348 |  |

HA 64 Series



#### **SCREW TERMINATED INSERTS**



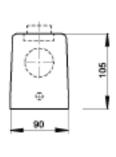


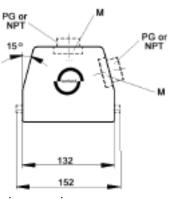
|                              | Plug:   | Receptacle: |
|------------------------------|---------|-------------|
| #1-16: with Wire Protection  | 10.5300 | 10.5310     |
| #17-32: with Wire Protection | 10.5400 | 10.5410     |
| #33-48: with Wire Protection | 10.5401 | 10.5411     |
| #49-64: with Wire Protection | 10.5405 | 10.5415     |

#### **HOODS**

#### **TOP ENTRY**









All dimensions are in mm.

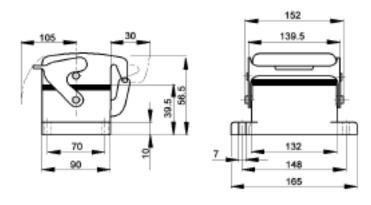
| # of       | Siz | ze of E | Entry  | Standard Grey Coating |               |            |  |
|------------|-----|---------|--------|-----------------------|---------------|------------|--|
| Entries    | DC  | NDT     | Matria | PG                    | NPT           | Metric     |  |
|            | PG  | NPT     | Metric | Part #                | Part #        | Part #     |  |
| Top Entry  | 29  | 1"      | 32     | 10.1550-HA            | 10.1550 NP-HA | 19.1550-HA |  |
|            | 36  | 1 1/4"  | 40     | 10.1560-HA            | 10.1560 NP-HA | 19.1560-HA |  |
|            | 42  | 1 1/2"  | 50     | 10.1570-HA            | -             | 19.1570-HA |  |
| Side Entry | 29  | 1"      | 32     | 10.1580-HA            | 10.1580 NP-HA | 19.1580-HA |  |
|            | 36  | 1 1/4"  | 40     | 10.1590-HA            | 10.1590 NP-HA | 19.1590-HA |  |
|            | 42  | 1 1/2"  | 50     | 10.1600-HA            | -             | 19.1600-HA |  |

Metric hoods do not come with a neck.

HA 64 Housings: Single Lever on Base







All dimensions are in mm.

| Wit         | hout  |
|-------------|-------|
| <b>Dust</b> | Cover |

10.1610-HA

With Dust Cover with hold down screw and no dust cover bolts

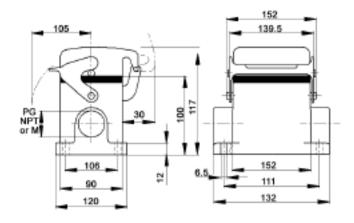
10.1520-HA

With Dust Cover with hold down screw and dust cover bolts

10.1525-HA

#### **SURFACE MOUNT BASE**





All dimensions are in mm.

| # of           | Siz | e of E | Entry  | Standard Grey Coating |               |            |  |
|----------------|-----|--------|--------|-----------------------|---------------|------------|--|
| <b>Entries</b> |     |        |        | PG                    | NPT           | Metric     |  |
|                | PG  | NPT    | Metric | Part #                | Part #        | Part #     |  |
| 2 Entries      | 29  | 1"     | 32     | 10.1660-HA            | 10.1660 NP-HA | 19.1660-HA |  |
|                | 36  | 1 1/4" | 40     | 10.1661-HA            | 10.1661 NP-HA | 19.1661-HA |  |
| 1 Entry        | 29  | 1"     | 32     | 10.1650-HA            | 10.1650 NP-HA | 19.1650-HA |  |
|                | 36  | 1 1/4" | 40     | 10.1651-HA            | 10.1651 NP-HA | 19.1651-HA |  |
| 2 Entries with | 29  | 1"     | 32     | 10.1680-HA            | 10.1680 NP-HA | 19.1680-HA |  |
| dust cover     | 36  | 1 1/4" | 40     | 10.1681-HA            | 10.1681 NP-HA | 19.1681-HA |  |
| 1 Entry with   | 29  | 1"     | 32     | 10.1670-HA            | 10.1670 NP-HA | 19.1670-HA |  |
| dust cover     | 36  | 1 1/4" | 40     | 10.1671-HA            | 10.1671 NP-HA | 19.1671-HA |  |

**HQ** Series



**HQ** Series

#### TECHNICAL DATA

Number of Contacts: 5 (+PE)

Rated Voltage: UL/ CSA: 600V

*VDE:* 400V

Rated Current: UL/ CSA: 16A

Temperature Range: -40°C to 125°C

Pollution Degree: 3

Test Voltage: 4 kV

**Termination Type:** 

**Machined Crimp:** 0.5 - 2.5 mm<sup>2</sup> 20 - 14 AWG

Contacts:

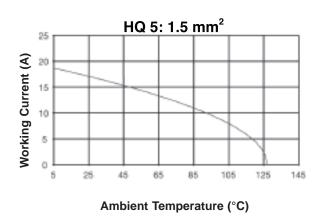
Material: Copper alloy, silver plated/gold platedMating Cycles: 100 (higher mating cycles depending on

the application)

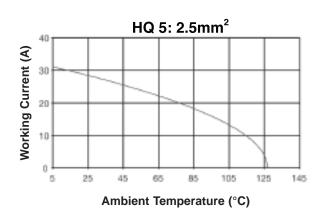
**Contact Resistance:**  $\leq$  2 m $\Omega$ 

#### **HQ INSERTS: DERATING CURVES**

**HQ 5: 1.5 mm<sup>2</sup> (16 AWG)** 



HQ 5: 2.5 mm<sup>2</sup> (14 AWG)



#### **MATING COMPONENTS**

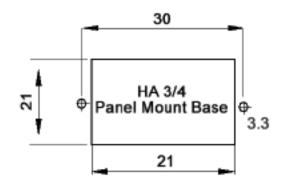
HQ 5 Plugs & Receptacles fit into EPIC® HA 3/4 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 239). Please note that metric parts are available



拉

**NPT** 





HQ 5 Plugs & Receptacles



#### **CRIMP TERMINATED INSERTS**

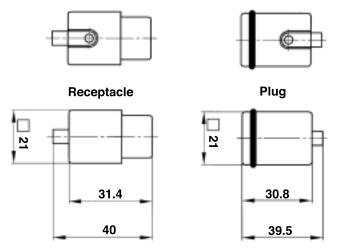


View from cable side

December 1







All dimensions are in mm.

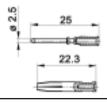
|                   | Plug    | Receptacle |
|-------------------|---------|------------|
| Crimp Termination | 10.4315 | 10.4325    |

**Contacts Sold Separately** 

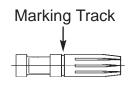
10.4365: HQ5 Coding Pin (with contact loss)

#### MACHINED CONTACTS: DIAMETER 2.5 MM<sup>2</sup>









Bags of 100

|           |     | Silver  |         | Gold    |         | Stripping            | # of Marking |
|-----------|-----|---------|---------|---------|---------|----------------------|--------------|
| mm²       | AWG | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |
| 0.5       | 20  | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0 | 18  | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5       | 16  | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5       | 14  | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |

Part number= 1 contact

#### **CRIMP TOOLS**



Crimp Tool 11.1470



Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool: 11.1825



HA 3/4 Housings: Single Lever on Base for HQ 5 Inserts

#### **HOODS**



| Material      | Material Size of Entry Without Cable Gland PG NPT NPT Part # |      | Without Cable Gland | With Cable Gland |  |
|---------------|--|------|---------------------|------------------|--|
| Wiaterial     |  |      | PG Part #           |                  |  |
| Zinc Die Cast | 11   | 1/2" | 10.5121 NP          | 10.4265          |  |
| Black Plastic | 11   | 1/2" | 10.4255 NP          | 10.4267          |  |
| Grey Plastic  | 11   | 1/2" | 10.4260 NP          | 10.4264          |  |

**TOP ENTRY** 

#### **SIDE ENTRY**

| Material      | Size of Entry |      | Without Cable Gland | With Cable Gland |  |
|---------------|---------------|------|---------------------|------------------|--|
| Wiaterial     | PG            | NPT  | NPT Part #          | PG Part #        |  |
| Zinc Die Cast | 11            | 1/2" | 10.5123 NP          | 10.4275          |  |
| Black Plastic | 11            | 1/2" | 10.4273 NP          | 10.6206          |  |
| Grey Plastic  | 11            | 1/2" | 10.4270 NP          | 10.4271          |  |



#### PANEL MOUNT BASES

| Grey | Metal |
|------|-------|
| 10.4 | 1225  |

| Black Plastic | Grey Plastic |
|---------------|--------------|
| 10.4222       | 10.4220      |

| Grey | Metal |
|------|-------|
| 10.4 | 4235  |

| Black Plastic | Grey Plastic |
|---------------|--------------|
| 10.4231       | 10.4230      |





#### **SURFACE MOUNT BASES**

| Material      | Size of Entry |                | Without Cable Gland | With Cable Gland |  |
|---------------|---------------|----------------|---------------------|------------------|--|
| Waterial      | PG            | NPT NPT Part # |                     | PG Part #        |  |
| Zinc Die Cast | 11            | 1/2"           | 10.5127 NP          | 10.4245          |  |
| Black Plastic | 11            | 1/2"           | 10.5117 NP          | 10.4247          |  |
| Grey Plastic  | 11            | 1/2"           | 10.4240 NP          | 10.4242          |  |



#### **CABLE COUPLER HOOD**

| Material      | Size of Entry |      | Without Cable Gland | With Cable Gland |  |
|---------------|---------------|------|---------------------|------------------|--|
| Waterial      | PG            | NPT  | NPT Part #          | PG Part #        |  |
| Zinc Die Cast | 11            | 1/2" | 10.5129 NP          | 10.4295          |  |
| Black Plastic | 11            | 1/2" | 10.4292 NP          | 10.6203          |  |
| Grey Plastic  | 11            | 1/2" | 10.4290 NP          | 10.4291          |  |

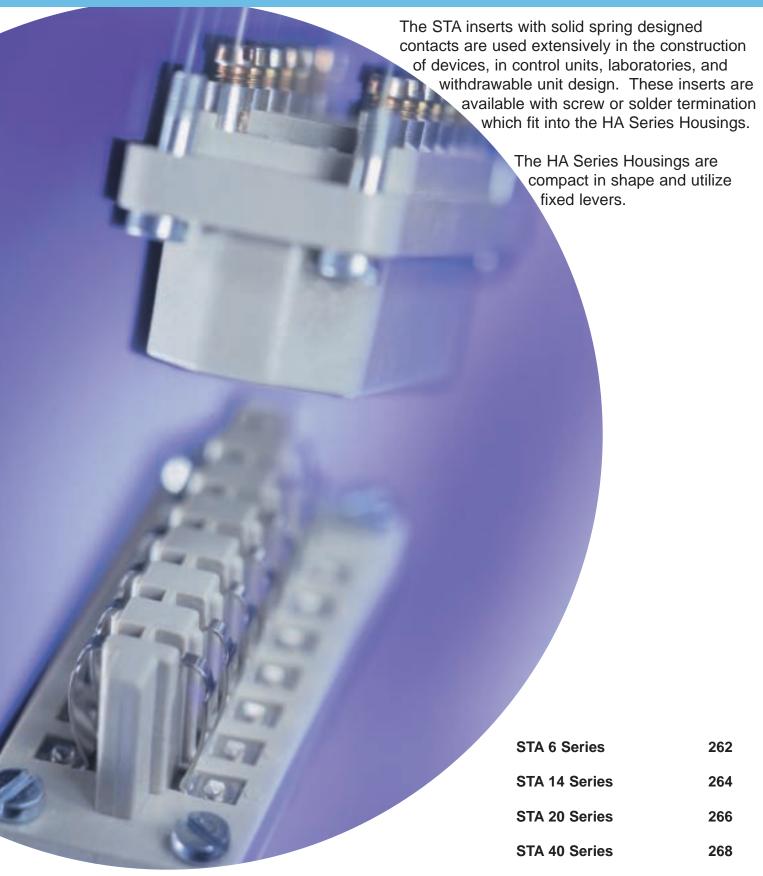
#### DUST COVERS WITH OR WITHOUT ATTACHMENT STRING



Material: Thermoplastic Resin or Aluminum -40°C to 125°C Temperature:

| Covers for Panel Mount or Surface Mount Bases and Cable Coupler Hoods | Part #<br>with string | Part #<br>without string |
|---|-----------------------|--------------------------|
| Dust Cover for HA 3/4 Housings with Male Insert                       | 10.4304               | 10.4300                  |
| Metal Dust Cover for HA 3/4 Housings with Male Insert                 | 10.5130               | 10.4303                  |
| Dust Cover for HA 3/4 Housings with Female Insert                     | 10.4301               | -                        |
| (includes gasket)   |                       |                          |
| Metal Dust Cover for HA 3/4 Housings with Female Insert               |                       | -                        |
| (includes gasket)   | 10.5131               |                          |

**STA Series** 



**STA Series** 



#### TECHNICAL DATA

Number of Contacts: 6, 14, 20, 40 Termination Type: Solder termination: up to 1.5 mm<sup>2</sup>

Rated Voltage: VDE: 60V EPIC STA 6 - 20 Screw termination: 0.5 - 1.5 mm<sup>2</sup>

UL: 48V EPIC STA 6 - 20 AWG: 20 - 16 CSA: 48V EPIC STA 6 - 20 *Temperature Range:* -40°C to 80°C

Rated Current: VDE: 10A EPIC STA 6 - 20 Contacts: Copper alloy, silver plated

UL: 10A EPIC STA 6 - 20 *Contact Resistance:* <2mOhm

CSA: 10A EPIC STA 6 - 20 **Contact Resistance.** <2month

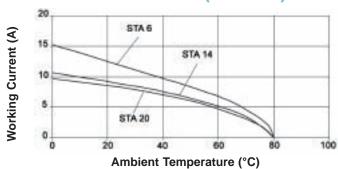
100 (higher mating cycles depends)

**Pollution Level:** 2 on the application)

Test Voltage: 2

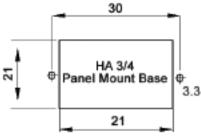
#### STA INSERTS: DERATING CURVES

#### STA: 1.0 mm<sup>2</sup> (18 AWG)

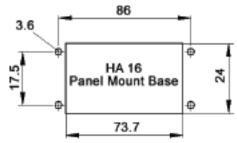


#### **TECHNICAL DATA: PANEL CUT-OUTS**

#### STA 6 Inserts fit into

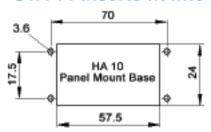


## STA 20 Inserts fit into

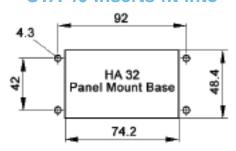


All dimensions are in mm.

#### STA 14 Inserts fit into



#### STA 40 Inserts fit into





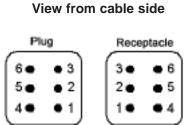
STA 6 Plugs & Receptacles

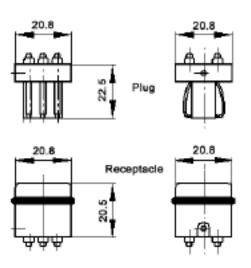


20.8

#### **SCREW TERMINATED INSERTS**



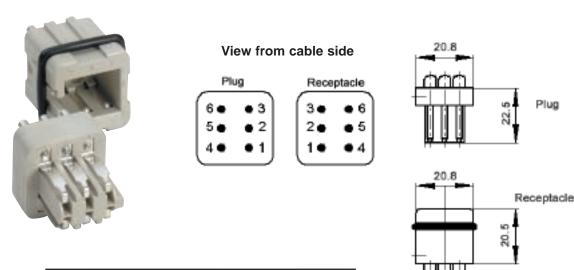




|                   | Plug    | Receptacle |
|-------------------|---------|------------|
| Screw Termination | 10.4881 | 10.4861    |

All dimensions are in mm.

#### **SOLDER TERMINATED INSERTS**



|                    | Plug    | Receptacle |
|--------------------|---------|------------|
| Solder Termination | 10.4872 | 10.4852    |

#### **MATING COMPONENTS**

STA 6 Plugs & Receptacles fit into the EPIC® HA 3/4 Housings. Following is a quick reference for the mating components. Diagrams are located in the HA Section of the catalog (Page 239). Please note that metric parts are available.



HA 3/4 Housings: Single Lever on Base for STA 6 Inserts

#### **HOODS**



| Material Size of Entry |    | Without Cable Gland | With Cable Gland |           |
|------------------------|----|---------------------|------------------|-----------|
| Wiaterial              | PG | NPT                 | NPT Part #       | PG Part # |
| Zinc Die Cast          | 11 | 1/2"                | 10.5121 NP       | 10.4265   |
| Black Plastic          | 11 | 1/2"                | 10.4255 NP       | 10.4267   |
| <b>Grey Plastic</b>    | 11 | 1/2"                | 10.4260 NP       | 10.4264   |

**TOP ENTRY** 

#### **SIDE ENTRY**

| Material Size of Entry |    | Without Cable Gland | With Cable Gland |           |
|------------------------|----|---------------------|------------------|-----------|
| Wiaterial              | PG | NPT                 | NPT Part #       | PG Part # |
| Zinc Die Cast          | 11 | 1/2"                | 10.5123 NP       | 10.4275   |
| Black Plastic          | 11 | 1/2"                | 10.4273 NP       | 10.6206   |
| Grey Plastic           | 11 | 1/2"                | 10.4270 NP       | 10.4271   |



#### PANEL MOUNT BASES

Grey Metal 10.4225

| Black Plastic | Grey Plastic |
|---------------|--------------|
| 10.4222       | 10.4220      |

| Grey Metal |
|------------|
| 10.4235    |

| Black Plastic | Grey Plastic |
|---------------|--------------|
| 10.4231       | 10.4230      |





#### **SURFACE MOUNT BASES**

| Material Size of Entry |    | Without Cable Gland | With Cable Gland |           |
|------------------------|----|---------------------|------------------|-----------|
| Waterial               | PG | NPT                 | NPT Part #       | PG Part # |
| Zinc Die Cast          | 11 | 1/2"                | 10.5127 NP       | 10.4245   |
| Black Plastic          | 11 | 1/2"                | 10.5117 NP       | 10.4247   |
| Grey Plastic           | 11 | 1/2"                | 10.4240 NP       | 10.4242   |



#### **CABLE COUPLER HOOD**

| Material Size of Entry |    | Without Cable Gland | With Cable Gland |           |
|------------------------|----|---------------------|------------------|-----------|
| Waterial               | PG | NPT                 | NPT Part #       | PG Part # |
| Zinc Die Cast          | 11 | 1/2"                | 10.5129 NP       | 10.4295   |
| Black Plastic          | 11 | 1/2"                | 10.4292 NP       | 10.6203   |
| Grey Plastic           | 11 | 1/2"                | 10.4290 NP       | 10.4291   |

#### DUST COVERS WITH OR WITHOUT ATTACHMENT STRING



-40°C to 125°C Material: Thermoplastic Resin or Aluminum Temperature:

|             | Part #                        |
|-------------|-------------------------------|
| with string | without string                |
| 10.4304     | 10.4300                       |
| 10.5130     | 10.4303                       |
| 10.4301     | -                             |
|             | j                             |
|             | -                             |
| 10.5131     |                               |
|             | 10.4304<br>10.5130<br>10.4301 |

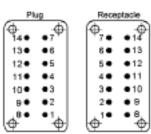
STA 14 Plugs & Receptacles

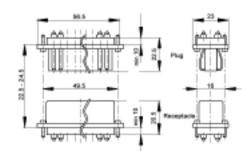


#### **SCREW TERMINATED INSERTS**



View from cable side



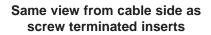


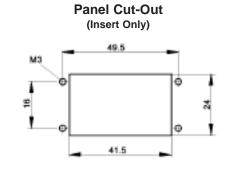
Same panel cut out as solder terminated inserts

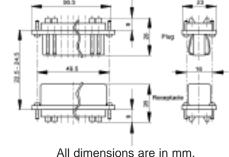
|                   | Plug    | Receptacle |
|-------------------|---------|------------|
| Screw Termination | 10.4931 | 10.4911    |

#### **SOLDER TERMINATED INSERTS**









— All difficultions are in

 Plug
 Receptacle

 Solder Termination
 10.4922
 10.4902

#### **MATING COMPONENTS**

STA 14 Plugs & Receptacles fit into the EPIC® HA 10 Housings. Following is a quick reference for the mating components. Diagrams are located in the HA Section of the catalog. Please note that metric parts are available.

#### **Standard Grey Coating (NEMA 4)**

#### **EP Black Coating (NEMA 4X)**













HA 10 Housings: Single Lever on Base for STA 14 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of  | Size of | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|--------------|---------|---------|-----------------------|------------|--------------------|------------|
| Cable Entry  | PG      | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry    | 13.5    | 1/2"    | 10.446010             | 10.4460 NP | -                  | -          |
|              | 16      | 1/2"    | 10.446110             | 10.4461 NP | 70.4610            | 70.4610 NP |
| Side Entry   | 16      | 1/2"    | 10.445010             | 10.4450 NP | 70.4630            | 70.4630 NP |
|              | 21      | 3/4"    | 10.445510             | 10.4455 NP | -                  | -          |
| LICH BROEILE |         |         |                       |            |                    |            |

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 70.4602    | 70.4602 NP  | 70.4612            | 70.4612 NP |
|             | 21            | 3/4" | 70.4604    | 70.4604 NP  | 70.4614            | 70.4614 NP |
| Side Entry  | 16            | 1/2" | 70.4622    | 70.4622 NP  | 70.4632            | 70.4632 NP |
|             | 21            | 3/4" | 70.4624    | 70.4624 NP  | 70.4634            | 70.4634 NP |



#### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.4420               | 70.4425            |  |
| With Dust Cover    | 70.4440               | 70.4445            |  |

#### **SURFACE MOUNT BASES**





| Number of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 1 Entry   | 16            | 1/2" | 10.4481               | 10.4481 NP | 70.4472            | 70.4472 NP |
|           | 21            | 3/4" | 10.4480               | 10.4480 NP | 70.4474            | 70.4474 NP |
| 2 Entries | 16            | 1/2" | 10.4501               | 10.4501 NP | 70.4482            | 70.4482 NP |
|           | 21            | 3/4" | 10.4500               | 10.4500 NP | 70.4484            | 70.4484 NP |

#### WITH DUST COVER

| Number of | Size o | of Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|--------|----------|-----------------------|------------|--------------------|------------|
| Entries   | PG     | NPT      | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 1 Entry   | 16     | 1/2"     | 70.4552               | 70.4552 NP | 70.4572            | 70.4572 NP |
|           | 21     | 3/4"     | 70.4554               | 70.4554 NP | 70.4574            | 70.4574 NP |
| 2 Entries | 16     | 1/2"     | 70.4562               | 70.4562 NP | 70.4582            | 70.4582 NP |
|           | 21     | 3/4"     | 70.4564               | 70.4564 NP | 70.4584            | 70.4584 NP |



#### **CABLE COUPLER HOOD**

| Profile          | Size of Entry |      | Without Cable Gland |            | With Cable Gland |            |
|------------------|---------------|------|---------------------|------------|------------------|------------|
| Profile          | PG            | NPT  | PG Part #           | NPT Part # | PG Part #        | NPT Part # |
| Standard Profile | 13.5          | 1/2" | 10.4390             | 10.4390 NP | -                | -          |
|                  | 16            | 1/2" | 70.4500             | 70.4500 NP | 70.4510          | 70.4510 NP |
| High Profile     | 21            | 3/4" | 70.4504             | 70.4504 NP | 70.4514          | 70.4514 NP |

## **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



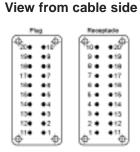
| Material: Thermoplastic Resin       | hermoplastic Resin Temperature: |             |                |
|-------------------------------------|---------------------------------|-------------|----------------|
|                                     |                                 | Part #      | Part #         |
|                                     |                                 | with string | without string |
| Dust cover for HA 10 Panel Mount or | Surface Mount                   | 10.4575     | 10.4577        |
| Base/ Cable Coupler hoods (include: | s gasket)                       |             |                |
| Dust cover for HA 10 Hoods          |                                 | 10.4576     | 10.4578        |

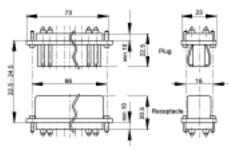
STA 20 Plugs & Receptacles



#### **SCREW TERMINATED INSERTS**







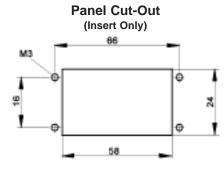
All dimensions are in mm.

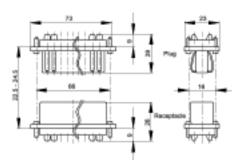
Same panel cut out as solder terminated inserts

|                   | Plug    | Receptacle |
|-------------------|---------|------------|
| Screw Termination | 10.5031 | 10.5011    |

#### SOLDER TERMINATED INSERTS







All dimensions are in mm.

Same view from cable side as screw terminated inserts

|                    | Plug    | Receptacle |
|--------------------|---------|------------|
| Solder Termination | 10.5022 | 10.5002    |

#### **MATING COMPONENTS**

STA 20 Plugs & Receptacles fit into the EPIC® HA 16 Housings. Following is a quick reference for the mating components. Diagrams are located in the HA Section of the catalog (Page 245). Please note that metric parts are available.

#### **Standard Grey Coating (NEMA 4)**

#### **EP Black Coating (NEMA 4X)**













HA 16 Housings: Single Lever on Base for STA 20 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |  |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |  |
| Top Entry   | 16            | 1/2" | 10.565010             | 10.5650 NP | 70.4910            | 70.4910 NP |  |
|             | 21            | 3/4" | 10.565210             | 10.5652 NP | -                  | -          |  |
| Side Entry  | 16            | 1/2" | 10.564010             | 10.5640 NP | 70.4930            | 70.4930 NP |  |
|             | 21            | 3/4" | 10.564510             | 10.5645 NP | -                  | -          |  |
|             |               |      |                       |            |                    |            |  |

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 70.4902    | 70.4902 NP  | 70.4912            | 70.4912 NP |
|             | 21            | 3/4" | 70.4904    | 70.4904 NP  | 70.4914            | 70.4914 NP |
| Side Entry  | 16            | 1/2" | 70.4922    | 70.4922 NP  | 70.4932            | 70.4932 NP |
|             | 21            | 3/4" | 70.4924    | 70.4924 NP  | 70.4934            | 70.4934 NP |



#### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.4620               | 70.4725            |  |
| With Dust Cover    | 70.4740               | 70.4745            |  |

#### **SURFACE MOUNT BASES**

#### WITHOUT DUST COVER



| Number of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 1 Entry   | 16            | 1/2" | 10.5671    | 10.5671 NP  | 70.4772            | 70.4772 NP |
|           | 21            | 3/4" | 10.5670    | 10.5670 NP  | 70.4774            | 70.4774 NP |
| 2 Entries | 16            | 1/2" | 10.5681    | 10.5681 NP  | 70.4782            | 70.4782 NP |
|           | 21            | 3/4" | 10.5680    | 10.5680 NP  | 70.4784            | 70.4784 NP |

#### WITH DUST COVER

| Number of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 1 Entry   | 16            | 1/2" | 70.4852               | 70.4852 NP | 70.4872            | 70.4872 NP |
|           | 21            | 3/4" | 70.4854               | 70.4854 NP | 70.4874            | 70.4874 NP |
| 2 Entries | 16            | 1/2" | 70.4862               | 70.4862 NP | 70.4882            | 70.4882 NP |
|           | 21            | 3/4" | 70.4864               | 70.4864 NP | 70.4884            | 70.4884 NP |



#### **CABLE COUPLER HOOD**

| Profile          | Size of Entry |      | Without Cable Gland |            | With Cable Gland |            |
|------------------|---------------|------|---------------------|------------|------------------|------------|
| Frome            | PG            | NPT  | PG Part #           | NPT Part # | PG Part #        | NPT Part # |
| Standard Profile | 16            | 1/2" | 10.5630             | 10.5630 NP | 70.4810          | 70.4810 NP |
| High Profile     | 16            | 1/2" | 70.4802             | 70.4802 NP | 70.4812          | 70.4812 NP |
|                  | 21            | 3/4" | 70.4804             | 70.4804 NP | 70.4814          | 70.4814 NP |

## **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



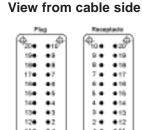
| Material: Thermoplastic Resin       | Temperature:  | -40°C to    | 125°C          |
|-------------------------------------|---------------|-------------|----------------|
|                                     |               | Part #      | Part #         |
|                                     |               | with string | without string |
| Dust cover for HA 16 Panel Mount or | Surface Mount | 10.4695     | 10.4697        |
| Base/ Cable Coupler hoods (includes | gasket)       |             |                |
| Dust cover for HA 16 Hoods          |               | 10.4696     | 10.4698        |

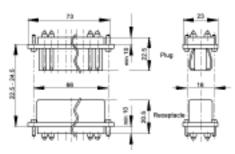
STA 40 Plugs & Receptacles



#### **SCREW TERMINATED INSERTS**







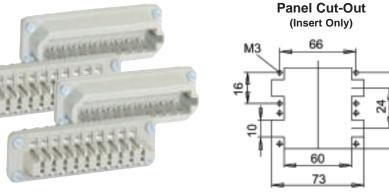
All dimensions are in mm.

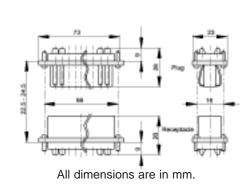
Same panel cut out as solder terminated inserts

|                        | Plug    | Receptacle |
|------------------------|---------|------------|
| Screw Termination (2X) | 10.5031 | 10.5011    |

#### SOLDER TERMINATED INSERTS







Same view from cable side as screw terminated inserts

|                         | Plug    | Receptacle |
|-------------------------|---------|------------|
| Solder Termination (2X) | 10.5022 | 10.5002    |

#### **MATING COMPONENTS**

STA 40 Plugs & Receptacles fit into the EPIC® HA 32 Housings. Following is a quick reference for the mating components. Diagrams are located in the HA Section of the catalog (Page 249). Please note that metric parts are available.

#### **Standard Grey Coating (NEMA 4)**

#### **EP Black Coating (NEMA 4X)**















HA 32 Housings: Double Levers on Base for STA 40 Inserts



#### **HOODS**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.5820               | 10.5820 NP | 70.5212            | 70.5212 NP |
|             | 29            | 1"   | 10.5830               | 10.5830 NP | 70.5214            | 70.5214 NP |
| Side Entry  | 21            | 3/4" | 10.5760               | 10.5760 NP | 70.5232            | 70.5232 NP |
|             | 29            | 1"   | 10.5770               | 10.5770 NP | 70.5234            | 70.5234 NP |

#### **PANEL MOUNT BASES**



| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.4720               | 70.5025            |

#### **SURFACE MOUNT BASES**



| # of      | Size o | f Entry | Standard G | Standard Grey Coating |           | oating (EP) |
|-----------|--------|---------|------------|-----------------------|-----------|-------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #  |
| 1 Entry   | 21     | 3/4"    | 10.4740    | 10.4740 NP            | 70.5072   | 70.5072 NP  |
|           | 29     | 1"      | 10.4741    | 10.4741 NP            | 70.5074   | 70.5074 NP  |
| 2 Entries | 21     | 3/4"    | 10.4820    | 10.4820 NP            | 70.5082   | 70.5082 NP  |
|           | 29     | 1"      | 10.4821    | 10.4821 NP            | 70.5084   | 70.5084 NP  |

#### **CABLE COUPLER HOOD**

| Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|--------|---------|------------|-------------|-----------|-------------|
| PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| 21     | 3/4"    | 10.5880    | 10.5880 NP  | 70.5110   | 70.5110 NP  |
| 29     | 1"      | 10.5885    | 10.5885 NP  | 70.5112   | 70.5112 NP  |

#### **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



| Material: Thermoplastic Resin       | -40°C to 125°C |             |                |
|-------------------------------------|----------------|-------------|----------------|
|                                     |                | Part #      | Part #         |
|                                     |                | with string | without string |
| Dust cover for HA 32 Panel Mount or | Surface Mount  | 10.4815     | 10.4817        |
| Base/ Cable Coupler hoods           |                |             |                |
| Dust cover for HA 32 Hoods (include | s gasket)      | 10.4816     | 10.4818        |

HA 32 Housings: Double Levers on Hood for STA 40 Inserts





| Cable Entry | PG | NPT  | PG Part # | NPT Part # | PG Part # | NPT Part # |
|-------------|----|------|-----------|------------|-----------|------------|
| Top Entry   | 21 | 3/4" | 10.5840   | 10.5840 NP | 70.5262   | 70.5262 NP |
|             | 29 | 1"   | 10.5850   | 10.5850 NP | 70.5264   | 70.5264 NP |
| Side Entry  | 21 | 3/4" | 10.5780   | 10.5780 NP | 70.5282   | 70.5282 NP |
|             | 29 | 1"   | 10.5790   | 10.5790 NP | 70.5284   | 70.5284 NP |
|             |    |      |           |            |           | _          |
|             |    |      |           |            |           |            |

Black Coating (EP)

Size of Entry Standard Grey Coating

#### PANEL MOUNT BASES



#### WITH DUST COVER

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.4731               | -                  |
| With Dust Cover    | 70.5030               | 70.5035            |

### **SURFACE MOUNT BASES**



#### WITH DUST COVER

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 1 Entry   | 21     | 3/4"    | 70.5152    | 70.5152 NP  | 70.5172            | 70.5172 NP |  |
|           | 29     | 1"      | 70.5154    | 70.5154 NP  | 70.5174            | 70.5174 NP |  |
| 2 Entries | 21     | 3/4"    | 70.5162    | 70.5162 NP  | 70.5182            | 70.5182 NP |  |
|           | 29     | 1"      | 70.5164    | 70.5164 NP  | 70.5184            | 70.5184 NP |  |



#### **HBE Series**

The HBE series inserts are suitable for applications with high voltages and current. The inserts can be terminated in a variety of ways: screw, crimp, or "spring" cage clamp.

These inserts fit into the HBE Series housings which are standard with fixed levers.



 HBE 6 Series
 276

 HBE 10 Series
 281

 HBE 16 Series
 291

 HBE 24 Series
 301

 HBE 32 Series
 311

 HBE 48 Series
 315

**HBE Inserts: Technical Data** 



#### **TECHNICAL DATA**

**Number of Contacts:** 6, 10, 16, 24, 32, 48 (+PE)

**Screw Termination & Crimp Termination:** 

Rated Voltage: VDE: 500V EPIC® HBE 6 - 48 UL: 600V EPIC® HBE 6 - 48

CSA: 600V EPIC® HBE 6 - 48

Rated Current: VDE: 16A EPIC® HBE 6 - 48 UL: 16A EPIC® HBE 6 - 48

CSA: 16A EPIC® HBE 6 - 48

Temperature Range: -40°C to 125°C

Cage Clamp:

Rated Voltage: VDE: 500V EPIC® HBE 6 - 48 UL: 600V EPIC® HBE 6 - 48

CSA: 600V EPIC® HBE 6 - 48

Rated Current VDE: 16A EPIC® HBE 6 - 48 UL: 16A EPIC® HBE 6 - 48

CSA: 16A EPIC® HBE 6 - 48

**Pollution Level:** 3 **Dimensioning Transient:** 6 kV

 Termination Type:
 mm²
 AWG

 Screw Termination:
 0.5 - 2.5 mm²
 20 - 14

 Crimp Termination:
 0.5 - 4.0 mm²
 20 - 12

 Cage Clamp Termination:
 0.5 - 2.5 mm²
 20 - 14

Contacts:

**Screw Termination:** Copper alloy, silver plated

Crimp Termination: Copper alloy, silver plated/ gold plated

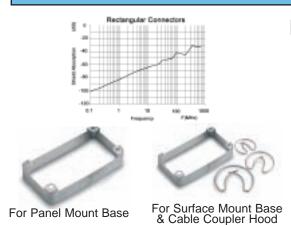
Cage Clamp Termination Copper alloy, silver plated

Mating Cycles: 100 (higher mating cycles depending on the application)

**Contact Resistance:** 

Screw Termination:<2 mOhm</th>Crimp Termination:<2 mOhm</th>Cage Clamp termination:1.5 - 4 mOhm

Please note that terminal block inserts are available. Please see website.



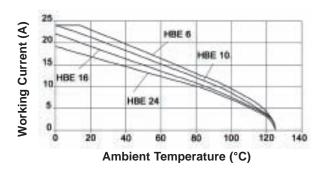
#### **EMC PROTECTION**

|   | PG/NPT  | Metric  |
|---|---------|---------|
| HBE 6 Panel Mount Base                    | 70.3500 | 79.3500 |
| HBE 6 Surface Mount & Cable Coupler Hood  | 70.3520 | 79.3520 |
| HBE 10 Panel Mount Base                   | 70.3501 | 79.3501 |
| HBE 10 Surface Mount & Cable Coupler Hood | 70.3521 | 79.3521 |
| HBE 16 Panel Mount Base                   | 70.3502 | 79.3502 |
| HBE 16 Surface Mount & Cable Coupler Hood | 70.3522 | 79.3522 |
| HBE 24 Panel Mount Base                   | 70.3503 | 79.3503 |
| HBE 24 Surface Mount & Cable Coupler Hood | 70.3523 | 79.3523 |

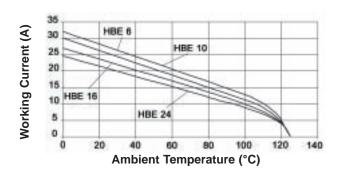
**HBE Series** 

#### **HBE INSERTS: DERATING CURVES**

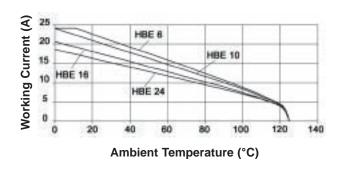
#### HBE SCREW TERMINATED: 1.5 mm<sup>2</sup> (16 AWG)



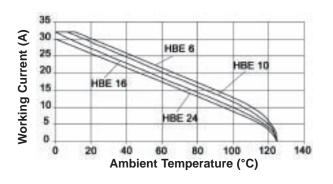
## HBE SCREW TERMINATED: 2.5 mm<sup>2</sup> (14 AWG)



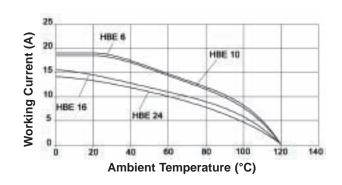
#### HBE CRIMP TERMINATED: 1.5 mm² (16 AWG)



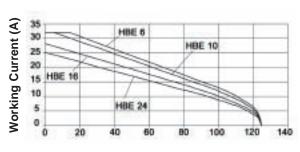
## HBE CRIMP TERMINATED: 2.5 mm<sup>2</sup> (14 AWG)



# HBE CAGE CLAMP: 1.5 mm<sup>2</sup> (16 AWG)



# HBE CAGE CLAMP: 2.5 mm<sup>2</sup> (14 AWG)



Ambient Temperature (°C)

HBE Housings: Technical Data

Specifications: DIN 43652
Temperature Range: -40°C to +125°C
Protection class: NEMA 4, IP65

*Material:* HBE 6 - 48: aluminum alloy, powder coated

#### **STANDARD GREY COATING (NEMA 4)**



HBE 6-48: aluminum alloy, powder coated (grey), locking levers and bolts made of zinc plated steel.

For industrial applications in demanding environments.

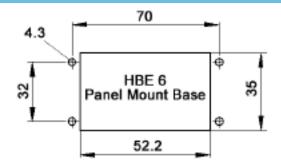
#### **EP BLACK COATING (NEMA 4X)**



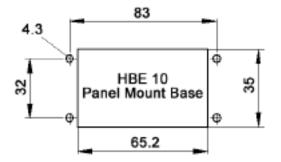
HBE 6 - 48 EP: Environmentally Protected: aluminum alloy, powder coated (black), locking levers and bolts made of stainless steel.

For industrial applications in extremely demanding environments with aggressive atmospheres.

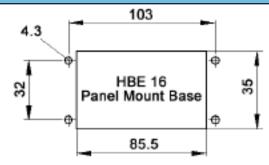
#### HBE Panel Cut-Outs for Panel Mount Bases



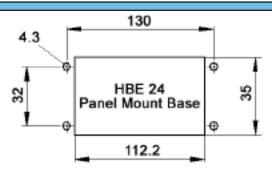
Fits the following plugs & receptacles: HBE 6, HDD 24, HEE 10, and 2 Module Frames.



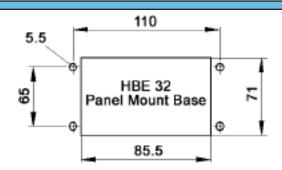
Fits the following plugs & receptacles: HBE 10, HBVE 3, HDD 42, HEE 18 and 3 Module Frames.



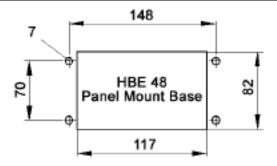
Fits the following plugs & receptacles: HBE 16, HBS 6, HBVE 6, HD 40, HDD 72, HEE 32, 5 Module Frames, 4 Pwr/0 Sgl, and 4 Pwr/2 Sgl.



Fits the following plugs & receptacles: HBE 24, HBVE 10, HD 64, HDD 108, HEE 46, 7 Module Frame, and 4 Pwr/8 Sgl.



Fits the following plugs & receptacles: HBE 32, HBS 12, HD 80, HDD 144, HEE 64, and 10 Module Frames.



Fits the following plugs & receptacles: HBE 48, HD 128, HDD 216, HEE 92, and 14 Module Frames.

All dimensions are in mm.



HBE 6 Plugs & Receptacles

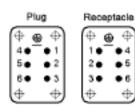


#### **SCREW & CRIMP TERMINATED INSERTS**

#### SCREW TERMINATED



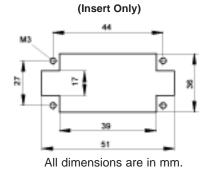
**View from Cable Side** 



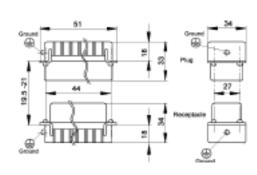
**CRIMP TERMINATED** 



**Contacts Sold Separately** 



**Panel Cut-Out** 



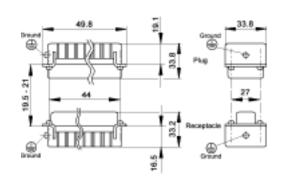
These inserts fit in the HBE 6 Series Housings.

|  | Plug    | Receptacle |
|--|---------|------------|
| Screw Terminated with wire protection    | 10.1900 | 10.1910    |
| Screw Terminated without wire protection | 10.1901 | 10.1911    |
| Crimp Terminated: Machine                | 10.1800 | 10.1810    |
| ·  |         |            |

Crimp Contacts are on the next page.

#### **SCREWLESS SPRING CAGE CLAMP INSERTS**





Panel Cut-Out (Insert Only)

44

49.8

Same View from Cable Side as Screw & Crimp Termination

These inserts fit in the HBE 6 Series Housings.

|                      | Plug    | Receptacle |
|----------------------|---------|------------|
| Screwless Cage Clamp | 10.4000 | 10.4010    |

All dimensions are in mm.



**Accessories for Crimp Terminated Inserts** 

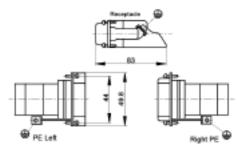
#### SCREW TERMINATED TERMINAL BLOCK INSERTS



These terminal block inserts only fit in HBE 6 panel mount bases

All dimensions are in mm.

|                              | Receptacle |
|------------------------------|------------|
| Terminal Block: Right Ground | 70.3111    |
| Terminal Block: Left Ground  | 70.3101    |



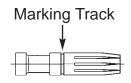
One terminal block insert mates with one screw terminated insert.

#### **MACHINED CONTACTS: DIAMETER 2.5 MM<sup>2</sup>**









Bags of 100

|                 |     | Sil     | ver     | Gold    |         | Stripping            | # of Marking |  |  |  |  |
|-----------------|-----|---------|---------|---------|---------|----------------------|--------------|--|--|--|--|
| mm <sup>2</sup> | AWG | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |  |  |  |  |
| 0.5             | 20  | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |  |  |  |  |
| .75 - 1.0       | 18  | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |  |  |  |  |
| 1.5             | 16  | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |  |  |  |  |
| 2.5             | 14  | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |  |  |  |  |
| 4.0             | 12  | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |  |  |  |  |

Part number= 1 contact

#### **CRIMP TOOLS**

Wire Gauge: 0.5 - 4.0 mm<sup>2</sup> for the HBE Crimp Inserts



**Locator** 11.1472



Crimp Tool 11.1470



Crimp Dies 11.1471

For removal of contacts use a slotted screwdriver. No special tool is necessary.

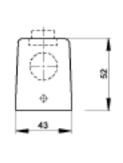
Please note that the crimp range for this tool is 0.14 to 2.5 mm² (AWG 26 - 14) with the appropriate crimp dies.

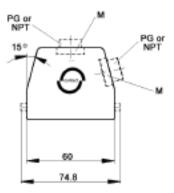
HBE 6 Housings: Single Lever on Base

#### **HOODS**

**TOP ENTRY** 









All dimensions are in mm.

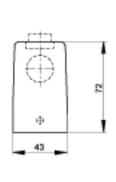
| Position of Size of Entry |      |      |        | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |
|---------------------------|------|------|--------|---------|------------|---------|--------------------|------------|---------|
| <b>Cable Entry</b>        |      |      |        | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |
|                           | PG   | NPT  | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |
| Top Entry                 | 13.5 | 1/2" | 20     | 10.0110 | 10.0110 NP | 19.0110 | 70.0216            | 70.0216 NP | 79.0216 |
|                           | 16   | 1/2" | 25     | 10.0210 | 10.0210 NP | 19.0210 | 70.0210            | 70.0210 NP | 79.0210 |
| Side Entry                | 13.5 | 1/2" | 20     | 10.0120 | 10.0120 NP | 19.0120 | 70.0236            | 70.0236 NP | 79.0236 |
|                           | 16   | 1/2" | 25     | 10.0220 | 10.0220 NP | 19.0220 | 70.0230            | 70.0230 NP | 79.0230 |

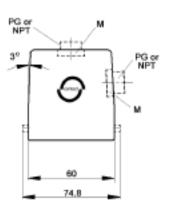
Top Entry metric hoods do not come with a neck.

#### **HIGH PROFILE HOODS**

**TOP ENTRY** 









**SIDE ENTRY** 

All dimensions are in mm.

| Position of | Siz | e of I | Entry  | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |
|-------------|-----|--------|--------|---------|------------|---------|--------------------|------------|---------|
| Cable Entry |     | NDT    | Matria | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |
|             | PG  | NPT    | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |
| Top Entry   | 21  | 3/4"   | 25     | 70.0202 | 70.0202 NP | 79.0202 | 70.0212            | 70.0212 NP | 79.0212 |
|             | 29  | 1"     | 32     | 70.0204 | 70.0204 NP | 79.0204 | 70.0214            | 70.0214 NP | 79.0214 |
| Side Entry  | 21  | 3/4"   | 25     | 70.0222 | 70.0222 NP | 79.0222 | 70.0232            | 70.0232 NP | 79.0232 |
|             | 29  | 1"     | 32     | 70.0224 | 70.0224 NP | 79.0224 | 70.0234            | 70.0234 NP | 79.0234 |

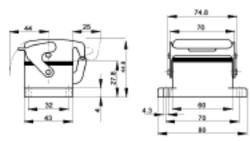
Top Entry metric hoods do not come with a neck.



HBE 6 Housings: Single Lever on Base

#### PANEL MOUNT BASES





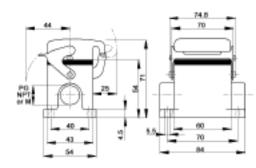


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.0030               | 70.0025            |
| Panel Mount with Dust Cover    | 10.0040               | 70.0045            |

#### **SURFACE MOUNT BASES**







All dimensions are in mm.

|                | # of Size of Entry |      |        | Stand                 | ard Grey C | nating  | Black Coating (EP)  |            |         |
|----------------|--------------------|------|--------|-----------------------|------------|---------|---------------------|------------|---------|
| # of           | Size of Lifting    |      |        | Standard Grey Coating |            |         | Black Coating (Li ) |            |         |
| <b>Entries</b> |                    |      |        | PG                    | NPT        | Metric  | PG                  | NPT        | Metric  |
|                | PG                 | NPT  | Metric | Part #                | Part #     | Part #  | Part #              | Part #     | Part #  |
| 2 Entries      | 16                 | 1/2" | 20     | 10.0060               | 10.0060 NP | 19.0060 | 70.0080             | 70.0080 NP | 79.0080 |
|                | -                  | -    | 25     | -                     | -          | 79.0066 | -                   | -          | 79.0086 |
| 1 Entry        | 16                 | 1/2" | 20     | 10.0050               | 10.0050 NP | 19.0050 | 70.0070             | 70.0070 NP | 79.0070 |
|                | -                  | -    | 25     | -                     | -          | 79.0056 | -                   | -          | 79.0076 |
| 2 Entries with | 16                 | 1/2" | 20     | 10.0090               | 10.0090 NP | 19.0090 | 70.0180             | 70.0180 NP | 79.0180 |
| dust cover     | -                  | -    | 25     | -                     | -          | 79.0166 | -                   | -          | 79.0186 |
| 1 Entry with   | 16                 | 1/2" | 20     | 10.0070               | 10.0070 NP | 19.0070 | 70.0170             | 70.0170 NP | 79.0170 |
| dust cover     | -                  | -    | 25     | -                     | -          | 79.0156 | -                   | -          | 79.0176 |

#### **DUST COVERS WITH ATTACHMENT STRING**



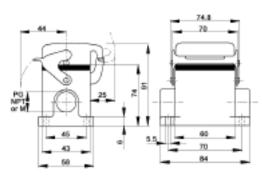
Material: Thermoplastic Resin Temperature: -40°C to 125°C

|   | Part #  |
|---|---------|
| Dust cover with single lever and gasket for HBE 6 Hoods     | 10.0165 |
| Dust cover with single lever bolts for HBE 6 Panel Mount or | 10.0150 |
| Surface Mount Base/ Cable Coupler Hood                      |         |

HBE 6 Housings: Single Lever on Base

#### HIGH PROFILE SURFACE MOUNT BASES







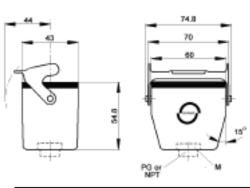
**HIGH PROFILE** 

All dimensions are in mm.

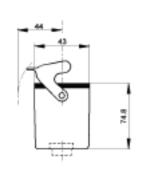
| # of           | # of Size of Entry |      |        |         | lard Grey C | oating  | Black Coating (EP) |            |         |
|----------------|--------------------|------|--------|---------|-------------|---------|--------------------|------------|---------|
| <b>Entries</b> |                    |      |        | PG      | NPT         | Metric  | PG                 | NPT        | Metric  |
|                | PG                 | NPT  | Metric | Part #  | Part #      | Part #  | Part #             | Part #     | Part #  |
| 2 Entries      | 21                 | 3/4" | 25     | 70.0062 | 70.0062 NP  | 79.0062 | 70.0082            | 70.0082 NP | 79.0082 |
|                | 29                 | 1"   | 32     | 70.0064 | 70.0064 NP  | 79.0064 | 70.0084            | 70.0084 NP | 79.0084 |
| 1 Entry        | 21                 | 3/4" | 25     | 70.0052 | 70.0052 NP  | 79.0052 | 70.0072            | 70.0072 NP | 79.0072 |
|                | 29                 | 1"   | 32     | 70.0054 | 70.0054 NP  | 79.0054 | 70.0074            | 70.0074 NP | 79.0074 |
| 2 Entries with | 21                 | 3/4" | 25     | 70.0162 | 70.0162 NP  | 79.0162 | 70.0182            | 70.0182 NP | 79.0182 |
| dust cover     | 29                 | 1"   | 32     | 70.0164 | 70.0164 NP  | 79.0164 | 70.0184            | 70.0184 NP | 79.0184 |
| 1 Entry with   | 21                 | 3/4" | 25     | 70.0152 | 70.0152 NP  | 79.0152 | 70.0172            | 70.0172 NP | 79.0172 |
| dust cover     | 29                 | 1"   | 32     | 70.0154 | 70.0154 NP  | 79.0154 | 70.0174            | 70.0174 NP | 79.0174 |

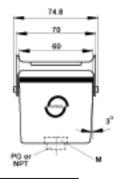
## **CABLE COUPLER HOODS**

#### STANDARD PROFILE









| <b>D</b> ('' | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|--------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Profile      | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Standard     | 13.5          | 1/2" | 20     | 10.0140               | 10.0140 NP    | 19.0140          | -                  | -             | 79.0110          |
| Profile      | 16            | 1/2" | 25     | 10.0240               | 10.0240 NP    | 19.0240          | 70.0110            | 70.0110 NP    | 79.0116          |
| High         | 21            | 3/4" | 25     | 70.0102               | 70.0102 NP    | 79.0102          | 70.0112            | 70.0112 NP    | 79.0112          |
| Profile      | 29            | 1"   | 32     | 70.0104               | 70.0104 NP    | 79.0104          | 70.0114            | 70.0114 NP    | 79.0114          |

Cable coupler metric hoods do not come with a neck.



HBE 10 Plugs & Receptacles

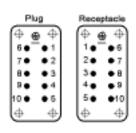


#### **SCREW & CRIMP TERMINATED INSERTS**

#### **SCREW TERMINATED**



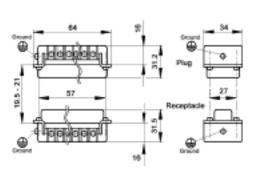
View from Cable Side

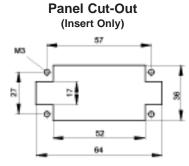


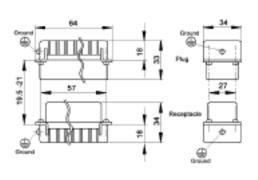
**CRIMP TERMINATED** 



**Contacts Sold Separately** 







All dimensions are in mm.

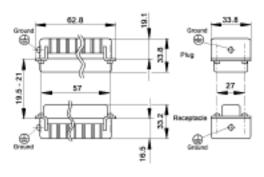
These inserts fit in the HBE 10 Series Housings.

|   | Plug    | Receptacle |
|---|---------|------------|
| Screw Terminated: with wire protection    | 10.1920 | 10.1930    |
| Screw Terminated: without wire protection | 10.1921 | 10.1931    |
| Crimp Terminated: Machine                 | 10.1820 | 10.1830    |
|   |         |            |

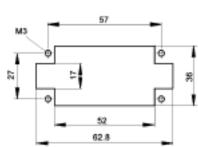
Crimp Contacts are on the next page.

#### SCREWLESS SPRING CAGE CLAMP INSERTS





Panel Cut-Out



All dimensions are in mm.

Same View from Cable Side as Screw & Crimp Termination

|                      | Plug    | Receptacle |
|----------------------|---------|------------|
| Screwless Cage Clamp | 10.4001 | 10.4011    |

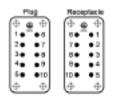
These inserts fit in the HBE 10 Series Housings.

**Accessories for Crimp Terminated Inserts** 

#### **SCREW TERMINATED TERMINAL BLOCK INSERTS**



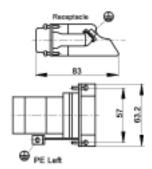
**View from Cable Side** 



All dimensions are in mm.



|                             | Receptacle |
|-----------------------------|------------|
| Terminal Block: Left Ground | 70.3121    |



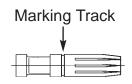
One terminal block insert mates with one screw terminated insert.

#### MACHINED CONTACTS: DIAMETER 2.5 MM<sup>2</sup>









| Bags | of | 10 | O |
|------|----|----|---|
| Dugo | O. |    | v |

|           |     | Silver  |         | Gold       |         | Stripping            | # of Marking |  |  |  |  |
|-----------|-----|---------|---------|------------|---------|----------------------|--------------|--|--|--|--|
| mm²       | AWG | Pin     | Socket  | Pin Socket |         | Length (mm)          | Tracks       |  |  |  |  |
| 0.5       | 20  | 11.1900 | 11.1950 | 11.1920    | 11.1970 | Pin=7.4, Socket =7.3 | -            |  |  |  |  |
| .75 - 1.0 | 18  | 11.1901 | 11.1951 | 11.1921    | 11.1971 | Pin=7.4, Socket =7.3 | 1            |  |  |  |  |
| 1.5       | 16  | 11.1902 | 11.1952 | 11.1922    | 11.1972 | Pin=7.4, Socket =7.3 | 2            |  |  |  |  |
| 2.5       | 14  | 11.1903 | 11.1953 | -          | -       | Pin=7.4, Socket =7.3 | 3            |  |  |  |  |
| 4.0       | 12  | 11.1904 | 11.1954 | -          | -       | Pin=7.4, Socket =7.3 | -            |  |  |  |  |

Part number= 1 contact

#### **CRIMP TOOLS**

Wire Gauge: 0.5 - 4.0 mm<sup>2</sup> for the HBE Crimp Inserts



**Locator** 11.1472



Crimp Tool 11.1470



Crimp Dies 11.1471

For removal of contacts use a slotted screwdriver. No special tool is necessary.

Please note that the crimp range for this tool is 0.14 to 2.5 mm<sup>2</sup> (AWG 26 - 14) with the appropriate crimp dies.

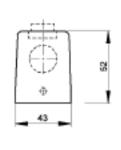


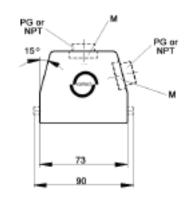
HBE 10 Housings: Single Lever on Base

#### **HOODS**

**TOP ENTRY** 









SIDE ENTRY

All dimensions are in mm.

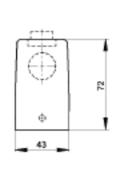
| Position of | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Top Entry   | 16            | 1/2" | 20     | 10.0409               | 10.0409 NP    | 19.0409          | 70.0490            | 70.0490 NP    | 79.0490          |
|             | 21            | 3/4" | 25     | 10.0407               | 10.0407 NP    | 19.0407          | 70.0496            | 70.0496 NP    | 79.0496          |
| Side Entry  | 16            | 1/2" | 20     | 10.0429               | 10.0429 NP    | 19.0429          | 70.0590            | 70.0590 NP    | 79.0590          |
|             | 21            | 3/4" | 25     | 10.0428               | 10.0428 NP    | 19.0428          | 70.0596            | 70.0596 NP    | 79.0596          |

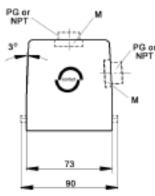
Metric hoods do not come with a neck.

#### **HIGH PROFILE HOODS**

**TOP ENTRY** 









SIDE ENTRY

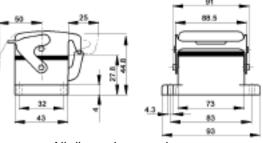
All dimensions are in mm.

| Position of | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Top Entry   | 21            | 3/4" | 25     | 70.0442               | 70.0442 NP    | 79.0442          | 70.0492            | 70.0492 NP    | 79.0492          |
|             | 29            | 1"   | 32     | 70.0444               | 70.0444 NP    | 79.0444          | 70.0494            | 70.0494 NP    | 79.0494          |
| Side Entry  | 21            | 3/4" | 25     | 70.0542               | 70.0542 NP    | 79.0542          | 70.0592            | 70.0592 NP    | 79.0592          |
|             | 29            | 1"   | 32     | 70.0544               | 70.0544 NP    | 79.0544          | 70.0594            | 70.0594 NP    | 79.0594          |

HBE 10 Housings: Single Lever on Base

## PANEL MOUNT BASES





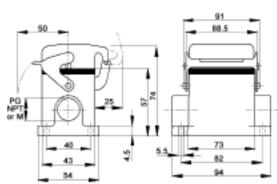


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.0329               | 70.0327            |
| Panel Mount with Dust Cover    | 10.0339               | 70.0337            |

#### **SURFACE MOUNT BASES**







All dimensions are in mm.

| # of Size of Entry |    |      | Standard Grey Coating |              |               | Black Coating (EP) |              |               |                  |
|--------------------|----|------|-----------------------|--------------|---------------|--------------------|--------------|---------------|------------------|
| Entries            | PG | NPT  | Metric                | PG<br>Part # | NPT<br>Part # | Metric<br>Part #   | PG<br>Part # | NPT<br>Part # | Metric<br>Part # |
| 2 Entries          | 16 | 1/2" | 20                    | 10.0359      | 10.0359 NP    | 19.0359            | 70.0630      | 70.0630 NP    | 79.0630          |
|                    |    |      | 25                    | -            | -             | 79.0616            | -            | -             | 79.0636          |
| 1 Entry            | 16 | 1/2" | 20                    | 10.0349      | 10.0349 NP    | 19.0349            | 70.0620      | 70.0620 NP    | 79.0620          |
|                    | 21 | 3/4" | 25                    | 10.0347      | 10.0347 NP    | 19.0347            | -            | -             | 79.0626          |
| 2 Entries with     | 16 | 1/2" | 20                    | 10.0389      | 10.0389 NP    | 19.0389            | 70.0670      | 70.0670 NP    | 79.0670          |
| dust cover         |    |      | 25                    | -            | -             | 79.0656            | -            | -             | 79.0676          |
| 1 Entry with       | 16 | 1/2" | 20                    | 10.0369      | 10.0369 NP    | 19.0369            | 70.0660      | 70.0660 NP    | 79.0660          |
| dust cover         |    |      | 25                    | -            | -             | 79.0646            | -            | -             | 79.0666          |

#### **DUST COVERS WITH ATTACHMENT STRING**

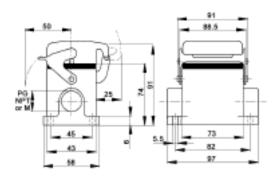


| Material:         | Thermoplastic Resin  | -40°C to | 125°C |        |  |  |  |  |
|-------------------|--|----------|-------|--------|--|--|--|--|
|                   |  |          |       | Part # |  |  |  |  |
| <b>Dust cover</b> | Dust cover with single lever for HBE 10 Hoods                |          |       |        |  |  |  |  |
| <b>Dust cover</b> | Dust cover with single lever bolts for HBE 10 Panel Mount or |          |       |        |  |  |  |  |
| <b>Surface Mo</b> | ount Base/ Cable Coupler Hoo                                 | od       |       |        |  |  |  |  |

HBE 10 Housings: Single Lever on Base

#### HIGH PROFILE SURFACE MOUNT BASES





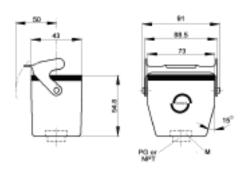


All dimensions are in mm.

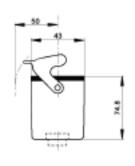
| # of           | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|----------------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| Entries        |               |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |
|                | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| 2 Entries      | 21            | 3/4" | 25     | 70.0612               | 70.0612 NP | 79.0612 | 70.0632            | 70.0632 NP | 79.0632 |
|                | 29            | 1"   | 32     | 70.0614               | 70.0614 NP | 79.0614 | 70.0634            | 70.0634 NP | 79.0634 |
| 1 Entry        | 21            | 3/4" | 25     | 70.0602               | 70.0602 NP | 79.0602 | 70.0622            | 70.0622 NP | 79.0622 |
|                | 29            | 1"   | 32     | 70.0604               | 70.0604 NP | 79.0604 | 70.0624            | 70.0624 NP | 79.0624 |
| 2 Entries with | 21            | 3/4" | 25     | 70.0652               | 70.0652 NP | 79.0652 | 70.0672            | 70.0672 NP | 79.0672 |
| dust cover     | 29            | 1"   | 32     | 70.0654               | 70.0654 NP | 79.0654 | 70.0674            | 70.0674 NP | 79.0674 |
| 1 Entry with   | 21            | 3/4" | 25     | 70.0642               | 70.0642 NP | 79.0642 | 70.0662            | 70.0662 NP | 79.0662 |
| dust cover     | 29            | 1"   | 32     | 70.0644               | 70.0644 NP | 79.0644 | 70.0664            | 70.0664 NP | 79.0664 |

#### **CABLE COUPLER HOODS**

#### STANDARD PROFILE







**HIGH PROFILE** 



| D Cl.    | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|----------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| Profile  |               |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |
|          | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| Standard | 16            | 1/2" | 20     | 10.0469               | 10.0469 NP | 19.0469 | 70.0430            | 70.0430 NP | 79.0430 |
| Profile  | 21            | 3/4" | 25     | 70.0422               | 70.0422 NP | 79.0422 | 70.0432            | 70.0432 NP | 79.0432 |
| High     | 21            | 3/4" | 25     | 70.0424               | 70.0424 NP | 79.0424 | 70.0434            | 70.0434 NP | 79.0434 |
| Profile  | 29            | 1"   | 32     | 70.0426               | 70.0426 NP | 79.0426 | 70.0436            | 70.0436 NP | 79.0436 |

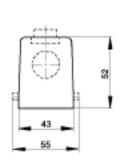


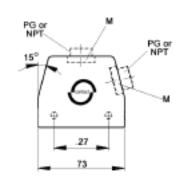
HBE 10 Housings: Double Levers on Base

#### **HOODS**

**TOP ENTRY** 









**SIDE ENTRY** 

All dimensions are in mm.

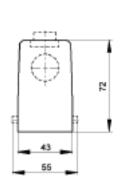
| Position of Size of Entry |    |      | Entry  | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |  |
|---------------------------|----|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|--|
| Cable Entry               | PG | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |  |
| Top Entry                 | 16 | 1/2" | 20     | 10.0400      | 10.0400 NP    | 19.0400          | 70.0510            | 70.0510 NP    | 79.0510          |  |
|                           | 21 | 3/4" | 25     | 10.0401      | 10.0401 NP    | 19.0401          | 70.0512            | 70.0512 NP    | 79.0512          |  |
| Side Entry                | 16 | 1/2" | 20     | 10.0420      | 10.0420 NP    | 19.0420          | 70.0530            | 70.0530 NP    | 79.0530          |  |
|                           | 21 | 3/4" | 25     | 10.0421      | 10.0421 NP    | 19.0421          | 70.0532            | 70.0532 NP    | 79.0532          |  |

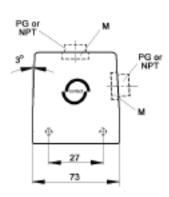
Metric hoods do not come with a neck.

#### **HIGH PROFILE HOODS**

**TOP ENTRY** 









All dimensions are in mm.

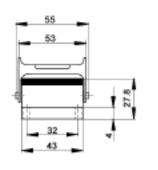
| Position of      | Siz | e of I | Entry  | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|------------------|-----|--------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| Cable Entry      |     |        |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |
|                  | PG  | NPT    | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| <b>Top Entry</b> | 21  | 3/4"   | 25     | 70.0504               | 70.0504 NP | 79.0504 | 70.0514            | 70.0514 NP | 79.0514 |
|                  | 29  | 1"     | 32     | 70.0506               | 70.0506 NP | 79.0506 | 70.0516            | 70.0516 NP | 79.0516 |
| Side Entry       | 21  | 3/4"   | 25     | 70.0524               | 70.0524 NP | 79.0524 | 70.0534            | 70.0534 NP | 79.0534 |
|                  | 29  | 1"     | 32     | 70.0526               | 70.0526 NP | 79.0526 | 70.0536            | 70.0536 NP | 79.0536 |

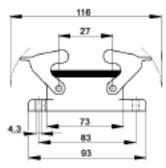


HBE 10 Housings: Double Levers on Base

#### **PANEL MOUNT BASES**





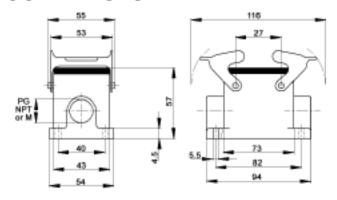


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.0320               | 70.0325            |

#### **SURFACE MOUNT BASES**





All dimensions are in mm.

| # of          | # of Size of Entry |               |    | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |  |
|---------------|--------------------|---------------|----|--------------|---------------|------------------|--------------------|---------------|------------------|--|
| Entries       | PG                 | PG NPT Metric |    | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |  |
| 2 Entries     | 16                 | 1/2"          | 20 | 10.0350      | 10.0350 NP    | 19.0350          | 70.0380            | 70.0380 NP    | 79.0380          |  |
| without cover | -                  | -             | 25 | -            | -             | 19.0351          | -                  | -             | 79.0386          |  |
| 1 Entry       | 16                 | 1/2"          | 20 | 10.0340      | 10.0340 NP    | 19.0340          | 70.0370            | 70.0370 NP    | 79.0370          |  |
| without cover | -                  | -             | 25 | -            | -             | 19.0341          | -                  | -             | 79.0376          |  |

#### **DUST COVERS WITH ATTACHMENT STRING**

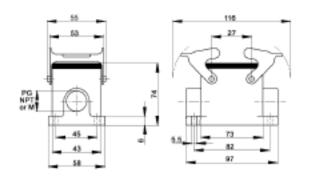


| Material:              | Thermoplastic Resin        | Temperature:        | -40 | °C to 125°C |
|------------------------|----------------------------|---------------------|-----|-------------|
|                        |                            |                     |     | Part #      |
| <b>Dust cover with</b> | double levers and gasket f | or HBE 10 Hoods     |     | 10.0485     |
| <b>Dust cover with</b> | double lever bolts for HBE | 10 Panel Mount or   |     | 10.0470     |
| <b>Surface Mount</b>   | Base/ Cable Coupler Hood   |                     |     |             |
| <b>Dust cover with</b> | double lever bolts and gas | ket for HBE 10 Hood | s   | 10.0471     |
| Dust cover with        | double lever bolts and gas | ket for HBE 10 Hood | S   | 10.047      |

HBE 10 Housings: Double Levers on Base

#### HIGH PROFILE SURFACE MOUNT BASES





All dimensions are in mm.

| # of          | Size of Entry |      |              | Standard Grey Coating |                  |              | Black Coating (EP) |                  |         |
|---------------|---------------|------|--------------|-----------------------|------------------|--------------|--------------------|------------------|---------|
| Entries       | PG NPT Metric |      | PG<br>Part # | NPT<br>Part #         | Metric<br>Part # | PG<br>Part # | NPT<br>Part #      | Metric<br>Part # |         |
| 2 Entries     | <u> </u>      | 3/4" |              |                       | 70.0362 NP       |              |                    |                  |         |
|               | 21            | 3/4  | 25           | 70.0362               | 70.0362 NP       | 79.0362      | 70.0382            | 70.0382 NP       | 79.0382 |
| without cover | 29            | 1"   | 32           | 70.0364               | 70.0364 NP       | 79.0364      | 70.0384            | 70.0384 NP       | 79.0384 |
| 1 Entry       | 21            | 3/4" | 25           | 70.0352               | 70.0352 NP       | 79.0352      | 70.0372            | 70.0372 NP       | 79.0372 |
| without cover | 29            | 1"   | 32           | 70.0354               | 70.0354 NP       | 79.0354      | 70.0374            | 70.0374 NP       | 79.0374 |

### **CABLE COUPLER HOODS**

#### STANDARD PROFILE

#### 55 53 43 43 73 73 73 73 75 MT

**HIGH PROFILE** 

All dimensions are in mm.

| 5 (1)    | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|----------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| Profile  |               |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |
|          | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| Standard | 16            | 1/2" | 20     | 10.0460               | 10.0460 NP | 19.0460 | 70.0410            | 70.0410 NP | 79.0410 |
| Profile  | 21            | 3/4" | 25     | 70.0402               | 70.0402 NP | 79.0402 | 70.0412            | 70.0412 NP | 79.0412 |
| High     | 21            | 3/4" | 25     | 70.0404               | 70.0404 NP | 79.0404 | 70.0414            | 70.0414 NP | 79.0414 |
| Profile  | 29            | 1"   | 32     | 70.0406               | 70.0406 NP | 79.0406 | 70.0416            | 70.0416 NP | 79.0416 |

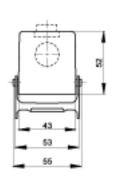


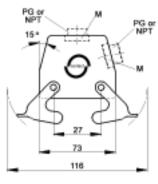
HBE 10 Housings: Double Levers on Hood

#### **HOODS**

**TOP ENTRY** 









**SIDE ENTRY** 

All dimensions are in mm.

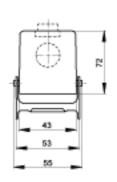
| Position of | Siz | e of | Entry  | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------|-----|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG  | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Top Entry   | 16  | 1/2" | 20     | 10.0410               | 10.0410 NP    | 19.0410          | 70.0560            | 70.0560 NP    | 79.0560          |
|             | •   | -    | 25     | -                     | -             | 79.0557          | -                  | -             | 79.0566          |
| Side Entry  | 16  | 1/2" | 20     | 10.0450               | 10.0450 NP    | 19.0450          | 70.0580            | 70.0580 NP    | 79.0580          |
|             | -   | -    | 25     | -                     | -             | 79.0577          | -                  | -             | 79.0586          |

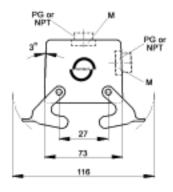
Metric hoods do not come with a neck.

#### **HIGH PROFILE HOODS**

**TOP ENTRY** 









**SIDE ENTRY** 

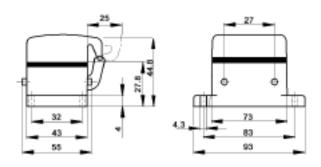
All dimensions are in mm.

| Position of        | Siz | e of | Entry  | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |
|--------------------|-----|------|--------|---------|------------|---------|--------------------|------------|---------|
| <b>Cable Entry</b> |     |      |        | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |
|                    | PG  | NPT  | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |
| <b>Top Entry</b>   | 21  | 3/4" | 25     | 70.0552 | 70.0552 NP | 79.0552 | 70.0562            | 70.0562 NP | 79.0562 |
|                    | 29  | 1"   | 32     | 70.0554 | 70.0554 NP | 79.0554 | 70.0564            | 70.0564 NP | 79.0564 |
| Side Entry         | 21  | 3/4" | 25     | 70.0572 | 70.0572 NP | 79.0572 | 70.0582            | 70.0582 NP | 79.0582 |
|                    | 29  | 1"   | 32     | 70.0574 | 70.0574 NP | 79.0574 | 70.0584            | 70.0584 NP | 79.0584 |

HBE 10 Housings: Double Levers on Hood

#### **PANEL MOUNT BASES**





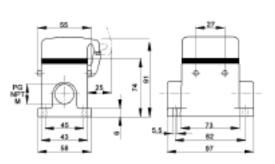
All dimensions are in mm.

| Description                 | Standard Grey Coating | Black Coating (EP) |
|-----------------------------|-----------------------|--------------------|
| Panel Mount with Dust Cover | 10.0330               | 70.0335            |

#### **SURFACE MOUNT BASES**

#### STANDARD PROFILE

# PG 25 55 73 32 34



**HIGH PROFILE** 

All dimensions are in mm.

#### STANDARD PROFILE

| # of              | Siz | e of | Entry  | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------------|-----|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Entries           | PG  | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| 2 Entries with    | 16  | 1/2" | 20     | 10.0380               | 10.0380 NP    | 19.0380          | 70.0480            | 70.0480 NP    | 79.0480          |
| <b>Dust Cover</b> | -   | -    | 25     | -                     | -             | 79.0466          | -                  | -             | 79.0486          |
| 1 Entry with      | 16  | 1/2" | 20     | 10.0360               | 10.0360 NP    | 19.0360          | 70.0470            | 70.0470 NP    | 79.0470          |
| <b>Dust Cover</b> | -   | -    | 25     | -                     | -             | 19.0361          | -                  | -             | 79.0476          |

#### **HIGH PROFILE**

| # of              | Size of Entry |      |        | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |         |
|-------------------|---------------|------|--------|--------------|---------------|------------------|--------------------|---------------|---------|
| Entries           | DC.           | NDT  | Motrio | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric  |
|                   | PG            | NPT  | Metric | Part #       | Part #        | Part #           | Part #             | Part #        | Part #  |
| 2 Entries with    | 21            | 3/4" | 25     | 70.0462      | 70.0462 NP    | 79.0462          | 70.0482            | 70.0482 NP    | 79.0482 |
| <b>Dust Cover</b> | 29            | 1"   | 32     | 70.0464      | 70.0464 NP    | 79.0464          | 70.0484            | 70.0484 NP    | 79.0484 |
| 1 Entry with      | 21            | 3/4" | 25     | 70.0452      | 70.0452 NP    | 79.0452          | 70.0472            | 70.0472 NP    | 79.0472 |
| <b>Dust Cover</b> | 29            | 1"   | 32     | 70.0454      | 70.0454 NP    | 79.0454          | 70.0474            | 70.0474 NP    | 79.0474 |

HBE 16 Plugs & Receptacles

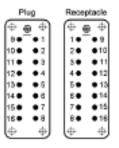


#### **SCREW & CRIMP TERMINATED INSERTS**

#### **SCREW TERMINATED**



**View from Cable Side** 

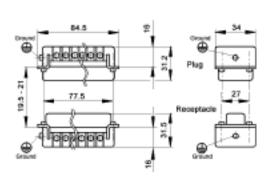


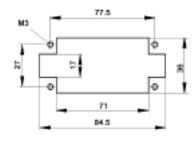
**CRIMP TERMINATED** 



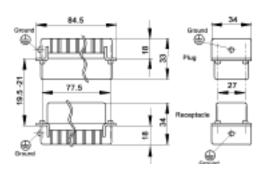
Panel Cut-Out (Insert Only)

**Contacts Sold Separately** 





All dimensions are in mm.



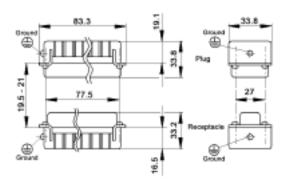
These inserts fit in the HBE 16 Series Housings.

|   | Plug    | Receptacle |
|---|---------|------------|
| Screw Terminated: with wire protection    | 10.1940 | 10.1950    |
| Screw Terminated: without wire protection | 10.1941 | 10.1951    |
| Crimp Terminated: Machine                 | 10.1840 | 10.1850    |

Crimp Contacts are on the next page.

#### **SCREWLESS SPRING CAGE CLAMP INSERTS**

Constant Con



77.5 M3

P

S

S

71

83.3

Panel Cut-Out (Insert Only)

Same View from Cable Side as Screw & Crimp Termination

All dimensions are in mm.

 Plug
 Receptacle

 Screwless Cage Clamp
 10.4002
 10.4012

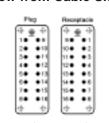
These inserts fit in the HBE 16 Series Housings.

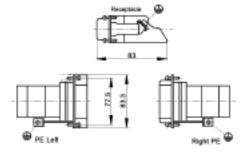


**Accessories for Crimp Terminated Inserts** 

#### SCREW TERMINATED TERMINAL BLOCK INSERTS







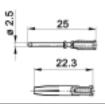
These terminal block inserts only fit in HBE 16 panel mount bases

|                                     | Receptacle |
|-------------------------------------|------------|
| <b>Terminal Block: Right Ground</b> | 70.3151    |
| Terminal Block: Left Ground         | 70.3141    |

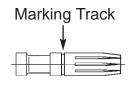
One terminal block insert mates with one screw terminated insert.

#### MACHINED CONTACTS: DIAMETER 2.5 MM<sup>2</sup>









| Bags | of | 10 | n | n |
|------|----|----|---|---|
| Dags | O. |    | v | v |

|                 |     | Sil     | ver     | Gold       |         | Stripping            | # of Marking |
|-----------------|-----|---------|---------|------------|---------|----------------------|--------------|
| mm <sup>2</sup> | AWG | Pin     | Socket  | Pin Socket |         | Length (mm)          | Tracks       |
| 0.5             | 20  | 11.1900 | 11.1950 | 11.1920    | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0       | 18  | 11.1901 | 11.1951 | 11.1921    | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5             | 16  | 11.1902 | 11.1952 | 11.1922    | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5             | 14  | 11.1903 | 11.1953 | -          | -       | Pin=7.4, Socket =7.3 | 3            |
| 4.0             | 12  | 11.1904 | 11.1954 | -          | -       | Pin=7.4, Socket =7.3 | -            |

Part number= 1 contact

#### **CRIMP TOOLS**

Wire Gauge: 0.5 - 4.0 mm<sup>2</sup> for the HBE Crimp Inserts



Locator 11.1472



**Crimp Tool** 11.1470



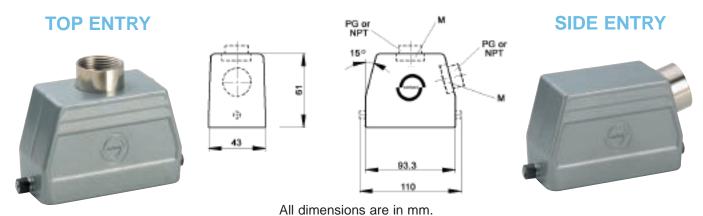
**Crimp Dies** 11.1471

For removal of contacts use a slotted screwdriver. No special tool is necessary.

Please note that the crimp range for this tool is 0.14 to 2.5 mm<sup>2</sup> (AWG 26 - 14) with the appropriate crimp dies.

HBE 16 Housings: Single Lever on Base

#### **HOODS**

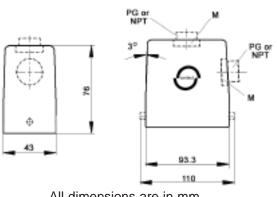


| Position of | Siz | e of | Entry  | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |
|-------------|-----|------|--------|---------|------------|---------|--------------------|------------|---------|
| Cable Entry |     |      |        | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |
|             | PG  | NPT  | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |
| Top Entry   | 21  | 3/4" | 25     | 10.0809 | 10.0809 NP | 19.0809 | 70.0990            | 70.0990 NP | 79.0990 |
|             | 29  | 1"   | 32     | 10.0909 | 10.0909 NP | 19.0909 | -                  | -          | -       |
| Side Entry  | 21  | 3/4" | 25     | 10.0829 | 10.0829 NP | 19.0829 | 70.1090            | 70.1090 NP | 79.1090 |
|             | 29  | 1"   | 32     | 10.0929 | 10.0929 NP | 19.0929 | -                  | -          | -       |

Metric hoods do not come with a neck.

## **HIGH PROFILE HOODS**







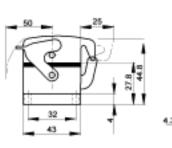
All dimensions are in mm.

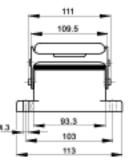
| Position of | Size of Entry |      |        | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |
|-------------|---------------|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG            | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Top Entry   | 21            | 3/4" | 25     | 70.0942      | 70.0942 NP    | 79.0942          | 70.0992            | 70.0992 NP    | 79.0992          |
|             | 29            | 1"   | 32     | 70.0944      | 70.0944 NP    | 79.0944          | 70.0994            | 70.0994 NP    | 79.0994          |
|             | -             | -    | 40     | -            | -             | 79.0946          | -                  | -             | -                |
| Side Entry  | 21            | 3/4" | 25     | 70.1042      | 70.1042 NP    | 79.1042          | 70.1092            | 70.1092 NP    | 79.1092          |
|             | 29            | 1"   | 32     | 70.1044      | 70.1044 NP    | 79.1044          | 70.1094            | 70.1094 NP    | 79.1094          |
|             | -             | -    | 40     | -            | -             | 79.1048          | -                  | -             | -                |

HBE 16 Housings: Single Lever on Base

#### PANEL MOUNT BASES







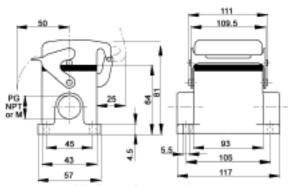


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |  |  |
|--------------------------------|-----------------------|--------------------|--|--|
| Panel Mount without Dust Cover | 10.0729               | 70.0827            |  |  |
| Panel Mount with Dust Cover    | 10.0739               | 70.0837            |  |  |

#### **SURFACE MOUNT BASES**







All dimensions are in mm.

| # of           | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|----------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Entries        | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| 2 Entries      | 21            | 3/4" | 25     | 10.0759               | 10.0759 NP    | 19.0759          | 70.1130            | 70.1130 NP    | 79.1130          |
| 1 Entry        | 21            | 3/4" | 25     | 10.0749               | 10.0749 NP    | 19.0749          | 70.1120            | 70.1120 NP    | 79.1120          |
| 2 Entries with | 21            | 3/4" | 25     | 10.0789               | 10.0789 NP    | 19.0789          | 70.1170            | 70.1170 NP    | 79.1170          |
| dust cover     | -             | -    | -      | -                     | -             | -                | -                  | -             | -                |
| 1 Entry with   | 21            | 3/4" | 25     | 10.0769               | 10.0769 NP    | 19.0769          | 70.1160            | 70.1160 NP    | 79.1160          |
| dust cover     | -             | -    | -      | -                     | _             | -                | -                  | -             |                  |

#### **DUST COVERS WITH ATTACHMENT STRING**

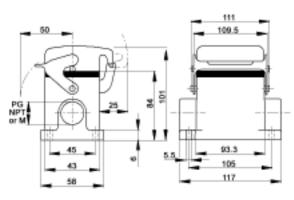


| Material:         | Thermoplastic Resin  | Temperature: | -40°C to | o 125°C |  |  |  |  |  |  |
|-------------------|--|--------------|----------|---------|--|--|--|--|--|--|
|                   |  |              |          | Part #  |  |  |  |  |  |  |
| <b>Dust cover</b> | Dust cover with single lever for HBE 16 Hoods                |              |          |         |  |  |  |  |  |  |
| <b>Dust cover</b> | Dust cover with single lever bolts for HBE 16 Panel Mount or |              |          |         |  |  |  |  |  |  |
| <b>Surface Mo</b> | unt Base/ Cable Coupler Ho                                   | od           |          |         |  |  |  |  |  |  |

HBE 16 Housings: Single Lever on Base

#### HIGH PROFILE SURFACE MOUNT BASES





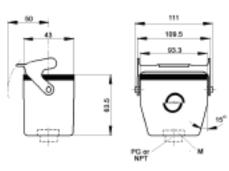


All dimensions are in mm.

| # of           | Size of Entry |      |        | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |
|----------------|---------------|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|
| Entries        | PG            | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| 2 Entries      | 21            | 3/4" | 25     | 70.1112      | 70.1112 NP    | 79.1112          | 70.1132            | 70.1132 NP    | 79.1132          |
|                | 29            | 1"   | 32     | 70.1114      | 70.1114 NP    | 79.1114          | 70.1134            | 70.1134 NP    | 79.1134          |
| 1 Entry        | 21            | 3/4" | 25     | 70.1102      | 70.1102 NP    | 79.1102          | 70.1122            | 70.1122 NP    | 79.1122          |
|                | 29            | 1"   | 32     | 70.1104      | 70.1104 NP    | 79.1104          | 70.1124            | 70.1124 NP    | 79.1124          |
| 2 Entries with | 21            | 3/4" | 25     | 70.1152      | 70.1152 NP    | 79.1152          | 70.1172            | 70.1172 NP    | 79.1172          |
| dust cover     | 29            | 1"   | 32     | 70.1154      | 70.1154 NP    | 79.1154          | 70.1174            | 70.1174 NP    | 79.1174          |
| 1 Entry with   | 21            | 3/4" | 25     | 70.1142      | 70.1142 NP    | 79.1142          | 70.1162            | 70.1162 NP    | 79.1162          |
| dust cover     | 29            | 1"   | 32     | 70.1144      | 70.1144 NP    | 79.1144          | 70.1164            | 70.1164 NP    | 79.1164          |

#### **CABLE COUPLER HOODS**

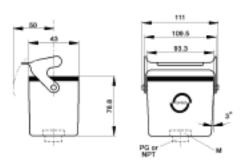
#### STANDARD PROFILE





All dimensions are in mm.

#### **HIGH PROFILE**



| D Cl.    | Size of Entry |      |        | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |
|----------|---------------|------|--------|---------|------------|---------|--------------------|------------|---------|
| Profile  | DC.           | NDT  | Matria | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |
|          | PG            | NPT  | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |
| Standard | 21            | 3/4" | 25     | 10.0869 | 10.0869 NP | 19.0869 | 70.0930            | 70.0930 NP | 79.0930 |
| Profile  | 29            | 1"   | 32     | 10.0969 | 10.0969 NP | 19.0969 | -                  | -          | -       |
| High     | 21            | 3/4" | 25     | 70.0922 | 70.0922 NP | 79.0922 | 70.0932            | 70.0932 NP | 79.0932 |
| Profile  | 29            | 1"   | 32     | 70.0924 | 70.0924 NP | 79.0924 | 70.0934            | 70.0934 NP | 79.0934 |

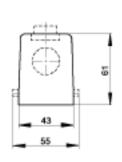


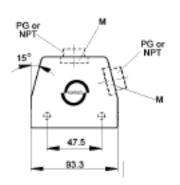
HBE 16 Housings: Double Levers on Base

#### **HOODS**

**TOP ENTRY** 









All dimensions are in mm.

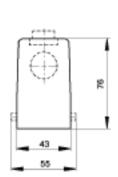
| Position of | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
|             |               |      |        |                       |               |                  |                    |               |                  |
| Top Entry   | 21            | 3/4" | 25     | 10.0800               | 10.0800 NP    | 19.0800          | 70.1010            | 70.1010 NP    | 79.1010          |
|             | 29            | 1"   | 32     | 10.0900               | 10.0900 NP    | 19.0900          | -                  | =             | -                |
| Side Entry  | 21            | 3/4" | 25     | 10.0820               | 10.0820 NP    | 19.0820          | 70.1030            | 70.1030 NP    | 79.1030          |
|             | 29            | 1"   | 32     | 10.0920               | 10.0920 NP    | 19.0920          | -                  | -             | -                |

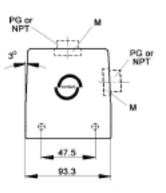
Metric hoods do not come with a neck.

#### **HIGH PROFILE HOODS**

**TOP ENTRY** 







**SIDE ENTRY** 



All dimensions are in mm.

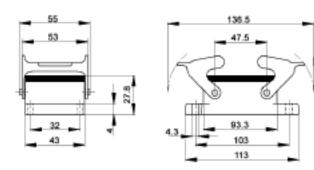
| Position of | Size of Entry |      |        | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------|---------------|------|--------|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG            | NPT  | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Top Entry   | 21            | 3/4" | 25     | 70.1002               | 70.1002 NP    | 79.1002          | 70.1012            | 70.1012 NP    | 79.1012          |
|             | 29            | 1"   | 32     | 70.1004               | 70.1004 NP    | 79.1004          | 70.1014            | 70.1014 NP    | 79.1014          |
|             | -             | -    | 40     | -                     | -             | 79.1008          | -                  | -             | -                |
| Side Entry  | 21            | 3/4" | 25     | 70.1022               | 70.1022 NP    | 79.1022          | 70.1032            | 70.1032 NP    | 79.1032          |
|             | 29            | 1"   | 32     | 70.1024               | 70.1024 NP    | 79.1024          | 70.1034            | 70.1034 NP    | 79.1034          |
|             | -             | -    | 40     | -                     | -             | 79.1028          | -                  | -             | -                |



HBE 16 Housings: Double Levers on Base

# **PANEL MOUNT BASES**



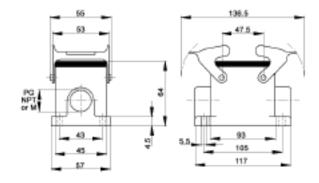


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.0720               | 70.0825            |

# **SURFACE MOUNT BASES**





All dimensions are in mm.

| # of           | Size of Entry |      | Standard Grey Coating |               |            | Black Coating (EP) |         |            |         |
|----------------|---------------|------|-----------------------|---------------|------------|--------------------|---------|------------|---------|
| <b>Entries</b> |               |      |                       | PG NPT Metric |            | Metric             | PG      | NPT        | Metric  |
|                | PG            | NPT  | Metric                | Part #        | Part #     | Part #             | Part #  | Part #     | Part #  |
| 2 Entries      | 21            | 3/4" | 25                    | 10.0750       | 10.0750 NP | 19.0750            | 70.0880 | 70.0880 NP | 79.0880 |
| 1 Entry        | 21            | 3/4" | 25                    | 10.0740       | 10.0740 NP | 19.0740            | 70.0870 | 70.0870 NP | 79.0870 |

# **DUST COVERS WITH ATTACHMENT STRING**



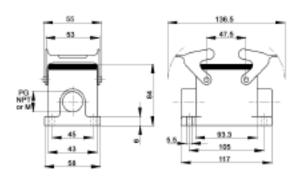
Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
| Dust cover with double levers and gasket for HBE 16 Hoods    | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or | 10.0870 |
| Surface Mount Base/ Cable Coupler Hood                       |         |

HBE 16 Housings: Double Levers on Base

# **HIGH PROFILE SURFACE MOUNT BASES**





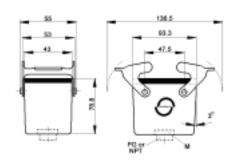
All dimensions are in mm.

| # of           | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|----------------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| <b>Entries</b> |               |      | PG     | NPT Metric            |            | PG      | NPT                | Metric     |         |
|                | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| 2 Entries      | 21            | 3/4" | 25     | 70.0862               | 70.0862 NP | 79.0862 | 70.0882            | 70.0882 NP | 79.0882 |
|                | 29            | 1"   | 32     | 70.0864               | 70.0864 NP | 79.0864 | 70.0884            | 70.0884 NP | 79.0884 |
| 1 Entry        | 21            | 3/4" | 25     | 70.0852               | 70.0852 NP | 79.0852 | 70.0872            | 70.0872 NP | 79.0872 |
|                | 29            | 1"   | 32     | 70.0854               | 70.0854 NP | 79.0854 | 70.0874            | 70.0874 NP | 79.0874 |

# **CABLE COUPLER HOODS**

# **STANDARD PROFILE**

#### 95 903 903 903 903 903 903 903 903 903



**HIGH PROFILE** 

All dimensions are in mm.

| D Cl.    | Size of Entry |      |        | Stand   | Standard Grey Coating |         |         | Black Coating (EP) |         |  |
|----------|---------------|------|--------|---------|-----------------------|---------|---------|--------------------|---------|--|
| Profile  |               |      | PG     | NPT     | Metric                | PG      | NPT     | Metric             |         |  |
|          | PG            | NPT  | Metric | Part #  | Part #                | Part #  | Part #  | Part #             | Part #  |  |
| Standard | 21            | 3/4" | 25     | 10.0860 | 10.0860 NP            | 19.0860 | 70.0910 | 70.0910 NP         | 79.0910 |  |
| Profile  | 29            | 1"   | 32     | 10.0960 | 10.0960 NP            | -       | -       | -                  | -       |  |
| High     | 21            | 3/4" | 25     | 70.0902 | 70.0902 NP            | 79.0902 | 70.0912 | 70.0912 NP         | 79.0912 |  |
| Profile  | 29            | 1"   | 32     | 70.0904 | 70.0904 NP            | 79.0904 | 70.0914 | 70.0914 NP         | 79.0914 |  |

Metric hoods do not come with a neck.

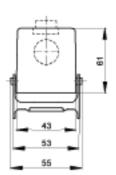


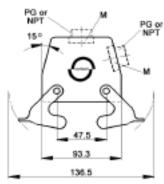
HBE 16 Housings: Double Levers on Hood

# **HOODS**











All dimensions are in mm.

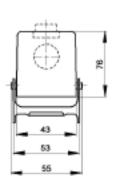
| Position of | Size of Entry |               |    | Standard Grey Coating |               |                  | Black Coating (EP) |               |                  |
|-------------|---------------|---------------|----|-----------------------|---------------|------------------|--------------------|---------------|------------------|
| Cable Entry | PG            | PG NPT Metric |    | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| Top Entry   | 21            | 3/4"          | 25 | 10.0810               | 10.0810 NP    | 19.0810          | 70.1060            | 70.1060 NP    | 79.1060          |
|             | 29            | 1"            | 32 | 10.0910               | 10.0910 NP    | 19.0910          | -                  | -             | -                |
| Side Entry  | 21            | 3/4"          | 25 | 10.0830               | 10.0830 NP    | 19.0830          | 70.1080            | 70.1080 NP    | 79.1080          |
|             | 29            | 1"            | 32 | 10.0930               | 10.0930 NP    | 19.0930          | -                  | -             | -                |

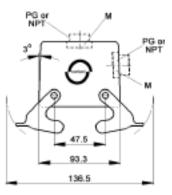
Metric hoods do not come with a neck.

# **HIGH PROFILE HOODS**











All dimensions are in mm.

| Position of | Size of Entry |               |        | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |  |
|-------------|---------------|---------------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|--|
| Cable Entry | PG            | PG NPT Metric |        | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |  |
|             | ГG            | INFI          | MELLIC | rail#        | rail#         | rail#            | rail#              | rail#         | rail#            |  |
| Top Entry   | 21            | 3/4"          | 25     | 70.1052      | 70.1052 NP    | 79.1052          | 70.1062            | 70.1062 NP    | 79.1062          |  |
|             | 29            | 1"            | 32     | 70.1054      | 70.1054 NP    | 79.1054          | 70.1064            | 70.1064 NP    | 79.1064          |  |
| Side Entry  | 21            | 3/4"          | 25     | 70.1072      | 70.1072 NP    | 79.1072          | 70.1082            | 70.1082 NP    | 79.1082          |  |
|             | 29            | 1"            | 32     | 70.1074      | 70.1074 NP    | 79.1074          | 70.1084            | 70.1084 NP    | 79.1084          |  |

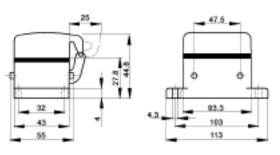
Metric hoods do not come with a neck.



HBE 16 Housings: Double Levers on Hood

# PANEL MOUNT BASES



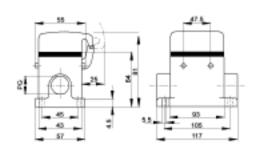


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.0731               | -                  |
| Panel Mount with Dust Cover    | 10.0730               | 70.0835            |

## **SURFACE MOUNT BASES**

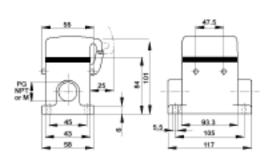
#### STANDARD PROFILE





All dimensions are in mm.

### **HIGH PROFILE**



### WITH DUST COVER

| # of           | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|----------------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| <b>Entries</b> |               |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |
|                | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| 2 Entries      | 21            | 3/4" | 25     | 70.0960               | 70.0960 NP | 79.0960 | 70.0980            | 70.0980 NP | 79.0980 |
| 1 Entry        | 21            | 3/4" | 25     | 10.0760               | 10.0760 NP | 19.0760 | 70.0970            | 70.0970 NP | 79.0970 |
| High Profile   | 21            | 3/4" | 25     | 70.0962               | 70.0962 NP | 79.0962 | 70.0982            | 70.0982 NP | 79.0982 |
| with 2 Entries | 29            | 1"   | 32     | 70.0964               | 70.0964 NP | 79.0964 | 70.0984            | 70.0984 NP | 79.0984 |
| High Profile   | 21            | 3/4" | 25     | 70.0952               | 70.0952 NP | 79.0952 | 70.0972            | 70.0972 NP | 79.0972 |
| with 1 Entry   | 29            | 1"   | 32     | 70.0954               | 70.0954 NP | 79.0954 | 70.0974            | 70.0974 NP | 79.0974 |

# **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
| Dust cover with double lever bolts and gasket for HBE 16 Hoods | 10.0871 |



HBE 24 Plugs & Receptacles

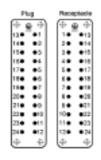


# **SCREW & CRIMP TERMINATED INSERTS**

#### **SCREW TERMINATED**



**View from Cable Side** 

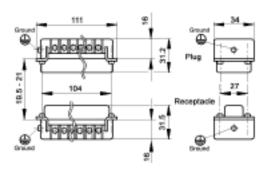


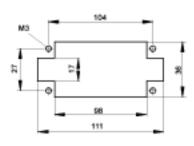
Panel Cut-Out (Insert Only)

**CRIMP TERMINATED** 



**Contacts Sold Separately** 





Plug 27
Receptade

All dimensions are in mm.

These inserts fit in the HBE 24 Series Housings.

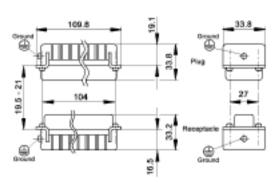
|   | Plug    | Receptacle |
|---|---------|------------|
| Screw Terminated: with wire protection    | 10.1960 | 10.1970    |
| Screw Terminated: without wire protection | 10.1961 | 10.1971    |
| Crimp Terminated: Machine                 | 10.1860 | 10.1870    |
| Omit Terminated. Machine                  | 10.1000 | 10.1070    |

Crimp Contacts are on the next page.

## SCREWLESS SPRING CAGE CLAMP INSERTS



Same View from Cable Side as Screw & Crimp Termination



All dimensions are in mm.

 Plug
 Receptacle

 Screwless Cage Clamp
 10.4003
 10.4013

(Insert Only)

104

\$6

109.8

**Panel Cut-Out** 

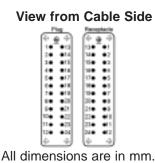
These inserts fit in the HBE 24 Series Housings.

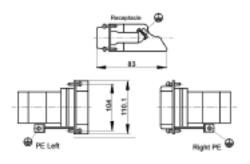


**Accessories for Crimp Terminated Inserts** 

# **SCREW TERMINATED TERMINAL BLOCK INSERTS**







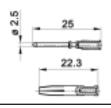
These terminal block inserts only fit in HBE 24 panel mount bases

|                                     | Receptacle |
|-------------------------------------|------------|
| <b>Terminal Block: Right Ground</b> | 70.3171    |
| Terminal Block: Left Ground         | 70.3161    |

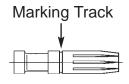
One terminal block insert mates with one screw terminated insert.

### MACHINED CONTACTS: DIAMETER 2.5 MM<sup>2</sup>









| Bags | of | 10 | 0 |
|------|----|----|---|
|      |    |    |   |

|                 |     | Sil     | ver     | Go         | old     | Stripping            | # of Marking |
|-----------------|-----|---------|---------|------------|---------|----------------------|--------------|
| mm <sup>2</sup> | AWG | Pin     | Socket  | Pin Socket |         | Length (mm)          | Tracks       |
| 0.5             | 20  | 11.1900 | 11.1950 | 11.1920    | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0       | 18  | 11.1901 | 11.1951 | 11.1921    | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5             | 16  | 11.1902 | 11.1952 | 11.1922    | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5             | 14  | 11.1903 | 11.1953 | -          | -       | Pin=7.4, Socket =7.3 | 3            |
| 4.0             | 12  | 11.1904 | 11.1954 | -          | -       | Pin=7.4, Socket =7.3 | -            |

Part number= 1 contact

# **CRIMP TOOLS**

Wire Gauge: 0.5 - 4.0 mm<sup>2</sup> for the HBE Crimp Inserts







Crimp Tool 11.1470



Crimp Dies 11.1471

For removal of contacts use a slotted screwdriver. No special tool is necessary.

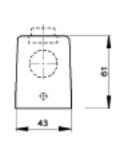
Please note that the crimp range for this tool is 0.14 to 2.5 mm<sup>2</sup> (AWG 26 - 14) with the appropriate crimp dies.

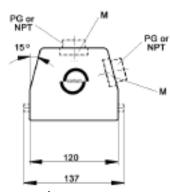
HBE 24 Housings: Single Lever on Base

## **HOODS**

**TOP ENTRY** 









All dimensions are in mm.

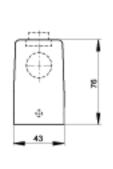
| Position of | Siz           | e of | Entry  | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |  |
|-------------|---------------|------|--------|---------|------------|---------|--------------------|------------|---------|--|
| Cable Entry | DO NOT Matria |      |        | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |  |
|             | PG            | NPT  | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |  |
| Top Entry   | 21            | 3/4" | 25     | 10.1219 | 10.1219 NP | 19.1219 | 70.1490            | 70.1490 NP | 79.1490 |  |
|             | 29            | 1"   | 32     | 10.1119 | 10.1119 NP | 19.1119 | 70.1492            | 70.1492 NP | 79.1492 |  |
| Side Entry  | 21            | 3/4" | 25     | 10.1139 | 10.1139 NP | 19.1139 | 70.1590            | 70.1590 NP | 79.1590 |  |
|             | 29            | 1"   | 32     | 10.1239 | 10.1239 NP | 19.1239 | 70.1592            | 70.1592 NP | 79.1592 |  |

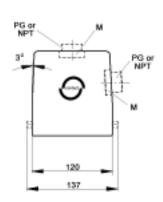
Metric hoods do not come with a neck.

# **HIGH PROFILE HOODS**

**TOP ENTRY** 









SIDE ENTRY

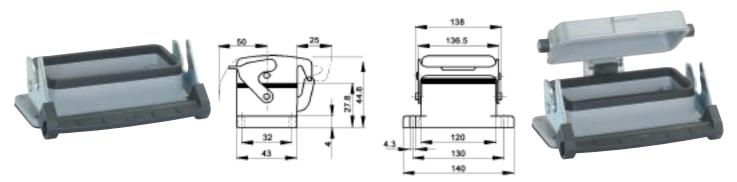
All dimensions are in mm.

| Position of | Siz | e of | Entry  | Standa       | ard Grey Co   | oating           | Black Coating (EP) |               |                  |  |
|-------------|-----|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|--|
| Cable Entry | PG  | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |  |
| Top Entry   | 21  | 3/4" | 25     | 70.1444      | 70.1444 NP    | 79.1444          | 70.1494            | 70.1494 NP    | 79.1494          |  |
|             | 29  | 1"   | 32     | 70.1446      | 70.1446 NP    | 79.1446          | 70.1496            | 70.1496 NP    | 79.1496          |  |
|             | -   | -    | 40     | -            | -             | 79.1448          | -                  | -             | -                |  |
| Side Entry  | 21  | 3/4" | 25     | 70.1544      | 70.1544 NP    | 79.1544          | 70.1594            | 70.1594 NP    | 79.1594          |  |
|             | 29  | 1"   | 32     | 70.1546      | 70.1546 NP    | 79.1546          | 70.1596            | 70.1596 NP    | 79.1596          |  |
|             | -   | -    | 40     | -            | -             | 79.1548          | -                  | -             | -                |  |

Metric hoods do not come with a neck.

HBE 24 Housings: Single Lever on Base

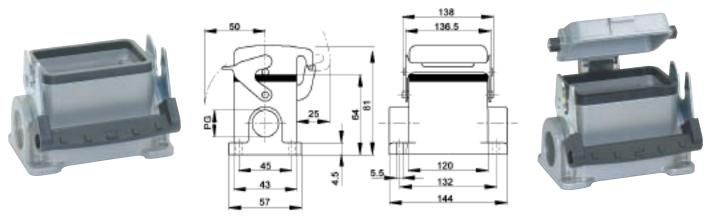
### PANEL MOUNT BASES



All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.1029               | 70.1327            |
| Panel Mount with Dust Cover    | 10.1039               | 70.1337            |

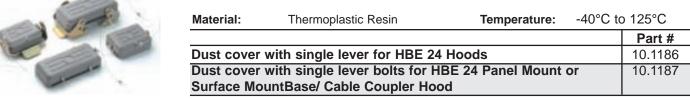
### **SURFACE MOUNT BASES**



All dimensions are in mm.

| # of         | Size of Entry |      |        | Stand        | ard Grey C    | oating           | Black Coating (EP) |               |                  |
|--------------|---------------|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|
| Entries      | PG            | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |
| 2 Entries    | 21            | 3/4" | 25     | 10.1059      | 10.1059 NP    | 19.1059          | 70.1630            | 70.1630 NP    | 79.1630          |
| 1 Entry      | 21            | 3/4" | 25     | 10.1049      | 10.1049 NP    | 19.1049          | 70.1620            | 70.1620 NP    | 79.1620          |
| 2 with cover | 21            | 3/4" | 25     | 10.1099      | 10.1099 NP    | 19.1099          | 70.1670            | 70.1670 NP    | 79.1670          |
| 1 with cover | 21            | 3/4" | 25     | 10.1079      | 10.1079 NP    | 19.1079          | 70.1660            | 70.1660 NP    | 79.1660          |

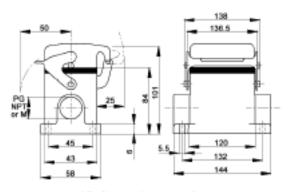
# **DUST COVERS WITH ATTACHMENT STRING**



HBE 24 Housings: Single Lever on Base

# **SURFACE MOUNT BASES**





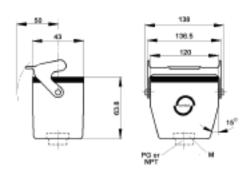


All dimensions are in mm.

| # of           | Siz | e of I | Entry  | Stand        | Standard Grey Coating |                  |              | Black Coating (EP) |                  |  |  |
|----------------|-----|--------|--------|--------------|-----------------------|------------------|--------------|--------------------|------------------|--|--|
| Entries        | PG  | NPT    | Metric | PG<br>Part # | NPT<br>Part #         | Metric<br>Part # | PG<br>Part # | NPT<br>Part #      | Metric<br>Part # |  |  |
| 2 Entries      | 21  | 3/4"   | 25     | 70.1612      | 70.1612 NP            | 79.1612          | 70.1632      | 70.1632 NP         | 79.1632          |  |  |
| Z Elitilos     | 29  | 1"     | 32     | 70.1612      | 70.1614 NP            | 79.1612          | 70.1632      | 70.1634 NP         | 79.1634          |  |  |
| 1 Entry        | 21  | 3/4"   | 25     | 70.1602      | 70.1602 NP            | 79.1602          | 70.1622      | 70.1622 NP         | 79.1622          |  |  |
|                | 29  | 1"     | 32     | 70.1604      | 70.1604 NP            | 79.1604          | 70.1624      | 70.1624 NP         | 79.1624          |  |  |
| 2 Entries with | 21  | 3/4"   | 25     | 70.1652      | 70.1652 NP            | 79.1652          | 70.1672      | 70.1672 NP         | 79.1672          |  |  |
| dust cover     | 29  | 1"     | 32     | 70.1654      | 70.1654 NP            | 79.1654          | 70.1674      | 70.1674 NP         | 79.1674          |  |  |
| 1 Entry with   | 21  | 3/4"   | 25     | 70.1642      | 70.1642 NP            | 79.1642          | 70.1662      | 70.1662 NP         | 79.1662          |  |  |
| dust cover     | 29  | 1"     | 32     | 70.1644      | 70.1644 NP            | 79.1644          | 70.1664      | 70.1664 NP         | 79.1664          |  |  |

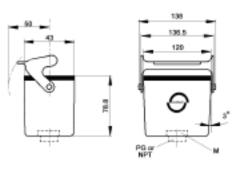
# **CABLE COUPLER HOODS**

#### STANDARD PROFILE





HIGH PROFILE



All dimensions are in mm.

| - C'I    | Siz           | e of       | Entry  | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |  |
|----------|---------------|------------|--------|---------|------------|---------|--------------------|------------|---------|--|
| Profile  | PG NPT Metric |            |        | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |  |
|          | PG            | <u>NPI</u> | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |  |
| Standard | 21            | 3/4"       | 25     | 10.1279 | 10.1279 NP | 19.1279 | 70.1430            | 70.1430 NP | 79.1430 |  |
| Profile  | 29            | 1"         | 32     | 10.1179 | 10.1179 NP | 19.1179 | 70.1432            | 70.1432 NP | 79.1432 |  |
| High     | 21            | 3/4"       | 25     | 70.1424 | 70.1424 NP | 79.1424 | 70.1434            | 70.1434 NP | 79.1434 |  |
| Profile  | 29            | 1"         | 32     | 70.1426 | 70.1426 NP | 79.1426 | 70.1436            | 70.1436 NP | 79.1436 |  |

Metric hoods do not come with a neck.

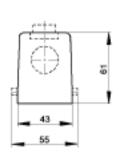


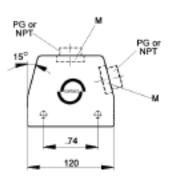
HBE 24 Housings: Double Levers on Base

# **HOODS**

**TOP ENTRY** 









All dimensions are in mm.

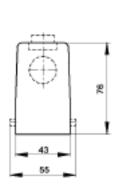
| Position of | Siz           | e of | Entry  | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |    |     |        |
|-------------|---------------|------|--------|---------|------------|---------|--------------------|------------|---------|----|-----|--------|
| Cable Entry | DO NOT Matric |      |        | - 1     |            |         | PG                 | NPT        | Metric  | PG | NPT | Metric |
|             | PG            | NPT  | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |    |     |        |
| Top Entry   | 21            | 3/4" | 25     | 10.1210 | 10.1210 NP | 19.1210 | 70.1510            | 70.1510 NP | 79.1510 |    |     |        |
|             | 29            | 1"   | 32     | 10.1110 | 10.1110 NP | 19.1110 | 70.1512            | 70.1512 NP | 79.1512 |    |     |        |
| Side Entry  | 21            | 3/4" | 25     | 10.1130 | 10.1130 NP | 19.1130 | 70.1530            | 70.1530 NP | 79.1530 |    |     |        |
|             | 29            | 1"   | 32     | 10.1230 | 10.1230 NP | 19.1230 | 70.1532            | 70.1532 NP | 79.1532 |    |     |        |

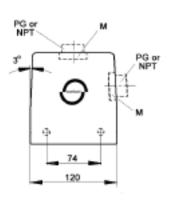
Metric hoods do not come with a neck.

# **HIGH PROFILE HOODS**

**TOP ENTRY** 







SIDE ENTRY



All dimensions are in mm.

| Position of | Siz | e of | Entry  | Stand        | ard Grey Co   | oating           | Black Coating (EP) |               |                  |  |
|-------------|-----|------|--------|--------------|---------------|------------------|--------------------|---------------|------------------|--|
| Cable Entry | PG  | NPT  | Metric | PG<br>Part # | NPT<br>Part # | Metric<br>Part # | PG<br>Part #       | NPT<br>Part # | Metric<br>Part # |  |
| Top Entry   | 21  | 3/4" | 25     | 70.1504      | 70.1504 NP    | 79.1504          | 70.1514            | 70.1514 NP    | 79.1514          |  |
|             | 29  | 1"   | 32     | 70.1506      | 70.1506 NP    | 79.1506          | 70.1516            | 70.1516 NP    | 79.1516          |  |
|             | -   | -    | 40     | -            | -             | 79.1508          | -                  | -             | -                |  |
| Side Entry  | 21  | 3/4" | 25     | 70.1524      | 70.1524 NP    | 79.1524          | 70.1534            | 70.1534 NP    | 79.1534          |  |
|             | 29  | 1"   | 32     | 70.1526      | 70.1526 NP    | 79.1526          | 70.1536            | 70.1536 NP    | 79.1536          |  |
|             | -   | -    | 40     |              |               | 79.1528          | -                  | -             | -                |  |

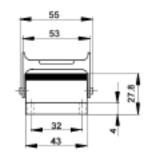
Metric hoods do not come with a neck.

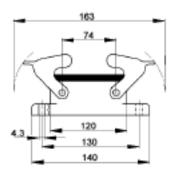


HBE 24 Housings: Double Levers on Base

## **PANEL MOUNT BASES**





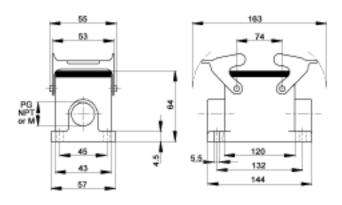


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount without Dust Cover | 10.1020               | 70.1325            |

# **SURFACE MOUNT BASES**





All dimensions are in mm.

| # of           | Size of Entry |      |        | Stand   | ard Grey C | oating  | Black Coating (EP) |            |         |  |
|----------------|---------------|------|--------|---------|------------|---------|--------------------|------------|---------|--|
| <b>Entries</b> |               |      |        | PG      | NPT        | Metric  | PG                 | NPT        | Metric  |  |
|                | PG            | NPT  | Metric | Part #  | Part #     | Part #  | Part #             | Part #     | Part #  |  |
| 2 Entries      | 21            | 3/4" | 25     | 10.1050 | 10.1050 NP | 19.1050 | 70.1380            | 70.1380 NP | 79.1380 |  |
| 1 Entry        | 21            | 3/4" | 25     | 10.1040 | 10.1040 NP | 19.1040 | 70.1370            | 70.1370 NP | 79.1370 |  |

## **DUST COVERS WITH ATTACHMENT STRING**



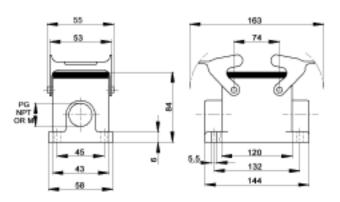
Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
| Dust cover with double levers and gasket for HBE 24 Hoods    | 10.1195 |
| Dust cover with double lever bolts for HBE 24 Panel Mount or | 10.1180 |
| Surface Mount Base/ Cable Coupler Hood                       |         |

HBE 24 Housings: Double Levers on Base

# HIGH PROFILE SURFACE MOUNT BASES





All dimensions are in mm.

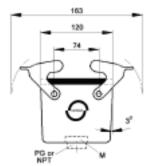
| # of      | Siz           | e of | Entry        | Standard Grey Coating |                  |              | Black Coating (EP) |                  |         |
|-----------|---------------|------|--------------|-----------------------|------------------|--------------|--------------------|------------------|---------|
| Entries   | PG NPT Metric |      | PG<br>Part # | NPT<br>Part #         | Metric<br>Part # | PG<br>Part # | NPT<br>Part #      | Metric<br>Part # |         |
| 2 Entries | 21            | 3/4" | 25           | 70.1362               | 70.1362 NP       | 79.1362      | 70.1382            | 70.1382 NP       | 79.1382 |
|           | 29            | 1"   | 32           | 70.1364               | 70.1364 NP       | 79.1364      | 70.1384            | 70.1384 NP       | 79.1384 |
| 1 Entry   | 21            | 3/4" | 25           | 70.1352               | 70.1352 NP       | 79.1352      | 70.1372            | 70.1372 NP       | 79.1372 |
|           | 29            | 1"   | 32           | 70.1354               | 70.1354 NP       | 79.1354      | 70.1374            | 70.1374 NP       | 79.1374 |

## **CABLE COUPLER HOODS**

### STANDARD PROFILE

### 53 53 49 74 75 76 76 77 NPT





**HIGH PROFILE** 

All dimensions are in mm.

| D Cl.    | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|----------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| Profile  |               |      |        | PG                    | NPT        | Metric  | PG                 | NPT        | Metric  |
|          | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| Standard | 21            | 3/4" | 25     | 10.1270               | 10.1270 NP | 19.1270 | 70.1410            | 70.1410 NP | 79.1410 |
| Profile  | 29            | 1"   | 32     | 10.1170               | 10.1170 NP | 19.1170 | 70.1412            | 70.1412 NP | 79.1412 |
| High     | 21            | 3/4" | 25     | 70.1404               | 70.1404 NP | 79.1404 | 70.1414            | 70.1414 NP | 79.1414 |
| Profile  | 29            | 1"   | 32     | 70.1406               | 70.1406 NP | 79.1406 | 70.1416            | 70.1416 NP | 79.1416 |

Metric hoods do not come with a neck.

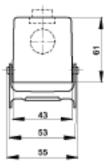


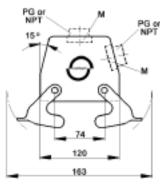
HBE 24 Housings: Double Levers on Hood

# **HOODS**

#### **TOP ENTRY**









SIDE ENTRY

All dimensions are in mm.

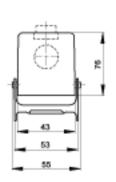
| Position of | Position of Size of Entry |      |              |               | Standard Grey Coating |              |               | Black Coating (EP) |         |  |
|-------------|---------------------------|------|--------------|---------------|-----------------------|--------------|---------------|--------------------|---------|--|
| Cable Entry | PG NPT Metric             |      | PG<br>Part # | NPT<br>Part # | Metric<br>Part #      | PG<br>Part # | NPT<br>Part # | Metric<br>Part #   |         |  |
| Top Entry   | 21                        | 3/4" | 25           | 10.1220       | 10.1220 NP            | 19.1220      | 70.1560       | 70.1560 NP         | 79.1560 |  |
|             | 29                        | 1"   | 32           | 10.1120       | 10.1120 NP            | 19.1120      | 70.1562       | 70.1562 NP         | 79.1562 |  |
| Side Entry  | 21                        | 3/4" | 25           | 10.1140       | 10.1140 NP            | 19.1140      | 70.1580       | 70.1580 NP         | 79.1580 |  |
|             | 29                        | 1"   | 32           | 10.1240       | 10.1240 NP            | 19.1240      | 70.1582       | 70.1582 NP         | 79.1582 |  |

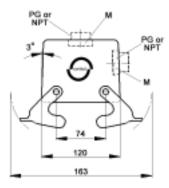
Metric hoods do not come with a neck.

# **HIGH PROFILE HOODS**

#### **TOP ENTRY**









SIDE ENTRY

All dimensions are in mm.

| Position of | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|-------------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| Cable Entry |               |      | PG     | NPT                   | Metric     | PG      | NPT                | Metric     |         |
|             | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| Top Entry   | 21            | 3/4" | 25     | 70.1554               | 70.1554 NP | 79.1554 | 70.1564            | 70.1564 NP | 79.1564 |
|             | 29            | 1"   | 32     | 70.1556               | 70.1556 NP | 79.1556 | 70.1566            | 70.1566 NP | 79.1566 |
| Side Entry  | 21            | 3/4" | 25     | 70.1574               | 70.1574 NP | 79.1574 | 70.1584            | 70.1584 NP | 79.1584 |
|             | 29            | 1"   | 32     | 70.1576               | 70.1576 NP | 79.1576 | 70.1586            | 70.1586 NP | 79.1586 |

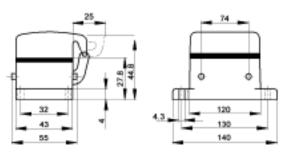
Metric hoods do not come with a neck.



HBE 24 Housings: Double Levers on Hood

## **PANEL MOUNT BASES**



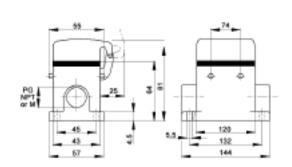


All dimensions are in mm.

| Description                    | Standard Grey Coating | Black Coating (EP) |
|--------------------------------|-----------------------|--------------------|
| Panel Mount with Dust Cover    | 10.1030               | 70.1335            |
| Panel Mount without Dust Cover | 10.1031               | -                  |

### **SURFACE MOUNT BASES**

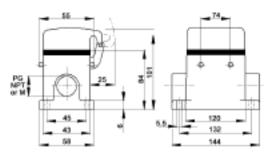
#### STANDARD PROFILE





All dimensions are in mm.

## **HIGH PROFILE**



#### WITH DUST COVER

| # of                | Size of Entry |      |        | Standard Grey Coating |            |         | Black Coating (EP) |            |         |
|---------------------|---------------|------|--------|-----------------------|------------|---------|--------------------|------------|---------|
| <b>Entries</b>      |               |      | PG     | NPT                   | Metric     | PG      | NPT                | Metric     |         |
|                     | PG            | NPT  | Metric | Part #                | Part #     | Part #  | Part #             | Part #     | Part #  |
| 2 Entries           | 21            | 3/4" | 25     | 10.1090               | 10.1090 NP | 19.1090 | 70.1480            | 70.1480 NP | 79.1480 |
| 1 Entry             | 21            | 3/4" | 32     | 10.1070               | 10.1070 NP | 19.1070 | 70.1470            | 70.1470 NP | 79.1470 |
| <b>High Profile</b> | 21            | 3/4" | 25     | 70.1462               | 70.1462 NP | 79.1462 | 70.1482            | 70.1482 NP | 79.1482 |
| with 2 Entries      | 29            | 1"   | 32     | 70.1464               | 70.1464 NP | 79.1464 | 70.1484            | 70.1484 NP | 79.1484 |
| High Profile        | 21            | 3/4" | 25     | 70.1452               | 70.1452 NP | 79.1452 | 70.1472            | 70.1472 NP | 79.1472 |
| with 1 Entry        | 29            | 1"   | 32     | 70.1454               | 70.1454 NP | 79.1454 | 70.1474            | 70.1474 NP | 79.1474 |

# **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin

Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
| Dust cover with double lever bolts and gasket for HBE 24 Hoods | 10.1181 |



HBE 32 Plugs & Receptacles

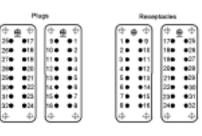


# **SCREW & CRIMP TERMINATED INSERTS**

#### **SCREW TERMINATED**



View from Cable Side

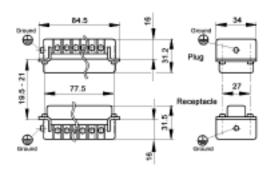


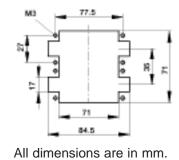
**CRIMP TERMINATED** 

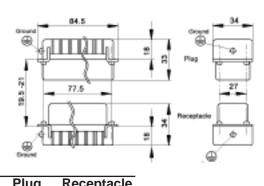


Panel Cut-Out (Insert Only)

**Contacts Sold Separately** 







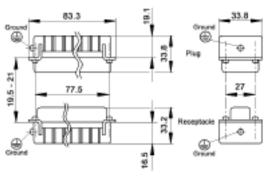
These inserts fit in the HBE 32 Series Housings.

|   | Flug    | Neceptacie |
|---|---------|------------|
| Screw Terminated with wire protection (#1-16)     | 10.1940 | 10.1950    |
| Screw Terminated with wire protection (#17-32)    | 10.2020 | 10.2030    |
| Screw Terminated without wire protection (#1-16)  | 10.1941 | 10.1951    |
| Screw Terminated without wire protection (#17-32) | 10.2021 | 10.2031    |
| Crimp Terminated: Machine (#1-16)                 | 10.1840 | 10.1850    |
| Crimp Terminated: Machine (#17-32)                | 10.1842 | 10.1852    |
|   |         |            |

Crimp Contacts are on the next page.

# SCREWLESS SPRING CAGE CLAMP INSERTS





Panel Cut-Out

All dimensions are in mm.

Same View from Cable Side as Screw & Crimp Termination

|                               | Plug    | Receptacle |
|-------------------------------|---------|------------|
| Screwless Cage Clamp (#1-16)  | 10.4002 | 10.4012    |
| Screwless Cage Clamp (#17-32) | 10.4004 | 10.4014    |

These inserts fit in the HBE 32 Series Housings.



**Accessories for Crimp Terminated Inserts** 

# HBE MACHINE CONTACTS: DIAMETER 2.5 MM



|           | Bags of 100 |         |         |         |         |                      |              |  |  |  |  |
|-----------|-------------|---------|---------|---------|---------|----------------------|--------------|--|--|--|--|
|           |             | Sil     | ver     | Go      | old     | Stripping            | # of Marking |  |  |  |  |
| mm²       | AWG         | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |  |  |  |  |
| 0.5       | 20          | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |  |  |  |  |
| .75 - 1.0 | 18          | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |  |  |  |  |
| 1.5       | 16          | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |  |  |  |  |
| 2.5       | 14          | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |  |  |  |  |
| 4.0       | 12          | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |  |  |  |  |

Part number= 1 contact

### **CRIMP TOOLS**

Wire Gauge: 0.5 - 4.0 mm<sup>2</sup> for the HBE Crimp Inserts



Crimp Tool 11.1470



**Locator** 11.1472



Crimp Dies 11.1471

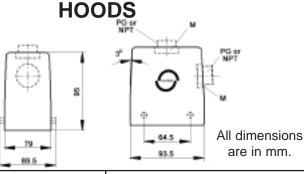
For removal of contacts use a slotted screwdriver. No special tool is necessary.

Please note that the crimp range for this tool is 0.14 to 2.5 mm² (AWG 26 - 14) with the appropriate crimp dies.

HBE 32 Housings: Double Levers on Hood

## **TOP ENTRY**







Metric hoods do not come with a neck.

|             | -   | 60.0  |        |                       |            |         |  |
|-------------|-----|-------|--------|-----------------------|------------|---------|--|
| Position of | Siz | e of  | Entry  | Standard Grey Coating |            |         |  |
| Cable Entry | -   | N.D.T |        | PG                    | NPT        | Metric  |  |
|             | PG  | NPT   | Metric | Part #                | Part #     | Part #  |  |
| Top Entry   | 21  | 3/4"  | -      | 10.1330               | 10.1330 NP | -       |  |
|             | 29  | 1"    | 32     | 10.1340               | 10.1340 NP | 19.1340 |  |
| Side Entry  | 21  | 3/4"  | 25     | 10.1350               | 10.1350 NP | 19.1350 |  |
|             | 29  | 1"    | 32     | 10.1360               | 10.1360 NP | 19.1360 |  |

Also Available Top Entry: Metric 40-19.1344

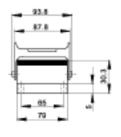
Side Entry: Metric 40-19.1362

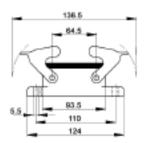
# PANEL MOUNT BASES



### **Standard Grey Coating** 10.1320

All dimensions are in mm.





Dust cover with double lever bolts and attachment string: 10.1420

All dimensions are in mm.

# **SURFACE MOUNT BASES**

| # of           |    |     |          | Standard Grey Coating |            |         |
|----------------|----|-----|----------|-----------------------|------------|---------|
| <b>Entries</b> |    |     |          | PG                    | NPT        | Metric  |
|                |    | NPT | Metric   | Part #                | Part #     | Part #  |
| 2 Entries      | 29 | 1"  | 32       | 10 1380               | 10.1380 NP | 19.1380 |
|                |    |     | <u> </u> |                       | 1011000111 |         |

Dust cover with double lever bolts and attachment string: 10.1420

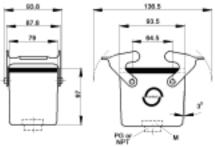


# **CABLE COUPLER HOODS**



| Size of Entry |      |        | Standard Grey Coating |            |         |  |  |
|---------------|------|--------|-----------------------|------------|---------|--|--|
|               |      |        | PG                    | NPT        | Metric  |  |  |
| PG            | NPT  | Metric | Part #                | Part #     | Part #  |  |  |
| 21            | 3/4" | -      | 10.1390               | 10.1390 NP | -       |  |  |
| 29            | 1"   | 32     | 10.1395               | 10.1395 NP | 19.1395 |  |  |

Dust cover with double lever bolts and attachment string: 10.1420

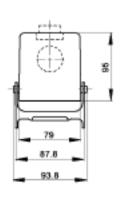


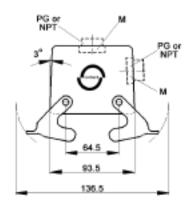
HBE 32 Housings: Double Levers on Hood

# **HOODS**

**TOP ENTRY** 







### **SIDE ENTRY**



All dimensions are in mm.

|                   | Size of Entry |     |        | Standard Grey Coating |               |                  |  |
|-------------------|---------------|-----|--------|-----------------------|---------------|------------------|--|
| of Cable<br>Entry | PG            | NPT | Metric | PG<br>Part #          | NPT<br>Part # | Metric<br>Part # |  |
| Top Entry         | 29            | 1"  | 32     | 70.2050               | 70.2050 NP    | 79.2050          |  |
| Side Entry        | 29            | 1"  | 32     | 10.1366               | 10.1366 NP    | 19.1366          |  |

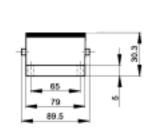
Metric hoods do not come with a neck.

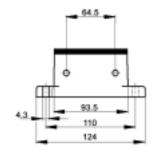
## PANEL MOUNT BASES



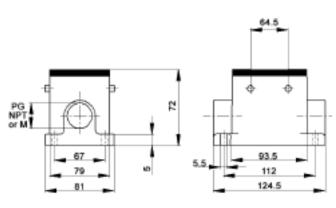
Standard Grey Coating

All dimensions are in mm.





# **SURFACE MOUNT BASES**



All dimensions are in mm.



| # of           | Size of Entry |     |        | Standard Grey Coating |            |        |  |
|----------------|---------------|-----|--------|-----------------------|------------|--------|--|
| <b>Entries</b> |               |     |        | PG                    | NPT        | Metric |  |
|                | PG            | NPT | Metric | Part #                | Part #     | Part # |  |
| 1 Entry        | 29            | 1"  | 32     | 10.1373               | 10.1373 NP | -      |  |



HBE 48 Plugs & Receptacles

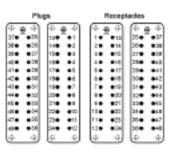


# **SCREW & CRIMP TERMINATED INSERTS**

#### **SCREW TERMINATED**



View from Cable Side

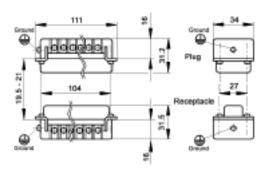


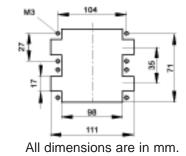
CRIMP TERMINATED

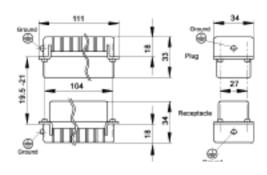


**Panel Cut-Out** 

**Contacts Sold Separately** 







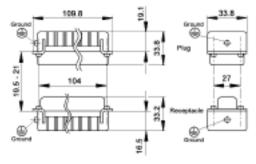
These inserts fit in the HBE 48 Series Housings.

|   | Plug    | Receptacle |
|---|---------|------------|
| Screw Terminated with wire protection (#1-24)     | 10.1960 | 10.1970    |
| Screw Terminated with wire protection (#25-48)    | 10.2040 | 10.2050    |
| Screw Terminated without wire protection (#1-24)  | 10.1961 | 10.1971    |
| Screw Terminated without wire protection (#25-48) | 10.2041 | 10.2051    |
| Crimp Terminated: Machine (#1-24)                 | 10.1860 | 10.1870    |
| Crimp Terminated: Machine (#25-48)                | 10.1862 | 10.1872    |

Crimp Contacts are on the next page.

# **SCREWLESS SPRING CAGE CLAMP INSERTS**





**Panel Cut-Out** 109.8

All dimensions are in mm.

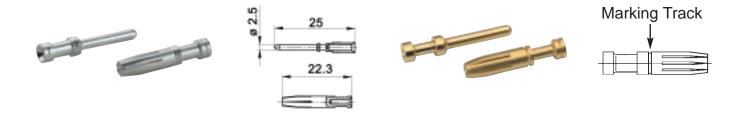
Same View from Cable Side as Screw & Crimp **Termination** 

|                               | Plug    | Receptacle |
|-------------------------------|---------|------------|
| Screwless Cage Clamp (#1-24)  | 10.4003 | 10.4013    |
| Screwless Cage Clamp (#25-48) | 10.4005 | 10.4015    |

These inserts fit in the HBE 48 Series Housings.

**Accessories for Crimp Terminated Inserts** 

### HBE MACHINE CONTACTS: DIAMETER 2.5 MM



| Bags of 100     |     |         |         |         |         |                      |              |  |  |
|-----------------|-----|---------|---------|---------|---------|----------------------|--------------|--|--|
|                 |     | Silver  |         | Gold    |         | Stripping            | # of Marking |  |  |
| mm <sup>2</sup> | AWG | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |  |  |
| 0.5             | 20  | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |  |  |
| .75 - 1.0       | 18  | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |  |  |
| 1.5             | 16  | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |  |  |
| 2.5             | 14  | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |  |  |
| 4.0             | 12  | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |  |  |

Part number= 1 contact

### **CRIMP TOOLS**

Wire Gauge: 0.5 - 4.0 mm<sup>2</sup> for the HBE Crimp Inserts



Crimp Tool 11.1470



**Locator** 11.1472



Crimp Dies 11.1471

For removal of contacts use a slotted screwdriver. No special tool is necessary.

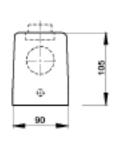
Please note that the crimp range for this tool is 0.14 to 2.5 mm² (AWG 26 - 14) with the appropriate crimp dies.

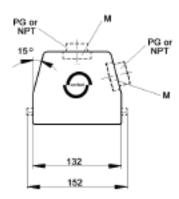
HBE 48 Housings: Single Lever on Base

# **HOODS**

**TOP ENTRY** 









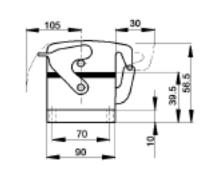
All dimensions are in mm.

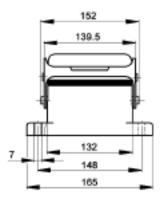
| Position of | Size of Entry |        |        | Standard Grey Coating |            |         |  |
|-------------|---------------|--------|--------|-----------------------|------------|---------|--|
| Cable Entry |               |        |        | PG                    | NPT        | Metric  |  |
|             | PG            | NPT    | Metric | Part #                | Part #     | Part #  |  |
| Top Entry   | 29            | 1"     | 32     | 10.1550               | 10.1550 NP | 19.1550 |  |
|             | 36            | 1 1/4" | 40     | 10.1560               | 10.1560 NP | 19.1560 |  |
|             | 42            | -      | 50     | 10.1570               | -          | 19.1570 |  |
| Side Entry  | 29            | 1"     | 32     | 10.1580               | 10.1580 NP | 19.1580 |  |
|             | 36            | 1 1/4" | 40     | 10.1590               | 10.1590 NP | 19.1590 |  |
|             | 42            | -      | 50     | 10.1600               | -          | 19.1600 |  |
|             |               |        |        |                       |            |         |  |

Metric hoods do not come with a neck.

# PANEL MOUNT BASES







All dimensions are in mm.

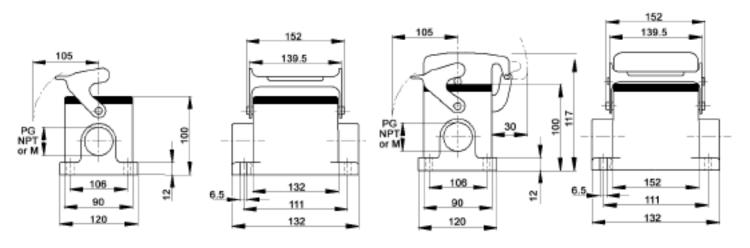
|                   | With Dust Cover         | With Dust Cover      |
|-------------------|-------------------------|----------------------|
| Without           | with hold down screw    | with hold down screw |
| <b>Dust Cover</b> | and no dust cover bolts | and dust cover bolts |
| 10.1610           | 10.1520                 | 10.1525              |

HBE 48 Housings: Single Lever on Base

# **SURFACE MOUNT BASES**







All dimensions are in mm.

| # of           | Siz | e of E | Entry  | Standa  | ard Grey Co | oating  |
|----------------|-----|--------|--------|---------|-------------|---------|
| <b>Entries</b> |     |        |        | PG      | NPT         | Metric  |
|                | PG  | NPT    | Metric | Part #  | Part #      | Part #  |
| 2 Entries      | 29  | 1"     | 32     | 10.1660 | 10.1660 NP  | 19.1660 |
|                | 36  | 1 1/4" | 40     | 10.1661 | 10.1661 NP  | 19.1661 |
| 1 Entry        | 29  | 1"     | 32     | 10.1650 | 10.1650 NP  | 19.1650 |
|                | 36  | 1 1/4" | 40     | 10.1651 | 10.1651 NP  | 19.1651 |
| 2 Entries with | 29  | 1"     | 32     | 10.1680 | 10.1680 NP  | 19.1680 |
| dust cover     | 36  | 1 1/4" | 40     | 10.1681 | 10.1681 NP  | 19.1681 |
| 1 Entry with   | 29  | 1"     | 32     | 10.1670 | 10.1670 NP  | 19.1670 |
| dust cover     | 36  | 1 1/4" | 40     | 10.1671 | 10.1671 NP  | 19.1671 |

# **HEE Series**

The EPIC® HEE Series connector inserts are a high-density companion to the popular EPIC® HBE Series. Offering the same voltage and current ratings (600 V AC, 16 Amps), they provide a significant increase in contact density (67% - 100% increase) within the same footprint dimensions as an equivalent size HBE connector. They are ideal for applications in the automotive industries, and any other industrial application requiring high density contacts. **HEE 10 Series** 321 **HEE 18 Series** 323 **HEE 32 Series** 327 **HEE 46 Series** 331 **HEE 64 Series** 335 **HEE 92 Series** 337

**HEE Series** 

#### TECHNICAL DATA

**Number of Contacts:** 10, 18, 32, 46, 64 (2x32),

92 (2X46) (+PE)

**VDE**: 500V Rated Voltage:

> UL: 600V CSA: 600V

Rated Current: 16A

-40°C to 125°C Temperature Range:

Pollution Degree: 3 Test Voltage: 6 kV **Termination Type:** mm<sup>2</sup> AWG Machined Crimp: 0.5 - 4.0 mm<sup>2</sup> 20 - 12

Contacts:

Copper alloy, silver plated/ gold Material:

plated

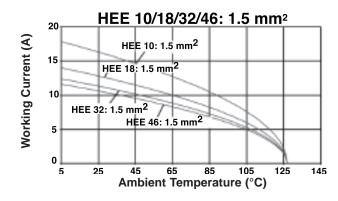
100 (higher mating cycles Mating Cycles:

depending on the application)

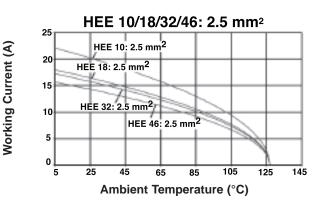
 $\leq$  2 m $\Omega$ Contact Resistance:

### HEE INSERTS: DERATING CURVES

#### HEE CRIMP MACHINED: 1.5 mm<sup>2</sup> (16 AWG)



#### HEE CRIMP MACHINED: 2.5 mm<sup>2</sup> (14 AWG)



### MATING COMPONENTS

HBVE Plugs & Receptacles fit into EPIC® HBE Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog. Please note that metric parts are available.

Specifications: DIN 43652 Protection class:

Temperature Range: -40°C to +125°C Material: Aluminum alloy, powder coated

**Standard Grey Coating (NEMA 4)** NPT



PG





**METRIC** 





**EP Black Coating (NEMA 4X)** 



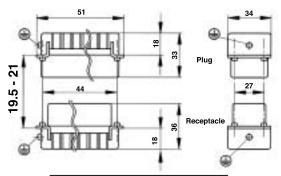
**METRIC** 

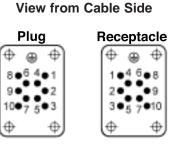
HEE 10 Plugs & Receptacles



### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**







All dimensions are in mm.

 Plug
 Receptacle

 10.1804C0
 10.1814C0

**Contacts Sold Separately** 

### **MACHINE CONTACTS: DIAMETER 2.5 MM**



| Bags of 100 |
|-------------|
|-------------|

|                 |     | Silver  |         | Gold    |         | Stripping            | # of Marking |
|-----------------|-----|---------|---------|---------|---------|----------------------|--------------|
| mm <sup>2</sup> | AWG | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |
| 0.5             | 20  | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0       | 18  | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5             | 16  | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5             | 14  | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |
| 4.0             | 12  | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |

Part number= 1 contact

# **CRIMP TOOLS**









Crimp Tool 11.1470

**Locator** 11.1472

Crimp Dies

Removal Tool: 11.1825

#### MATING COMPONENTS

HEE 10 Plugs & Receptacles fit into the EPIC® HBE 6 Housings. Following is a quick reference for the mating components. Diagrams are located in the HBE Section of the catalog (Page 278). Please note that metric parts are available.

HBE 6 Housings: Single Lever on Base for HEE 10 Inserts



Dust Cover- 10.0165

### **HOODS**

#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 13.5          | 1/2" | 10.0110    | 10.0110 NP  | 70.0216            | 70.0216 NP |
|             | 16            | 1/2" | 10.0210    | 10.0210 NP  | 70.0210            | 70.0210 NP |
| Side Entry  | 13.5          | 1/2" | 10.0120    | 10.0120 NP  | 70.0236            | 70.0236 NP |
|             | 16            | 1/2" | 10.0220    | 10.0220 NP  | 70.0230            | 70.0230 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0202               | 70.0202 NP | 70.0212            | 70.0212 NP |
|             | 29            | 1"   | 70.0204               | 70.0204 NP | 70.0214            | 70.0214 NP |
| Side Entry  | 21            | 3/4" | 70.0222               | 70.0222 NP | 70.0232            | 70.0232 NP |
|             | 29            | 1"   | 70.0224               | 70.0224 NP | 70.0234            | 70.0234 NP |





## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0030               | 70.0025            |  |
| With Dust Cover    | 10.0040               | 70.0045            |  |

Dust Cover- 10.0150

## **SURFACE MOUNT BASES**









Dust Cover- 10.0150

#### **STANDARD PROFILE**

| # of           | Size o | f Entry | Standard G | Standard Grey Coating |           | oating (EP) |  |
|----------------|--------|---------|------------|-----------------------|-----------|-------------|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #  |  |
| 2 Entries      | 16     | 1/2"    | 10.0060    | 10.0060 NP            | 70.0080   | 70.0080 NP  |  |
| 1 Entry        | 16     | 1/2"    | 10.0050    | 10.0050 NP            | 70.0070   | 70.0070 NP  |  |
| 2 Entries with | 16     | 1/2"    | 10.0090    | 10.0090 NP            | 70.0180   | 70.0180 NP  |  |
| dust cover     | -      | -       | -          | -                     | -         | -           |  |
| 1 Entry with   | 16     | 1/2"    | 10.0070    | 10.0070 NP            | 70.0170   | 70.0170 NP  |  |
| dust cover     | -      | -       | -          | -                     | -         | -           |  |

#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries      | 21     | 3/4"    | 70.0062    | 70.0062 NP  | 70.0082            | 70.0082 NP |  |
|                | 29     | 1"      | 70.0064    | 70.0064 NP  | 70.0084            | 70.0084 NP |  |
| 1 Entry        | 21     | 3/4"    | 70.0052    | 70.0052 NP  | 70.0072            | 70.0072 NP |  |
|                | 29     | 1"      | 70.0054    | 70.0054 NP  | 70.0074            | 70.0074 NP |  |
| 2 Entries with | 21     | 3/4"    | 70.0162    | 70.0162 NP  | 70.0182            | 70.0182 NP |  |
| dust cover     | 29     | 1"      | 70.0164    | 70.0164 NP  | 70.0184            | 70.0184 NP |  |
| 1 Entry with   | 21     | 3/4"    | 70.0152    | 70.0152 NP  | 70.0172            | 70.0172 NP |  |
| dust cover     | 29     | 1"      | 70.0154    | 70.0154 NP  | 70.0174            | 70.0174 NP |  |

# **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| Tionic   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 13.5          | 1/2" | 10.0140               | 10.0140 NP | -                  | -          |
| Profile  | 16            | 1/2" | 10.0240               | 10.0240 NP | 70.0110            | 70.0110 NP |
| High     | 21            | 3/4" | 70.0102               | 70.0102 NP | 70.0112            | 70.0112 NP |
| Profile  | 29            | 1"   | 70.0104               | 70.0104 NP | 70.0114            | 70.0114 NP |

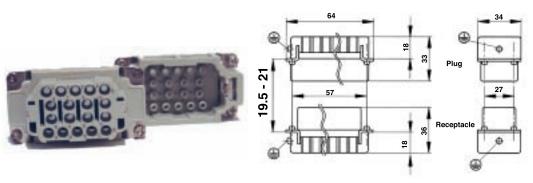
Dust Cover- 10.0150



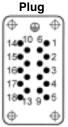
HEE 18 Plugs & Receptacles

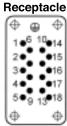


## **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



View from Cable Side



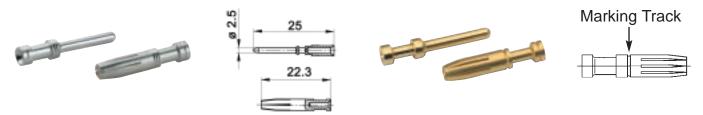


All dimensions are in mm.

| Plug      | Receptacle |
|-----------|------------|
| 10.1824C0 | 10.1834C0  |

**Contacts Sold Separately** 

# **MACHINE CONTACTS: DIAMETER 2.5 MM**



| Bags | of | 1 | 00            |
|------|----|---|---------------|
|      |    |   | $\overline{}$ |

|                 |     | Sil     | ver     | Go      | old     | Stripping            | # of Marking |
|-----------------|-----|---------|---------|---------|---------|----------------------|--------------|
| mm <sup>2</sup> | AWG | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |
| 0.5             | 20  | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0       | 18  | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5             | 16  | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5             | 14  | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |
| 4.0             | 12  | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |

Part number= 1 contact

# **CRIMP TOOLS**







**Locator** 11.1472



Crimp Dies 11.1471



Removal Tool: 11.1825

### **MATING COMPONENTS**

HEE 18 Plugs & Receptacles fit into the EPIC® HBE 10 Housings. Following is a quick reference for the mating components. Diagrams are located in the HBE Section of the catalog (Page 283). Please note that metric parts are available.

HBE 10 Housings: Single Lever on Base for HEE 18 Inserts







| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 10.0409               | 10.0409 NP | 70.0490            | 70.0490 NP |
|             | 21            | 3/4" | 10.0407               | 10.0407 NP | 70.0496            | 70.0496 NP |
| Side Entry  | 16            | 1/2" | 10.0429               | 10.0429 NP | 70.0590            | 70.0590 NP |
|             | 21            | 3/4" | 10.0428               | 10.0428 NP | 70.0596            | 70.0596 NP |

STANDARD PROFILE

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0442               | 70.0442 NP | 70.0492            | 70.0492 NP |
|             | 29            | 1"   | 70.0444               | 70.0444 NP | 70.0494            | 70.0494 NP |
| Side Entry  | 21            | 3/4" | 70.0542               | 70.0542 NP | 70.0592            | 70.0592 NP |
|             | 29            | 1"   | 70.0544               | 70.0544 NP | 70.0594            | 70.0594 NP |



# PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0329               | 70.0327            |  |
| With Dust Cover    | 10.0339               | 70.0337            |  |

Dust Cover- 10.0487

**STANDARD PROFILE** 

# **SURFACE MOUNT BASES**

16

1 Entry with

dust cover





| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |           |
|----------------|--------|---------|------------|-------------|--------------------|-----------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part  |
| 2 Entries      | 16     | 1/2"    | 10.0359    | 10.0359 NP  | 70.0630            | 70.0630 N |
| 1 Entry        | 16     | 1/2"    | 10.0349    | 10.0349 NP  | 70.0620            | 70.0620 N |
|                | 21     | -       | 10.0347    | 10.0347 NP  | -                  | -         |
| 2 Entries with | 16     | 1/2"    | 10.0389    | 10.0389 NP  | 70.0670            | 70.0670 N |
| dust cover     | -      | -       | -          | -           | -                  | -         |

10.0369

**HIGH PROFILE** 

10.0369 NP

70.0660

70.0660 NP

| # of           | # of Size of Entry |      |           | rey Coating | Black Co  | oating (EP) |
|----------------|--------------------|------|-----------|-------------|-----------|-------------|
| Entries        | PG                 | NPT  | PG Part # | NPT Part #  | PG Part # | NPT Part #  |
| 2 Entries      | 21                 | 3/4" | 70.0612   | 70.0612 NP  | 70.0632   | 70.0632 NP  |
|                | 29                 | 1"   | 70.0614   | 70.0614 NP  | 70.0634   | 70.0634 NP  |
| 1 Entry        | 21                 | 3/4" | 70.0602   | 70.0602 NP  | 70.0622   | 70.0622 NP  |
|                | 29                 | 1"   | 70.0604   | 70.0604 NP  | 70.0624   | 70.0624 NP  |
| 2 Entries with | 21                 | 3/4" | 70.0652   | 70.0652 NP  | 70.0672   | 70.0672 NP  |
| dust cover     | 29                 | 1"   | 70.0654   | 70.0654 NP  | 70.0674   | 70.0674 NP  |
| 1 Entry with   | 21                 | 3/4" | 70.0642   | 70.0642 NP  | 70.0662   | 70.0662 NP  |
| dust cover     | 29                 | 1"   | 70.0644   | 70.0644 NP  | 70.0664   | 70.0664 NP  |



# **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| Tronie   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0469    | 10.0469 NP  | 70.0430            | 70.0430 NP |
| Profile  | 21            | 3/4" | 70.0422    | 70.0422 NP  | 70.0432            | 70.0432 NP |
| High     | 21            | 3/4" | 70.0424    | 70.0424 NP  | 70.0434            | 70.0434 NP |
| Profile  | 29            | 1"   | 70.0426    | 70.0426 NP  | 70.0436            | 70.0436 NP |



HBE 10 Housings: Double Levers on Base for HEE 18 Inserts





#### STANDARD PROFILE

| Position of | sition of Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|-------------------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG                      | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 16                      | 1/2" | 10.0400    | 10.0400 NP  | 70.0510            | 70.0510 NP |
|             | 21                      | 3/4" | 10.0401    | 10.0401 NP  | 70.0512            | 70.0512 NP |
| Side Entry  | 16                      | 1/2" | 10.0420    | 10.0420 NP  | 70.0530            | 70.0530 NP |
|             | 21                      | 3/4" | 10.0421    | 10.0421 NP  | 70.0532            | 70.0532 NP |

#### **HIGH PROFILE**

| Position of Size of Entry |    |      | Standard G | rey Coating | Black Coating (EP) |            |
|---------------------------|----|------|------------|-------------|--------------------|------------|
| Cable Entry               | PG | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry                 | 21 | 3/4" | 70.0504    | 70.0504 NP  | 70.0514            | 70.0514 NP |
|                           | 29 | 1"   | 70.0506    | 70.0506 NP  | 70.0516            | 70.0516 NP |
| Side Entry                | 21 | 3/4" | 70.0524    | 70.0524 NP  | 70.0534            | 70.0534 NP |
|                           | 29 | 1"   | 70.0526    | 70.0526 NP  | 70.0536            | 70.0536 NP |



# **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0320               | 70.0325            |

# **SURFACE MOUNT BASES**







#### STANDARD PROFILE

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 16            | 1/2" | 10.0350               | 10.0350 NP | 70.0380            | 70.0380 NP |
| 1 Entry   | 16            | 1/2" | 10.0340               | 10.0340 NP | 70.0370            | 70.0370 NP |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|--------|---------|------------|-------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 70.0362    | 70.0362 NP  | 70.0382            | 70.0382 NP |
|           | 29     | 1"      | 70.0364    | 70.0364 NP  | 70.0384            | 70.0384 NP |
| 1 Entry   | 21     | 3/4"    | 70.0352    | 70.0352 NP  | 70.0372            | 70.0372 NP |
|           | 29     | 1"      | 70.0354    | 70.0354 NP  | 70.0374            | 70.0374 NP |



# **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| TTOINE   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0460               | 10.0460 NP | 70.0410            | 70.0410 NP |
| Profile  | 21            | 3/4" | 70.0402               | 70.0402 NP | 70.0412            | 70.0412 NP |
| High     | 16            | 1/2" | 70.0404               | 70.0404 NP | 70.0414            | 70.0414 NP |
| Profile  | 21            | 3/4" | 70.0406               | 70.0406 NP | 70.0416            | 70.0416 NP |

HBE 10 Housings: Double Levers on Hood for HEE 18 Inserts





#### STANDARD PROFILE

| Position of Size of Entry |    | Standard Grey Coating |           | Black Coating (EP) |           |            |
|---------------------------|----|-----------------------|-----------|--------------------|-----------|------------|
| Cable Entry               | PG | NPT                   | PG Part # | NPT Part #         | PG Part # | NPT Part # |
| Top Entry                 | 16 | 1/2"                  | 10.0410   | 10.0410 NP         | 70.0560   | 70.0560 NP |
| Side Entry                | 16 | 1/2"                  | 10.0450   | 10.0450 NP         | 70.0580   | 70.0580 NP |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.0552    | 70.0552 NP  | 70.0562            | 70.0562 NP |
|             | 29     | 1"      | 70.0554    | 70.0554 NP  | 70.0564            | 70.0564 NP |
| Side Entry  | 21     | 3/4"    | 70.0572    | 70.0572 NP  | 70.0582            | 70.0582 NP |
|             | 29     | 1"      | 70.0574    | 70.0574 NP  | 70.0584            | 70.0584 NP |





| Description     | Standard Grey Coating | Black Coating (EP) |
|-----------------|-----------------------|--------------------|
| With Dust Cover | 10.0330               | 70.0335            |

# **SURFACE MOUNT BASES**

#### **STANDARD PROFILE**



| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 16     | 1/2"    | 10.0380    | 10.0380 NP  | 70.0480            | 70.0480 NP |  |
| 1 Entry   | 16     | 1/2"    | 10.0360    | 10.0360 NP  | 70.0470            | 70.0470 NP |  |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|--------|---------|------------|-------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 70.0462    | 70.0462 NP  | 70.0482            | 70.0482 NP |
|           | 29     | 1"      | 70.0464    | 70.0464 NP  | 70.0484            | 70.0484 NP |
| 1 Entry   | 21     | 3/4"    | 70.0452    | 70.0452 NP  | 70.0472            | 70.0472 NP |
|           | 29     | 1"      | 70.0454    | 70.0454 NP  | 70.0474            | 70.0474 NP |

# **DUST COVERS WITH ATTACHMENT STRING**



| Material: Thermoplastic Resin | Temperature: | -40°C to 125°C |
|-------------------------------|--------------|----------------|
|-------------------------------|--------------|----------------|

|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 10 Hoods  | 10.0486 |
| Dust cover with single lever bolts for HBE 10 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0487 |
| Dust cover with double levers and gasket for HBE 10 Hoods  | 10.0485 |
| Dust cover with double lever bolts for HBE 10 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0470 |
| Dust cover with double lever bolts and gasket for HBE 10 Hoods   | 10.0471 |

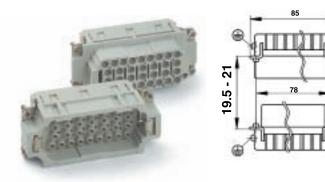


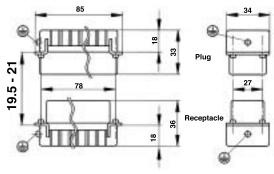
HEE 32 Plugs & Receptacles

All dimensions are in mm.



# **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



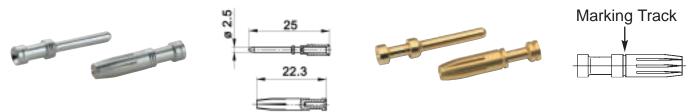


 Plug
 Receptacle

 10.1844C0
 10.1854C0

**Contacts Sold Separately** 

### **MACHINE CONTACTS: DIAMETER 2.5 MM**



Bags of 100

|           |     | Silver  |         | Gold    |         | Stripping            | # of Marking |
|-----------|-----|---------|---------|---------|---------|----------------------|--------------|
| mm²       | AWG | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |
| 0.5       | 20  | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0 | 18  | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5       | 16  | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5       | 14  | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |
| 4.0       | 12  | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |

Part number= 1 contact

### **CRIMP TOOLS**



Crimp Tool 11.1470



**Locator** 11.1472



Crimp Dies 11.1471



Removal Tool: 11.1825

#### MATING COMPONENTS

HEE 32 Plugs & Receptacles fit into the EPIC® HBE 16 Housings. Following is a quick reference for the mating components. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.

HBE 16 Housings: Single Lever on Base for HEE 32 Inserts

# **HOODS**







| Position of Size of Entry |    | Standard G | rey Coating | Black Coating (EP) |           |            |
|---------------------------|----|------------|-------------|--------------------|-----------|------------|
| Cable Entry               | PG | NPT        | PG Part #   | NPT Part #         | PG Part # | NPT Part # |
| Top Entry                 | 21 | 3/4"       | 10.0809     | 10.0809 NP         | 70.0990   | 70.0990 NP |
|                           | 29 | 1"         | 10.0909     | 10.0909 NP         | -         | -          |
| Side Entry                | 21 | 3/4"       | 10.0829     | 10.0829 NP         | 70.1090   | 70.1090 NP |
|                           | 29 | 1"         | 10.0929     | 10.0929 NP         | -         | -          |

STANDARD PROFILE

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|--|--|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |  |
| Top Entry   | 21     | 3/4"    | 70.0942    | 70.0942 NP  | 70.0992            | 70.0992 NP |  |  |  |  |
|             | 29     | 1"      | 70.0944    | 70.0944 NP  | 70.0994            | 70.0994 NP |  |  |  |  |
| Side Entry  | 21     | 3/4"    | 70.1042    | 70.1042 NP  | 70.1092            | 70.1092 NP |  |  |  |  |
|             | 29     | 1"      | 70.1044    | 70.1044 NP  | 70.1094            | 70.1094 NP |  |  |  |  |

# PANEL MOUNT BASES



| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0729               | 70.0827            |  |
| With Dust Cover    | 10.0739               | 70.0837            |  |

# **SURFACE MOUNT BASES**







#### STANDARD PROFILE

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|--|--|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |  |
| 2 Entries      | 21     | 3/4"    | 10.0759    | 10.0759 NP  | 70.1130            | 70.1130 NP |  |  |  |  |
| 1 Entry        | 21     | 3/4"    | 10.0749    | 10.0749 NP  | 70.1120            | 70.1120 NP |  |  |  |  |
| 2 Entries with | 21     | 3/4"    | 10.0789    | 10.0789 NP  | 70.1170            | 70.1170 NP |  |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |  |
| 1 Entry with   | 21     | 3/4"    | 10.0769    | 10.0769 NP  | 70.1160            | 70.1160 NP |  |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |  |

#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|--------|---------|-----------------------|------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.1112               | 70.1112 NP | 70.1132            | 70.1132 NP |
|                | 29     | 1"      | 70.1114               | 70.1114 NP | 70.1134            | 70.1134 NP |
| 1 Entry        | 21     | 3/4"    | 70.1102               | 70.1102 NP | 70.1122            | 70.1122 NP |
|                | 29     | 1"      | 70.1104               | 70.1104 NP | 70.1124            | 70.1124 NP |
| 2 Entries with | 21     | 3/4"    | 70.1152               | 70.1152 NP | 70.1172            | 70.1172 NP |
| dust cover     | 29     | 1"      | 70.1154               | 70.1154 NP | 70.1174            | 70.1174 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1142               | 70.1142 NP | 70.1162            | 70.1162 NP |
| dust cover     | 29     | 1"      | 70.1144               | 70.1144 NP | 70.1164            | 70.1164 NP |

# **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| Trome    | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0869    | 10.0869 NP  | 70.0930            | 70.0930 NP |
| Profile  | 29            | 1"   | 10.0969    | 10.0969 NP  | -                  | -          |
| High     | 21            | 3/4" | 70.0922    | 70.0922 NP  | 70.0932            | 70.0932 NP |
| Profile  | 29            | 1"   | 70.0924    | 70.0924 NP  | 70.0934            | 70.0934 NP |

HBE 16 Housings: Double Levers on Base for HEE 32 Inserts

### **HOODS**





#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|--------|---------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21     | 3/4"    | 10.0800    | 10.0800 NP            | 70.1010   | 70.1010 NP         |  |
|             | 29     | 1"      | 10.0900    | 10.0900 NP            | -         | -                  |  |
| Side Entry  | 21     | 3/4"    | 10.0820    | 10.0820 NP            | 70.1030   | 70.1030 NP         |  |
|             | 29     | 1"      | 10.0920    | 10.0920 NP            | -         |                    |  |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 70.1002    | 70.1002 NP  | 70.1012            | 70.1012 NP |  |
|             | 29     | 1"      | 70.1004    | 70.1004 NP  | 70.1014            | 70.1014 NP |  |
| Side Entry  | 21     | 3/4"    | 70.1022    | 70.1022 NP  | 70.1032            | 70.1032 NP |  |
|             | 29     | 1"      | 70.1024    | 70.1024 NP  | 70.1034            | 70.1034 NP |  |

## **PANEL MOUNT BASES**



| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0720               | 70.0825            |  |

# **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 21     | 3/4"    | 10.0750    | 10.0750 NP  | 70.0880            | 70.0880 NP |  |
| 1 Entry   | 21     | 3/4"    | 10.0740    | 10.0740 NP  | 70.0870            | 70.0870 NP |  |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-----------|--------|---------|------------|-----------------------|-----------|--------------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| 2 Entries | 21     | 3/4"    | 70.0862    | 70.0862 NP            | 70.0882   | 70.0882 NP         |  |
|           | 29     | 1"      | 70.0864    | 70.0864 NP            | 70.0884   | 70.0884 NP         |  |
| 1 Entry   | 21     | 3/4"    | 70.0852    | 70.0852 NP            | 70.0872   | 70.0872 NP         |  |
|           | 29     | 1"      | 70.0854    | 70.0854 NP            | 70.0874   | 70.0874 NP         |  |

# **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| TTOTILE  | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0860               | 10.0860 NP | 70.0910            | 70.0910 NP |
| Profile  | 29            | 1"   | 10.0960               | 10.0960 NP | -                  | -          |
| High     | 21            | 3/4" | 70.0902               | 70.0902 NP | 70.0912            | 70.0912 NP |
| Profile  | 29            | 1"   | 70.0904               | 70.0904 NP | 70.0914            | 70.0914 NP |

HBE 16 Housings: Double Levers on Hood for HEE 32 Inserts





#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|--------|---------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.0810               | 10.0810 NP | 70.1060            | 70.1060 NP |
|             | 29     | 1"      | 10.0910               | 10.0910 NP | -                  | -          |
| Side Entry  | 21     | 3/4"    | 10.0830               | 10.0830 NP | 70.1080            | 70.1080 NP |
|             | 29     | 1"      | 10.0930               | 10.0930 NP | 1                  |            |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|--------|---------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.1052               | 70.1052 NP | 70.1062            | 70.1062 NP |
|             | 29     | 1"      | 70.1054               | 70.1054 NP | 70.1064            | 70.1064 NP |
| Side Entry  | 21     | 3/4"    | 70.1072               | 70.1072 NP | 70.1082            | 70.1032 NP |
|             | 29     | 1"      | 70.1074               | 70.1074 NP | 70.1084            | 70.1034 NP |



# PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0731               | -                  |
| With Dust Cover    | 10.0730               | 70.0835            |

# **SURFACE MOUNT BASES**



| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries      | 21     | 3/4"    | 70.0960    | 70.0960 NP  | 70.0980            | 70.0980 NP |  |
| 1 Entry        | 21     | 3/4"    | 10.0760    | 10.0760 NP  | 70.0970            | 70.0970 NP |  |
| 2 Entries with | 21     | 3/4"    | 70.0962    | 70.0962 NP  | 70.0982            | 70.0982 NP |  |
| dust cover     | 29     | 1"      | 70.0964    | 70.0964 NP  | 70.0984            | 70.0984 NP |  |
| 1 Entry with   | 21     | 3/4"    | 70.0952    | 70.0952 NP  | 70.0972            | 70.0972 NP |  |
| dust cover     | 29     | 1"      | 70.0954    | 70.0954 NP  | 70.0974            | 70.0974 NP |  |

# **DUST COVERS WITH ATTACHMENT STRING**



Temperature:

-40°C to 125°C



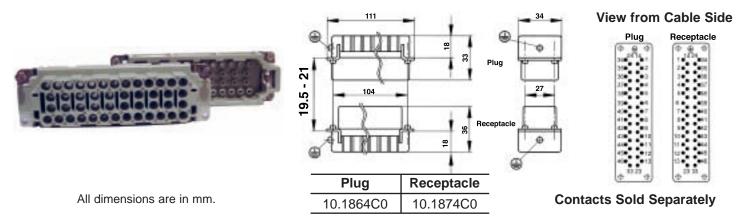
|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 16 Hoods  | 10.0886 |
| Dust cover with single lever bolts for HBE 16 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0887 |
| Dust cover with double levers and gasket for HBE 16 Hoods  | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0870 |
| Dust cover with double lever bolts and gasket for HBE 16 Hoods   | 10.0871 |



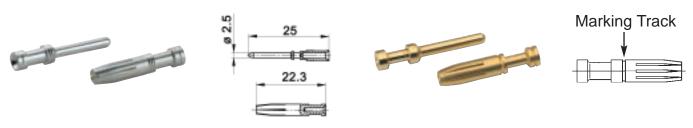
HEE 46 Plugs & Receptacles



### CRIMP TERMINATED: MACHINE CONTACT INSERTS



## **MACHINE CONTACTS: DIAMETER 2.5 MM**



|                 | Bags of 100 |             |         |         |           |                      |        |  |  |  |  |  |  |
|-----------------|-------------|-------------|---------|---------|-----------|----------------------|--------|--|--|--|--|--|--|
|                 |             | Silver Gold |         | old     | Stripping | # of Marking         |        |  |  |  |  |  |  |
| mm <sup>2</sup> | AWG         | Pin         | Socket  | Pin     | Socket    | Length (mm)          | Tracks |  |  |  |  |  |  |
| 0.5             | 20          | 11.1900     | 11.1950 | 11.1920 | 11.1970   | Pin=7.4, Socket =7.3 | -      |  |  |  |  |  |  |
| .75 - 1.0       | 18          | 11.1901     | 11.1951 | 11.1921 | 11.1971   | Pin=7.4, Socket =7.3 | 1      |  |  |  |  |  |  |
| 1.5             | 16          | 11.1902     | 11.1952 | 11.1922 | 11.1972   | Pin=7.4, Socket =7.3 | 2      |  |  |  |  |  |  |
| 2.5             | 14          | 11.1903     | 11.1953 | -       | -         | Pin=7.4, Socket =7.3 | 3      |  |  |  |  |  |  |
| 4.0             | 12          | 11.1904     | 11.1954 | -       | -         | Pin=7.4, Socket =7.3 | -      |  |  |  |  |  |  |

Part number= 1 contact

#### **CRIMP TOOLS Crimp Tool** Locator **Crimp Dies Removal Tool:** 11.1470 11.1472 11.1471 11.1825

#### MATING COMPONENTS

HEE 46 Plugs & Receptacles fit into the EPIC® HBE 24 Housings. Following is a quick reference for the mating components. Diagrams are located in the HBE Section of the catalog (Page 303). Please note that metric parts are available.

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HBE 24 Housings: Single Lever on Base for HEE 46 Inserts



## **HOODS**

#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.1219    | 10.1219 NP  | 70.1490            | 70.1490 NP |
|             | 29     | 1"      | 10.1119    | 10.1119 NP  | 70.1492            | 70.1492 NP |
| Side Entry  | 21     | 3/4"    | 10.1139    | 10.1139 NP  | 70.1590            | 70.1590 NP |
|             | 29     | 1"      | 10.1239    | 10.1239 NP  | 70.1592            | 70.1592 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1444               | 70.1444 NP | 70.1494            | 70.1494 NP |
|             | 29            | 1"   | 70.1446               | 70.1446 NP | 70.1496            | 70.1496 NP |
| Side Entry  | 21            | 3/4" | 70.1544               | 70.1544 NP | 70.1594            | 70.1594 NP |
|             | 29            | 1"   | 70.1546               | 70.1546 NP | 70.1596            | 70.1596 NP |



# **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.1029               | 70.1327            |  |
| With Dust Cover    | 10.1039               | 70.1337            |  |

## **SURFACE MOUNT BASES**



# STANDARD PROFILE

| # of         | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|--------------|---------------|------|------------|-------------|--------------------|------------|
| Entries      | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries    | 21            | 3/4" | 10.1059    | 10.1059 NP  | 70.1630            | 70.1630 NP |
| 1 Entry      | 21            | 3/4" | 10.1049    | 10.1049 NP  | 70.1620            | 70.1620 NP |
| 2 with cover | 21            | 3/4" | 10.1099    | 10.1099 NP  | 70.1670            | 70.1670 NP |
| 1 with cover | 21            | 3/4" | 10.1079    | 10.1079 NP  | 70.1660            | 70.1660 NP |



#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.1612               | 70.1612 NP | 70.1632            | 70.1632 NP |
|                | 29            | 1"   | 70.1614               | 70.1614 NP | 70.1634            | 70.1634 NP |
| 1 Entry        | 21            | 3/4" | 70.1602               | 70.1602 NP | 70.1622            | 70.1622 NP |
|                | 29            | 1"   | 70.1604               | 70.1604 NP | 70.1624            | 70.1624 NP |
| 2 Entries with | 21            | 3/4" | 70.1652               | 70.1652 NP | 70.1672            | 70.1672 NP |
| dust cover     | 29            | 1"   | 70.1654               | 70.1654 NP | 70.1674            | 70.1674 NP |
| 1 Entry with   | 21            | 3/4" | 70.1642               | 70.1642 NP | 70.1662            | 70.1662 NP |
| dust cover     | 29            | 1"   | 70.1644               | 70.1644 NP | 70.1664            | 70.1664 NP |



# **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
|          | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.1279    | 10.1279 NP  | 70.1430            | 70.1430 NP |
| Profile  | 29            | 1"   | 10.1179    | 10.1179 NP  | 70.1432            | 70.1432 NP |
| High     | 21            | 3/4" | 70.1424    | 70.1424 NP  | 70.1434            | 70.1434 NP |
| Profile  | 29            | 1"   | 70.1426    | 70.1426 NP  | 70.1436            | 70.1436 NP |



HBE 24 Housings: Double Levers on Base for HEE 46 Inserts

#### **HOODS**







#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.1210               | 10.1210 NP | 70.1510            | 70.1510 NP |
|             | 29            | 1"   | 10.1110               | 10.1110 NP | 70.1512            | 70.1512 NP |
| Side Entry  | 21            | 3/4" | 10.1130               | 10.1130 NP | 70.1530            | 70.1530 NP |
|             | 29            | 1"   | 10.1230               | 10.1230 NP | 70.1532            | 70.1532 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1504               | 70.1504 NP | 70.1514            | 70.1514 NP |
|             | 29            | 1"   | 70.1506               | 70.1506 NP | 70.1516            | 70.1516 NP |
| Side Entry  | 21            | 3/4" | 70.1524               | 70.1524 NP | 70.1534            | 70.1534 NP |
|             | 29            | 1"   | 70.1526               | 70.1526 NP | 70.1536            | 70.1536 NP |



### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.1020               | 70.1325            |  |

### **SURFACE MOUNT BASES**





#### STANDARD PROFILE

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 10.1050               | 10.1050 NP | 70.1380            | 70.1380 NP |
| 1 Entry   | 21            | 3/4" | 10.1040               | 10.1040 NP | 70.1370            | 70.1370 NP |

#### **HIGH PROFILE**

| # of      | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-----------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| 2 Entries | 21            | 3/4" | 70.1362    | 70.1362 NP            | 70.1382   | 70.1382 NP         |  |
|           | 29            | 1"   | 70.1364    | 70.1364 NP            | 70.1384   | 70.1384 NP         |  |
| 1 Entry   | 21            | 3/4" | 70.1352    | 70.1352 NP            | 70.1372   | 70.1372 NP         |  |
|           | 29            | 1"   | 70.1354    | 70.1354 NP            | 70.1374   | 70.1374 NP         |  |



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
|          | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.1270               | 10.1270 NP | 70.1410            | 70.1410 NP |
| Profile  | 29            | 1"   | 10.1170               | 10.1170 NP | 70.1412            | 70.1412 NP |
| High     | 21            | 3/4" | 70.1404               | 70.1404 NP | 70.1414            | 70.1414 NP |
| Profile  | 29            | 1"   | 70.1406               | 70.1406 NP | 70.1416            | 70.1416 NP |

HBE 24 Housings: Double Levers on Hood for HEE 46 Inserts

### **HOODS**





| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.1220               | 10.1220 NP | 70.1560            | 70.1560 NP |
|             | 29            | 1"   | 10.1120               | 10.1120 NP | 70.1562            | 70.1562 NP |
| Side Entry  | 21            | 3/4" | 10.1140               | 10.1140 NP | 70.1580            | 70.1580 NP |
|             | 29            | 1"   | 10.1240               | 10.1240 NP | 70.1582            | 70.1582 NP |



| Position of | Position of Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG                        | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21                        | 3/4" | 70.1554               | 70.1554 NP | 70.1564            | 70.1564 NP |
|             | 29                        | 1"   | 70.1556               | 70.1556 NP | 70.1566            | 70.1566 NP |
| Side Entry  | 21                        | 3/4" | 70.1574               | 70.1574 NP | 70.1584            | 70.1584 NP |
|             | 29                        | 1"   | 70.1576               | 70.1576 NP | 70.1586            | 70.1586 NP |



#### **PANEL MOUNT BASES**



| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| With Dust Cover    | 10.1030               | 70.1335            |
| Without Dust Cover | 10.1031               | -                  |

## **SURFACE MOUNT BASES**



| # of Size of Entry |    | Standard G | Standard Grey Coating |            | oating (EP) |            |
|--------------------|----|------------|-----------------------|------------|-------------|------------|
| Entries            | PG | NPT        | PG Part #             | NPT Part # | PG Part #   | NPT Part # |
| 2 Entries          | 21 | 3/4"       | 10.1090               | 10.1090 NP | 70.1480     | 70.1480 NP |
| 1 Entry            | 21 | 3/4"       | 10.1070               | 10.1070 NP | 70.1470     | 70.1470 NP |
| 2 Entries with     | 21 | 3/4"       | 70.1462               | 70.1462 NP | 70.1482     | 70.1482 NP |
| dust cover         | 29 | 1"         | 70.1464               | 70.1464 NP | 70.1484     | 70.1484 NP |
| 1 Entry with       | 21 | 3/4"       | 70.1452               | 70.1452 NP | 70.1472     | 70.1472 NP |
| dust cover         | 29 | 1"         | 70.1454               | 70.1454 NP | 70.1474     | 70.1474 NP |

### **DUST COVERS WITH ATTACHMENT STRING**



| Temperature:                | -40°C to 125°C  |  |  |
|-----------------------------|---|--|--|
|                             |   | Part #   |  |
| l Hoods                     |   | 10.1186  |  |
| BE 24 Panel Mount or<br>ood |   | 10.1187  |  |
| ket for HBE 24 Hoods        |   | 10.1195  |  |
| HBE 24 Panel Mount or ood   |   | 10.1180  |  |
| gasket for HBE 24 Hood      | s   | 10.1181  |  |
|                             | Hoods BE 24 Panel Mount or od ket for HBE 24 Hoods HBE 24 Panel Mount or od | Hoods BE 24 Panel Mount or od ket for HBE 24 Hoods HBE 24 Panel Mount or |  |

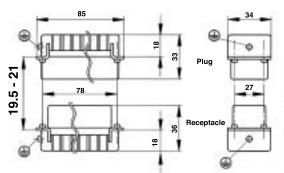
HEE 64 Plugs & Receptacles

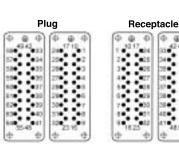


**View from Cable Side** 

### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**







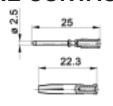
All dimensions are in mm.

| Description | Plug      | Receptacle |  |
|-------------|-----------|------------|--|
| 1 - 32      | 10.1844C0 | 10.1854C0  |  |
| 33 - 64     | 10.1845C0 | 10.1855C0  |  |

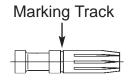
**Contacts Sold Separately** 

#### **MACHINE CONTACTS: DIAMETER 2.5 MM**









| Days of Tot | Bags of 1 | JU |
|-------------|-----------|----|
|-------------|-----------|----|

|           |     | Silver  |         | Gold    |         | Stripping            | # of Marking |
|-----------|-----|---------|---------|---------|---------|----------------------|--------------|
| mm²       | AWG | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |
| 0.5       | 20  | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0 | 18  | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5       | 16  | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5       | 14  | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |
| 4.0       | 12  | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |

Part number= 1 contact







**Crimp Tool** 11.1470

**Locator** 11.1472

Crimp Dies 11.1471 Removal Tool: 11.1825

#### **MATING COMPONENTS**

HEE 64 Plugs & Receptacles fit into the EPIC® HBE 32 Housings. Following is a quick reference for the mating components. Diagrams are located in the HBE Section of the catalog (Page 313). Please note that metric parts are available.

HBE 32 Housings for HEE 64 Inserts

### **DOUBLE LEVERS ON BASE**





| Position of | Size of Entry |      | Standard Grey Coating |            |  |
|-------------|---------------|------|-----------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # |  |
| Top Entry   | 21            | 3/4" | 10.1330               | 10.1330 NP |  |
|             | 29            | 1"   | 10.1340               | 10.1340 NP |  |
| Side Entry  | 21            | 3/4" | 10.1350               | 10.1350 NP |  |
|             | 29            | 1"   | 10.1360               | 10.1360 NP |  |



| # of      | Size of Entry |     | Standard Grey Coating |            |  |
|-----------|---------------|-----|-----------------------|------------|--|
| Entries   | PG            | NPT | PG Part #             | NPT Part # |  |
| 2 Entries | 29            | 1"  | 10.1380               | 10.1380 NP |  |
| 1 Entry   | 29            | 1"  | 10.1370               | 10.1370 NP |  |



| Part #  |
|---------|
| 10.1320 |



| Size o | f Entry | Standard ( | Grey Coating |
|--------|---------|------------|--------------|
| PG     | NPT     | PG Part #  | NPT Part #   |
| 21     | 3/4"    | 10.1390    | 10.1390      |
| 29     | 1"      | 10.1395    | 10.1395 NP   |

Dust cover with double lever bolts and attachment string for panel mount or surface mount base or cable coupler hood: 10.1420

### **DOUBLE LEVERS ON HOOD**



| Position of | Size of Entry |     | Standard Grey Coating |            |  |
|-------------|---------------|-----|-----------------------|------------|--|
| Cable Entry | PG            | NPT | PG Part #             | NPT Part # |  |
| Top Entry   | 29            | 1"  | 70.2050               | 70.2050 NP |  |
| Side Entry  | 29            | 1"  | 10.1366               | 10.1366 NP |  |





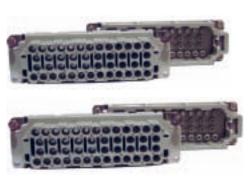


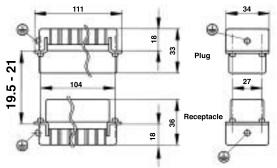
| Size of | f Entry | Standard ( | Grey Coating |
|---------|---------|------------|--------------|
| PG      | NPT     | PG Part #  | NPT Part #   |
| 29      | 1"      | 10.1373    | 10.1373 NP   |

HEE 92 Plugs & Receptacles



### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**

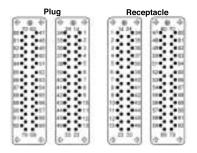




All dimensions are in mm.

| scription       | Plug      | Receptacle |
|-----------------|-----------|------------|
| 1 - 46          | 10.1864C0 | 10.1874C0  |
| <i>1</i> 7 - 92 | 10 186500 | 10 187500  |

View from Cable Side



**Contacts Sold Separately** 

#### **MACHINE CONTACTS: DIAMETER 2.5 MM**

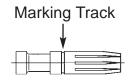




Desc

47





#### Bags of 100

|                 | <del>_</del> |         |         |         |         |                      |              |
|-----------------|--------------|---------|---------|---------|---------|----------------------|--------------|
|                 |              | Sil     | ver     | Go      | old     | Stripping            | # of Marking |
| mm <sup>2</sup> | AWG          | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |
| 0.5             | 20           | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |
| .75 - 1.0       | 18           | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |
| 1.5             | 16           | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |
| 2.5             | 14           | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |
| 4.0             | 12           | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |

Part number= 1 contact

### **CRIMP TOOLS**



**Crimp Tool** 11.1470



Locator 11.1472



**Crimp Dies** 11.1471



**Removal Tool:** 11.1825

#### MATING COMPONENTS

HEE 92 Plugs & Receptacles fit into the EPIC® HBE 48 Housings. Following is a quick reference for the mating components. Diagrams are located in the HBE Section of the catalog (Page 317). Please note that metric parts are available.

HBE 48 Housings for HEE 92 Inserts





| Position   | Size c | f Entry | Standard Grey Coating |            |  |
|------------|--------|---------|-----------------------|------------|--|
| of Entry   | PG     | NPT     | PG Part #             | NPT Part # |  |
| Top Entry  | 29     | 1"      | 10.1550               | 10.1550 NP |  |
|            | 36     | 1 1/4"  | 10.1560               | 10.1560 NP |  |
|            | 42     | -       | 10.1570               | -          |  |
| Side Entry | 29     | 1"      | 10.1580               | 10.1580 NP |  |
|            | 36     | 1 1/4"  | 10.1590               | 10.1590 NP |  |
|            | 42     | -       | 10.1600               | -          |  |

### **PANEL MOUNT BASES**



| Without<br>Dust Cove | er | With Dust Cover<br>with hold down screws<br>and no dust cover bolts | With Dust Cover<br>with hold down screws<br>and dust cover bolts |
|----------------------|----|---|--|
| 10.1610              |    | 10.1520   | 10.1525  |

## **SURFACE MOUNT BASES**



| # of           | Size o | of Entry | Standard Grey Coating |            |  |
|----------------|--------|----------|-----------------------|------------|--|
| Entries        | PG     | NPT      | PG Part #             | NPT Part # |  |
| 2 Entries      | 29     | 1"       | 10.1660               | 10.1660 NP |  |
|                | 36     | 1 1/4"   | 10.1661               | 10.1661 NP |  |
| 1 Entry        | 29     | 1"       | 10.1650               | 10.1650 NP |  |
|                | 36     | 1 1/4"   | 10.1651               | 10.1651 NP |  |
| 2 Entries with | 29     | 1"       | 10.1680               | 10.1680 NP |  |
| dust cover     | 36     | 1 1/4"   | 10.1681               | 10.1681 NP |  |
| 1 Entry with   | 29     | 1"       | 10.1670               | 10.1670 NP |  |
| dust cover     | 36     | 1 1/4"   | 10.1671               | 10.1671 NP |  |

**HBS Series** 

The HBS series inserts are characterized by their high current carrying capacity. A secure and resistant connection can be made by simple screw termination in an area up to 6 mm<sup>2</sup>. These inserts fit into the HBE Series housings which are now standard with fixed levers. **HBS 6 Series** 341 **HBS 12 Series** 345

#### **HBS Inserts Technical Data**

#### TECHNICAL DATA

Number of Contacts: 6, 12 (+PE) Pollution Level: 3 Rated Voltage: VDE: 400V EPIC HBS 6 - 12 Test Voltage: 6 kV

> UL: 600V EPIC HBS 6 - 12 *Termination Type:* Screw termination: 0.5 - 6 mm<sup>2</sup>

CSA: 600V EPIC HBS 6 - 12

AWG: 20 - 10 -40°C to 125°C Temperature Range:

Copper alloy, silver plated

Rated Current: VDE: 35A EPIC HBS 6 - 12 Contacts:

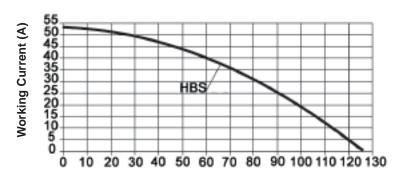
> 35A EPIC HBS 6 - 12 Contact Resistance: <2mOhm

UL:

CSA: 35A EPIC HBS 6 - 12 Mating Cycles: 100 (higher mating cycles depends on the application)

#### **HBS INSERTS: DERATING CURVES**

**HBS: 6.0 mm<sup>2</sup> (10 AWG)** 



Ambient Temperature (°C)

#### MATING COMPONENTS

HBS Plugs & Receptacles fit into EPIC® HBE Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog. Please note that metric parts are available.

Protection class: Specifications: DIN 43652

Temperature Range: -40°C to +125°C Material: Aluminum alloy, powder coated

Standard Grey Coating (NEMA 4)

**EP Black Coating (NEMA 4X)** 

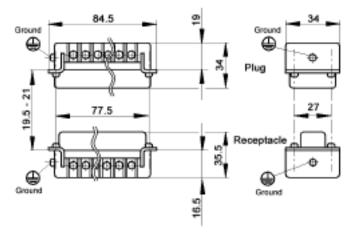


HBS 6 Plugs & Receptacles



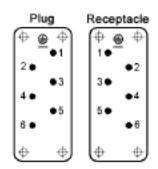
#### **SCREW TERMINATED INSERTS**



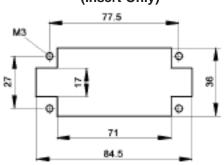


All dimensions are in mm.

#### View from cable side



## Panel Cut-Out (Insert Only)



|  | Plug    | Receptacle |
|--|---------|------------|
| Screw Termination with wire protection | 10.1700 | 10.1710    |

#### **MATING COMPONENTS**

HBS 6 Plugs & Receptacles fit into EPIC® HBE 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.

HBE 16 Housings: Single Lever on Base for HBS 6 Inserts



#### **HOODS**

#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.0809    | 10.0809 NP  | 70.0990            | 70.0990 NP |
|             | 29     | 1"      | 10.0909    | 10.0909 NP  | -                  | -          |
| Side Entry  | 21     | 3/4"    | 10.0829    | 10.0829 NP  | 70.1090            | 70.1090 NP |
|             | 29     | 1"      | 10.0929    | 10.0929 NP  | -                  | -          |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.0942    | 70.0942 NP  | 70.0992            | 70.0992 NP |
|             | 29     | 1"      | 70.0944    | 70.0944 NP  | 70.0994            | 70.0994 NP |
| Side Entry  | 21     | 3/4"    | 70.1042    | 70.1042 NP  | 70.1092            | 70.1092 NP |
|             | 29     | 1"      | 70.1044    | 70.1044 NP  | 70.1094            | 70.1094 NP |



### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0729               | 70.0827            |  |
| With Dust Cover    | 10.0739               | 70.0837            |  |

### **SURFACE MOUNT BASES**



#### **STANDARD PROFILE**

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|--|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |
| 2 Entries      | 21     | 3/4"    | 10.0759    | 10.0759 NP  | 70.1130            | 70.1130 NP |  |  |  |
| 1 Entry        | 21     | 3/4"    | 10.0749    | 10.0749 NP  | 70.1120            | 70.1120 NP |  |  |  |
| 2 Entries with | 21     | 3/4"    | 10.0789    | 10.0789 NP  | 70.1170            | 70.1170 NP |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |
| 1 Entry with   | 21     | 3/4"    | 10.0769    | 10.0769 NP  | 70.1160            | 70.1160 NP |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |



#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------|---------|------------|-------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.1112    | 70.1112 NP  | 70.1132            | 70.1132 NP |
|                | 29     | 1"      | 70.1114    | 70.1114 NP  | 70.1134            | 70.1134 NP |
| 1 Entry        | 21     | 3/4"    | 70.1102    | 70.1102 NP  | 70.1122            | 70.1122 NP |
|                | 29     | 1"      | 70.1104    | 70.1104 NP  | 70.1124            | 70.1124 NP |
| 2 Entries with | 21     | 3/4"    | 70.1152    | 70.1152 NP  | 70.1172            | 70.1172 NP |
| dust cover     | 29     | 1"      | 70.1154    | 70.1154 NP  | 70.1174            | 70.1174 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1142    | 70.1142 NP  | 70.1162            | 70.1162 NP |
| dust cover     | 29     | 1"      | 70.1144    | 70.1144 NP  | 70.1164            | 70.1164 NP |



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
|          | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0869    | 10.0869 NP  | 70.0930            | 70.0930 NP |
| Profile  | 29            | 1"   | 10.0969    | 10.0969 NP  | -                  | -          |
| High     | 21            | 3/4" | 70.0922    | 70.0922 NP  | 70.0932            | 70.0932 NP |
| Profile  | 29            | 1"   | 70.0924    | 70.0924 NP  | 70.0934            | 70.0934 NP |

HBE 16 Housings: Double Levers on Base for HBS 6 Inserts

#### **HOODS**



#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.0800    | 10.0800 NP  | 70.1010            | 70.1010 NP |
|             | 29     | 1"      | 10.0900    | 10.0900 NP  | -                  | -          |
| Side Entry  | 21     | 3/4"    | 10.0820    | 10.0820 NP  | 70.1030            | 70.1030 NP |
|             | 29     | 1"      | 10.0920    | 10.0920 NP  | 1                  |            |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.1002    | 70.1002 NP  | 70.1012            | 70.1012 NP |
|             | 29     | 1"      | 70.1004    | 70.1004 NP  | 70.1014            | 70.1014 NP |
| Side Entry  | 21     | 3/4"    | 70.1022    | 70.1022 NP  | 70.1032            | 70.1032 NP |
|             | 29     | 1"      | 70.1024    | 70.1024 NP  | 70.1034            | 70.1034 NP |

#### PANEL MOUNT BASES



| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0720               | 70.0825            |  |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 10.0750               | 10.0750 NP | 70.0880            | 70.0880 NP |
| 1 Entry   | 21            | 3/4" | 10.0740               | 10.0740 NP | 70.0870            | 70.0870 NP |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|--------|---------|-----------------------|------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 70.0862               | 70.0862 NP | 70.0882            | 70.0882 NP |
|           | 29     | 1"      | 70.0864               | 70.0864 NP | 70.0884            | 70.0884 NP |
| 1 Entry   | 21     | 3/4"    | 70.0852               | 70.0852 NP | 70.0872            | 70.0872 NP |
|           | 29     | 1"      | 70.0854               | 70.0854 NP | 70.0874            | 70.0874 NP |



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| TTOTILE  | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0860               | 10.0860 NP | 70.0910            | 70.0910 NP |
| Profile  | 29            | 1"   | 10.0960               | 10.0960 NP | -                  | -          |
| High     | 21            | 3/4" | 70.0902               | 70.0902 NP | 70.0912            | 70.0912 NP |
| Profile  | 29            | 1"   | 70.0904               | 70.0904 NP | 70.0914            | 70.0914 NP |

HBE 16 Housings: Double Levers on Hood for HBS 6 Inserts

### **HOODS**



#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.0810               | 10.0810 NP | 70.1060            | 70.1060 NP |
|             | 29            | 1"   | 10.0910               | 10.0910 NP | -                  | -          |
| Side Entry  | 21            | 3/4" | 10.0830               | 10.0830 NP | 70.1080            | 70.1080 NP |
|             | 29            | 1"   | 10.0930               | 10.0930 NP | -                  |            |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|--------|---------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.1052               | 70.1052 NP | 70.1062            | 70.1062 NP |
|             | 29     | 1"      | 70.1054               | 70.1054 NP | 70.1064            | 70.1064 NP |
| Side Entry  | 21     | 3/4"    | 70.1072               | 70.1072 NP | 70.1082            | 70.1032 NP |
|             | 29     | 1"      | 70.1074               | 70.1074 NP | 70.1084            | 70.1034 NP |



### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| With Dust Cover    | 10.0730               | 70.0835            |
| Without Dust Cover | 10.0731               | -                  |

### **SURFACE MOUNT BASES**



| # of           | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|----------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| 2 Entries      | 21            | 3/4" | 70.0960    | 70.0960 NP            | 70.0980   | 70.0980 NP         |  |
| 1 Entry        | 21            | 3/4" | 10.0760    | 10.0760 NP            | 70.0970   | 70.0970 NP         |  |
| 2 Entries with | 21            | 3/4" | 70.0962    | 70.0962 NP            | 70.0982   | 70.0982 NP         |  |
| dust cover     | 29            | 1"   | 70.0964    | 70.0964 NP            | 70.0984   | 70.0984 NP         |  |
| 1 Entry with   | 21            | 3/4" | 70.0952    | 70.0952 NP            | 70.0972   | 70.0972 NP         |  |
| dust cover     | 29            | 1"   | 70.0954    | 70.0954 NP            | 70.0974   | 70.0974 NP         |  |

### **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

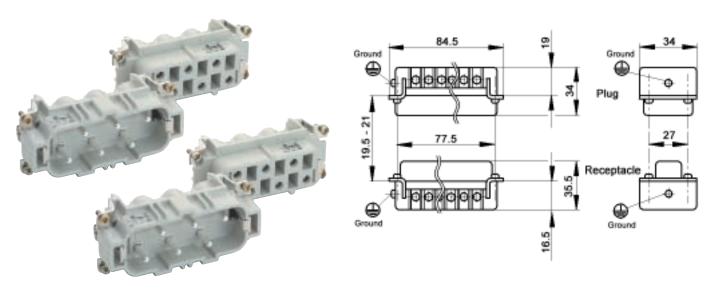
|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 16 Hoods  | 10.0886 |
| Dust cover with single lever bolts for HBE 16 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0887 |
| Dust cover with double levers and gasket for HBE 16 Hoods  | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0870 |
| Dust cover with double lever bolts and gasket for HBE 16 Hoods   | 10.0871 |



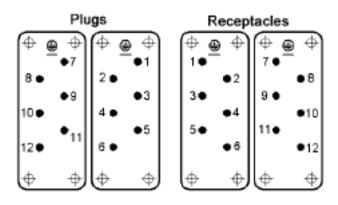
HBS 12 Plugs & Receptacles



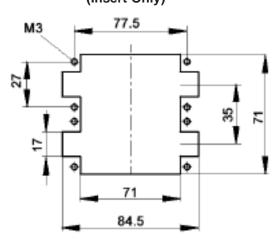
#### **SCREW TERMINATED INSERTS**



View from cable side



Panel Cut-Out (Insert Only)



|  | Plug    | Receptacle |
|--|---------|------------|
| Screw Termination with wire protection #1-6  | 10.1700 | 10.1710    |
| Screw Termination with wire protection #7-12 | 10.1706 | 10.1716    |

#### **MATING COMPONENTS**

HBS 12 Plugs & Receptacles fit into EPIC® HBE 32 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 313). Please note that metric parts are available.

HBE 32 Housings for HBS 12 Inserts

### **DOUBLE LEVERS ON BASE**





| Position of | Size of Entry |      | Standard Grey Coating |            |  |
|-------------|---------------|------|-----------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # |  |
| Top Entry   | 21            | 3/4" | 10.1330               | 10.1330 NP |  |
|             | 29            | 1"   | 10.1340               | 10.1340 NP |  |
| Side Entry  | 21            | 3/4" | 10.1350               | 10.1350 NP |  |
|             | 29            | 1"   | 10.1360               | 10.1360 NP |  |



| # of      | Size of Entry |     | Standard Grey Coating |            |  |
|-----------|---------------|-----|-----------------------|------------|--|
| Entries   | PG            | NPT | PG Part #             | NPT Part # |  |
| 2 Entries | 29            | 1"  | 10.1380               | 10.1380 NP |  |
| 1 Entry   | 29            | 1"  | 10.1370               | 10.1370 NP |  |



| Part # |   |
|--------|---|
| 10.132 | 0 |
|        |   |
|        |   |



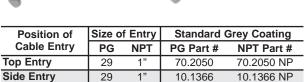
| Size of Entry |      | Standard Grey Coating |            |  |
|---------------|------|-----------------------|------------|--|
| PG            | NPT  | PG Part #             | NPT Part # |  |
| 21            | 3/4" | 10.1390               | 10.1390    |  |
| 29            | 1"   | 10.1395               | 10.1395 NP |  |

Dust cover with double lever bolts and attachment string for panel mount or surface mount base or cable coupler hood: 10.1420

## **DOUBLE LEVERS ON HOOD**







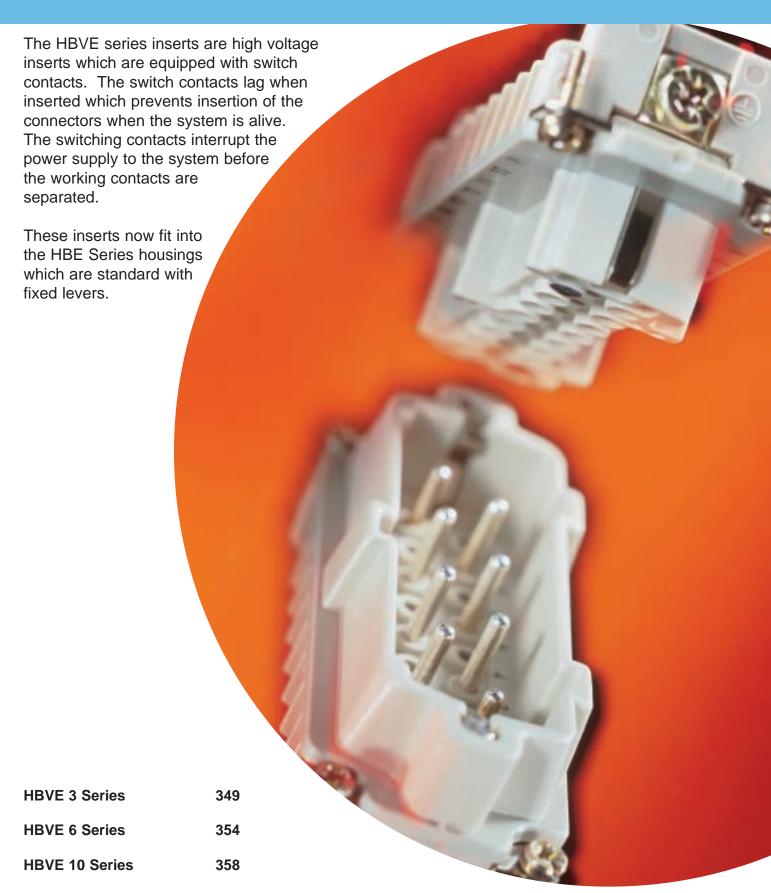




| Part #  |   |
|---------|---|
| 10.1323 | • |

| Size o | f Entry         | Standard ( | Grey Coating |
|--------|-----------------|------------|--------------|
| PG     | G NPT PG Part # |            | NPT Part #   |
| 29     | 1"              | 10.1373    | 10.1373 NP   |

**HBVE Series** 



#### **HBVE Series**



#### **TECHNICAL DATA**

Number of Contacts: 3, 6, 10 (+PE)

Rated Voltage:

Screw Terminated: VDE: 630V EPIC HBVE 3 - 10

UL: 600V EPIC HBVE 3 - 10 CSA: 600V EPIC HBVE 3 - 10

Cage Clamp: VDE: 830V EPIC HBVE 3

Rated Current: VDE: 16A EPIC HBVE 3 - 10

UL: 16A EPIC HBVE 3 - 10 CSA: 16A EPIC HBVE 3 - 10

**Pollution Level:** 3 **Test Voltage:** 6 kV

**Termination Type:** 0.5 - 2.5 mm<sup>2</sup> AWG: 20 - 14

**Temperature Range:** -40°C to 125°C

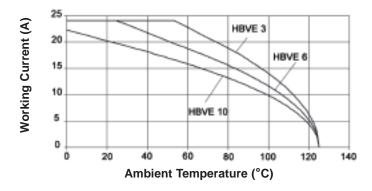
Contacts: Copper alloy, silver plated

Contact Resistance: <2mOhm

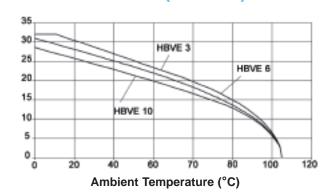
Mating Cycles: 100 (higher mating cycles depend on the application)

## HBVE INSERTS TECHNICAL DATA: DERATING CURVES SCREW TERMINATED

**HBVE: 1.5 mm<sup>2</sup> (16 AWG)** 



**HBVE: 2.5 mm<sup>2</sup> (14 AWG)** 



# HBVE INSERTS TECHNICAL DATA: DERATING CURVES CAGE CLAMP

Working Current (A)

Ambient Temperature (°C)

**HBVE Inserts: Technical Data** 

#### MATING COMPONENTS

HBVE Plugs & Receptacles fit into EPIC® HBE Housings. A quick reference for the mating components is shown. Diagrams are located in

the HBE Section of the catalog. Please note that metric parts are available. (See HBE Section)

Specifications: DIN 43652

Temperature Range: -40°C to +125°C

Protection class: IP65

Material: Aluminum alloy, powder coated

#### **Standard Grey Coating (NEMA 4)**

#### **EP Black Coating (NEMA 4X)**







**METRIC** 



PG

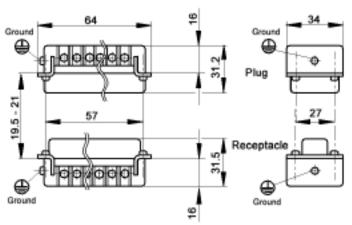




**METRIC** 

### **SCREW TERMINATED INSERTS**





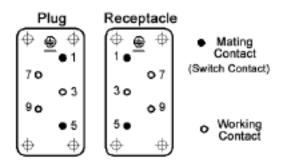
|   | Plug      | Receptacle |
|---|-----------|------------|
| Screw Termination with wire protection    | 10.210010 | 10.211010  |
| Screw Termination without wire protection | 10.210110 | 10.211110  |

HBVE 3 Plugs & Receptacles

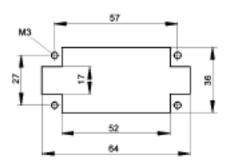


#### **SCREW TERMINATED INSERTS**

#### View from cable side



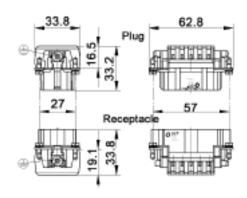
Panel Cut-Out (Insert Only)



All dimensions are in mm.

#### **HBVE 3 CAGE CLAMP INSERTS**





Plug Receptacle 10.210040 10.211040

#### **MATING COMPONENTS**

HBVE 3 Plugs & Receptacles fit into the EPIC® HBE 10 Housings. Following is a quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 283). Please note that metric parts are available.



HBE 10 Housings: Single Lever on Base for HBVE 3 Inserts



#### **HOODS**

#### **STANDARD PROFILE**

| Position of                                     | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |  |
|---|---------------|------|-----------------------|------------|--------------------|------------|--|
| Cable Entry                                     | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |  |
| Top Entry                                       | 16            | 1/2" | 10.0409               | 10.0409 NP | 70.0490            | 70.0490 NP |  |
|   | 21            | 3/4" | 10.0407               | 10.0407 NP | 70.0496            | 70.0496 NP |  |
| Side Entry                                      | 16            | 1/2" | 10.0429               | 10.0429 NP | 70.0590            | 70.0590 NP |  |
|   | 21            | 3/4" | 10.0428               | 10.0428 NP | 70.0596            | 70.0596 NP |  |
| 21 3/4" 10.0428 10.0428 NP   70.0596 70.0596 NP |               |      |                       |            |                    |            |  |

#### HIGH PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0442               | 70.0442 NP | 70.0492            | 70.0492 NP |
|             | 29            | 1"   | 70.0444               | 70.0444 NP | 70.0494            | 70.0494 NP |
| Side Entry  | 21            | 3/4" | 70.0542               | 70.0542 NP | 70.0592            | 70.0592 NP |
|             | 29            | 1"   | 70.0544               | 70.0544 NP | 70.0594            | 70.0594 NP |



### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0329               | 70.0327            |  |
| With Dust Cover    | 10.0339               | 70.0337            |  |

### **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of           | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|--------|---------|-----------------------|------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 16     | 1/2"    | 10.0359               | 10.0359 NP | 70.0630            | 70.0630 NP |
| 1 Entry        | 16     | 1/2"    | 10.0349               | 10.0349 NP | 70.0620            | 70.0620 NP |
|                | 21     | 3/4"    | 10.0347               | 10.0347 NP | -                  | -          |
| 2 Entries with | 16     | 1/2"    | 10.0389               | 10.0389 NP | 70.0670            | 70.0670 NP |
| dust cover     | -      | -       | -                     | -          | -                  | -          |
| 1 Entry with   | 16     | 1/2"    | 10.0369               | 10.0369 NP | 70.0660            | 70.0660 NP |
| dust cover     | -      | -       | -                     | -          | -                  | -          |



#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|----------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| 2 Entries      | 21            | 3/4" | 70.0612    | 70.0612 NP            | 70.0632   | 70.0632 NP         |  |
|                | 29            | 1"   | 70.0614    | 70.0614 NP            | 70.0634   | 70.0634 NP         |  |
| 1 Entry        | 21            | 3/4" | 70.0602    | 70.0602 NP            | 70.0622   | 70.0622 NP         |  |
|                | 29            | 1"   | 70.0604    | 70.0604 NP            | 70.0624   | 70.0624 NP         |  |
| 2 Entries with | 21            | 3/4" | 70.0652    | 70.0652 NP            | 70.0672   | 70.0672 NP         |  |
| dust cover     | 29            | 1"   | 70.0654    | 70.0654 NP            | 70.0674   | 70.0674 NP         |  |
| 1 Entry with   | 21            | 3/4" | 70.0642    | 70.0642 NP            | 70.0662   | 70.0662 NP         |  |
| dust cover     | 29            | 1"   | 70.0644    | 70.0644 NP            | 70.0664   | 70.0664 NP         |  |



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| i ionie  | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0469               | 10.0469 NP | 70.0430            | 70.0430 NP |
| Profile  | 21            | 3/4" | 70.0422               | 70.0422 NP | 70.0432            | 70.0432 NP |
| High     | 21            | 3/4" | 70.0424               | 70.0424 NP | 70.0434            | 70.0434 NP |
| Profile  | 29            | 1"   | 70.0426               | 70.0426 NP | 70.0436            | 70.0436 NP |

HBE 10 Housings: Double Lever on Base for for HBVE 3 Inserts

#### **HOODS**



#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 10.0400               | 10.0400 NP | 70.0510            | 70.0510 NP |
|             | 21            | 3/4" | 10.0401               | 10.0401 NP | 70.0512            | 70.0512 NP |
| Side Entry  | 16            | 1/2" | 10.0420               | 10.0420 NP | 70.0530            | 70.0530 NP |
|             | 21            | 3/4" | 10.0421               | 10.0421 NP | 70.0532            | 70.0532 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0504               | 70.0504 NP | 70.0514            | 70.0514 NP |
|             | 29            | 1"   | 70.0506               | 70.0506 NP | 70.0516            | 70.0516 NP |
| Side Entry  | 21            | 3/4" | 70.0524               | 70.0524 NP | 70.0534            | 70.0534 NP |
|             | 29            | 1"   | 70.0526               | 70.0526 NP | 70.0536            | 70.0536 NP |



#### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0320               | 70.0325            |

### **SURFACE MOUNT BASES**





#### **STANDARD PROFILE**

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 16            | 1/2" | 10.0350               | 10.0350 NP | 70.0380            | 70.0380 NP |
| 1 Entry   | 16            | 1/2" | 10.0340               | 10.0340 NP | 70.0370            | 70.0370 NP |

#### **HIGH PROFILE**

| # of      | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 70.0362    | 70.0362 NP  | 70.0382            | 70.0382 NP |
|           | 29            | 1"   | 70.0364    | 70.0364 NP  | 70.0384            | 70.0384 NP |
| 1 Entry   | 21            | 3/4" | 70.0352    | 70.0352 NP  | 70.0372            | 70.0372 NP |
|           | 29            | 1"   | 70.0354    | 70.0354 NP  | 70.0374            | 70.0374 NP |





| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
|          | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0460               | 10.0460 NP | 70.0410            | 70.0410 NP |
| Profile  | 21            | 3/4" | 70.0402               | 70.0402 NP | 70.0412            | 70.0412 NP |
| High     | 16            | 1/2" | 70.0404               | 70.0404 NP | 70.0414            | 70.0414 NP |
| Profile  | 21            | 3/4" | 70.0406               | 70.0406 NP | 70.0416            | 70.0416 NP |



HBE 10 Housings: Double Levers on Hood for HBVE 3 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 10.0410    | 10.0410 NP  | 70.0560            | 70.0560 NP |
| Side Entry  | 16            | 1/2" | 10.0450    | 10.0450 NP  | 70.0580            | 70.0580 NP |

#### **HIGH PROFILE**

| Position of Size |    | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|------------------|----|---------|-----------------------|------------|--------------------|------------|
| Cable Entry      | PG | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry        | 21 | 3/4"    | 70.0552               | 70.0552 NP | 70.0562            | 70.0562 NP |
|                  | 29 | 1"      | 70.0554               | 70.0554 NP | 70.0564            | 70.0564 NP |
| Side Entry       | 21 | 3/4"    | 70.0572               | 70.0572 NP | 70.0582            | 70.0582 NP |
|                  | 29 | 1"      | 70.0574               | 70.0574 NP | 70.0584            | 70.0584 NP |



#### PANEL MOUNT BASES

| Description     | Standard Grey Coating | Black Coating (EP) |
|-----------------|-----------------------|--------------------|
| With Dust Cover | 10.0330               | 70.0335            |

### **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of      | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 16            | 1/2" | 10.0380    | 10.0380 NP  | 70.0480            | 70.0480 NP |
| 1 Entry   | 16            | 1/2" | 10.0360    | 10.0360 NP  | 70.0470            | 70.0470 NP |

#### **HIGH PROFILE**

| # of      | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 70.0462    | 70.0462 NP  | 70.0482            | 70.0482 NP |
|           | 29            | 1"   | 70.0464    | 70.0464 NP  | 70.0484            | 70.0484 NP |
| 1 Entry   | 21            | 3/4" | 70.0452    | 70.0452 NP  | 70.0472            | 70.0472 NP |
|           | 29            | 1"   | 70.0454    | 70.0454 NP  | 70.0474            | 70.0474 NP |

### **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

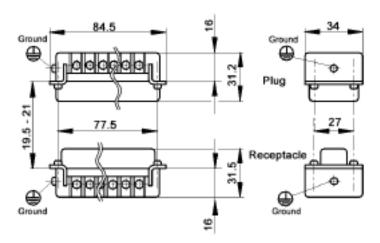
|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 10 Hoods  | 10.0486 |
| Dust cover with single lever bolts for HBE 10 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0487 |
| Dust cover with double levers and gasket for HBE 10 Hoods  | 10.0485 |
| Dust cover with double lever bolts for HBE 10 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0470 |
| Dust cover with double lever bolts and gasket for HBE 10 Hoods   | 10.0471 |

HBVE 6 Plugs & Receptacles



#### **SCREW TERMINATED INSERTS**

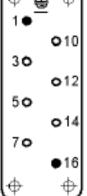




All dimensions are in mm.

#### View from cable side

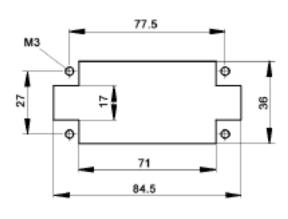
# Receptacle



## Mating Contact (Switch Contact)



## Panel Cut-Out (Insert Only)



|   | Plug      | Receptacle |
|---|-----------|------------|
| Screw Termination with wire protection    | 10.239010 | 10.240010  |
| Screw Termination without wire protection | 10.239110 | 10.240110  |

### **MATING COMPONENTS**

HBVE 6 Plugs & Receptacles fit into the EPIC® HBE 16 Housings. Following is a quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.

HBE 16 Housings: Single Lever on Base for HBVE 6 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of | Position of Size of Entry |      |           | rey Coating | Black Coating (EP) |            |
|-------------|---------------------------|------|-----------|-------------|--------------------|------------|
| Cable Entry | PG                        | NPT  | PG Part # | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21                        | 3/4" | 10.0809   | 10.0809 NP  | 70.0990            | 70.0990 NP |
|             | 29                        | 1"   | 10.0909   | 10.0909 NP  | -                  | -          |
| Side Entry  | 21                        | 3/4" | 10.0829   | 10.0829 NP  | 70.1090            | 70.1090 NP |
|             | 29                        | 1"   | 10.0929   | 10.0929 NP  | -                  | -          |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0942    | 70.0942 NP  | 70.0992            | 70.0992 NP |
|             | 29            | 1"   | 70.0944    | 70.0944 NP  | 70.0994            | 70.0994 NP |
| Side Entry  | 21            | 3/4" | 70.1042    | 70.1042 NP  | 70.1092            | 70.1092 NP |
|             | 29            | 1"   | 70.1044    | 70.1044 NP  | 70.1094            | 70.1094 NP |



### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0729               | 70.0827            |
| With Dust Cover    | 10.0739               | 70.0837            |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------|---------|------------|-------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 10.0759    | 10.0759 NP  | 70.1130            | 70.1130 NP |
| 1 Entry        | 21     | 3/4"    | 10.0749    | 10.0749 NP  | 70.1120            | 70.1120 NP |
| 2 Entries with | 21     | 3/4"    | 10.0789    | 10.0789 NP  | 70.1170            | 70.1170 NP |
| dust cover     | -      | -       | -          | -           | -                  | -          |
| 1 Entry with   | 21     | 3/4"    | 10.0769    | 10.0769 NP  | 70.1160            | 70.1160 NP |
| dust cover     | -      | -       | -          | -           | _                  | -          |



#### HIGH PROFILE

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------|---------|------------|-------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.1112    | 70.1112 NP  | 70.1132            | 70.1132 NP |
|                | 29     | 1"      | 70.1114    | 70.1114 NP  | 70.1134            | 70.1134 NP |
| 1 Entry        | 21     | 3/4"    | 70.1102    | 70.1102 NP  | 70.1122            | 70.1122 NP |
|                | 29     | 1"      | 70.1104    | 70.1104 NP  | 70.1124            | 70.1124 NP |
| 2 Entries with | 21     | 3/4"    | 70.1152    | 70.1152 NP  | 70.1172            | 70.1172 NP |
| dust cover     | 29     | 1"      | 70.1154    | 70.1154 NP  | 70.1174            | 70.1174 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1142    | 70.1142 NP  | 70.1162            | 70.1162 NP |
| dust cover     | 29     | 1"      | 70.1144    | 70.1144 NP  | 70.1164            | 70.1164 NP |



| Profile  | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------|--------|---------|------------|-------------|--------------------|------------|--|
|          | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Standard | 21     | 3/4"    | 10.0869    | 10.0869 NP  | 70.0930            | 70.0930 NP |  |
| Profile  | 29     | 1"      | 10.0969    | 10.0969 NP  | -                  | -          |  |
| High     | 21     | 3/4"    | 70.0922    | 70.0922 NP  | 70.0932            | 70.0932 NP |  |
| Profile  | 29     | 1"      | 70.0924    | 70.0924 NP  | 70.0934            | 70.0934 NP |  |

HBE 16 Housings: Double Levers on Base for HBVE 6 Inserts

#### **HOODS**





#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.0800    | 10.0800 NP  | 70.1010            | 70.1010 NP |
|             | 29            | 1"   | 10.0900    | 10.0900 NP  | -                  | -          |
| Side Entry  | 21            | 3/4" | 10.0820    | 10.0820 NP  | 70.1030            | 70.1030 NP |
|             | 29            | 1"   | 10.0920    | 10.0920 NP  | -                  |            |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|---------------|------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21            | 3/4" | 70.1002    | 70.1002 NP  | 70.1012            | 70.1012 NP |  |
|             | 29            | 1"   | 70.1004    | 70.1004 NP  | 70.1014            | 70.1014 NP |  |
| Side Entry  | 21            | 3/4" | 70.1022    | 70.1022 NP  | 70.1032            | 70.1032 NP |  |
|             | 29            | 1"   | 70.1024    | 70.1024 NP  | 70.1034            | 70.1034 NP |  |

#### PANEL MOUNT BASES



| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0720               | 70.0825            |  |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|--------|---------|------------|-------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 10.0750    | 10.0750 NP  | 70.0880            | 70.0880 NP |
| 1 Entry   | 21     | 3/4"    | 10.0740    | 10.0740 NP  | 70.0870            | 70.0870 NP |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 21     | 3/4"    | 70.0862    | 70.0862 NP  | 70.0882            | 70.0882 NP |  |
|           | 29     | 1"      | 70.0864    | 70.0864 NP  | 70.0884            | 70.0884 NP |  |
| 1 Entry   | 21     | 3/4"    | 70.0852    | 70.0852 NP  | 70.0872            | 70.0872 NP |  |
|           | 29     | 1"      | 70.0854    | 70.0854 NP  | 70.0874            | 70.0874 NP |  |



| Profile  | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|--------|---------|-----------------------|------------|--------------------|------------|
| i ionie  | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21     | 3/4"    | 10.0860               | 10.0860 NP | 70.0910            | 70.0910 NP |
| Profile  | 29     | 1"      | 10.0960               | 10.0960 NP | -                  | -          |
| High     | 21     | 3/4"    | 70.0902               | 70.0902 NP | 70.0912            | 70.0912 NP |
| Profile  | 29     | 1"      | 70.0904               | 70.0904 NP | 70.0914            | 70.0914 NP |



HBE 16 Housings: Double Levers on Hood for HBVE 6 Inserts

#### **HOODS**



#### STANDARD PROFILE

| Position of | of Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|------------------|------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG               | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21               | 3/4" | 10.0810    | 10.0810 NP  | 70.1060            | 70.1060 NP |  |
|             | 29               | 1"   | 10.0910    | 10.0910 NP  | -                  | -          |  |
| Side Entry  | 21               | 3/4" | 10.0830    | 10.0830 NP  | 70.1080            | 70.1080 NP |  |
|             | 29               | 1"   | 10.0930    | 10.0930 NP  | 1                  |            |  |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1052    | 70.1052 NP  | 70.1062            | 70.1062 NP |
|             | 29            | 1"   | 70.1054    | 70.1054 NP  | 70.1064            | 70.1064 NP |
| Side Entry  | 21            | 3/4" | 70.1072    | 70.1072 NP  | 70.1082            | 70.1032 NP |
|             | 29            | 1"   | 70.1074    | 70.1074 NP  | 70.1084            | 70.1034 NP |



### PANEL MOUNT BASES

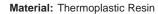
| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0731               | -                  |  |
| With Dust Cover    | 10.0730               | 70.0835            |  |

### **SURFACE MOUNT BASES**



| # of           | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|---------------|------|------------|-------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.0960    | 70.0960 NP  | 70.0980            | 70.0980 NP |
| 1 Entry        | 21            | 3/4" | 10.0760    | 10.0760 NP  | 70.0970            | 70.0970 NP |
| 2 Entries with | 21            | 3/4" | 70.0962    | 70.0962 NP  | 70.0982            | 70.0982 NP |
| dust cover     | 29            | 1"   | 70.0964    | 70.0964 NP  | 70.0984            | 70.0984 NP |
| 1 Entry with   | 21            | 3/4" | 70.0952    | 70.0952 NP  | 70.0972            | 70.0972 NP |
| dust cover     | 29            | 1"   | 70.0954    | 70.0954 NP  | 70.0974            | 70.0974 NP |

### **DUST COVERS WITH ATTACHMENT STRING**



Temperature:

-40°C to 125°C



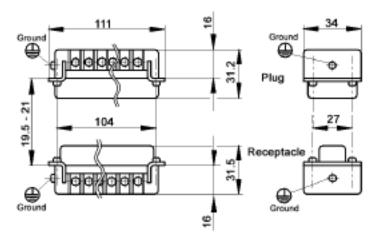
|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 16 Hoods  | 10.0886 |
| Dust cover with single lever bolts for HBE 16 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0887 |
| Dust cover with double levers and gasket for HBE 16 Hoods  | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0870 |
| Dust cover with double lever bolts and gasket for HBE 16 Hoods   | 10.0871 |

HBVE 10 Plugs & Receptacles



#### **SCREW TERMINATED INSERTS**



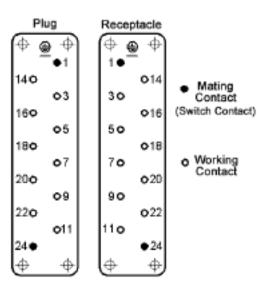


All dimensions are in mm.

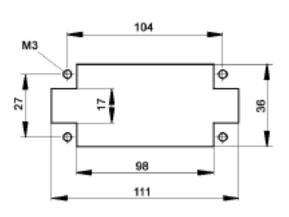
#### View from cable side

Mating

Contact



#### **Panel Cut-Out** (Insert Only)



|   | Plug      | Receptacle |
|---|-----------|------------|
| Screw Termination with wire protection    | 10.270010 | 10.271010  |
| Screw Termination without wire protection | 10.270110 | 10.271110  |

#### **MATING COMPONENTS**

HBVE 10 Plugs & Receptacles fit into the EPIC® HBE 24 Housings. Following is a quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 303). Please note that metric parts are available.

HBE 24 Housings: Single Lever on Base for HBVE 10 Inserts



#### **HOODS**

#### **STANDARD PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.1219    | 10.1219 NP  | 70.1490            | 70.1490 NP |
|             | 29            | 1"   | 10.1119    | 10.1119 NP  | 70.1492            | 70.1492 NP |
| Side Entry  | 21            | 3/4" | 10.1139    | 10.1139 NP  | 70.1590            | 70.1590 NP |
|             | 29            | 1"   | 10.1239    | 10.1239 NP  | 70.1592            | 70.1592 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1444    | 70.1444 NP  | 70.1494            | 70.1494 NP |
|             | 29            | 1"   | 70.1446    | 70.1446 NP  | 70.1496            | 70.1496 NP |
| Side Entry  | 21            | 3/4" | 70.1544    | 70.1544 NP  | 70.1594            | 70.1594 NP |
|             | 29            | 1"   | 70.1546    | 70.1546 NP  | 70.1596            | 70.1596 NP |



### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.1029               | 70.1327            |
| With Dust Cover    | 10.1039               | 70.1337            |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of         | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |  |
|--------------|---------------|------|------------|-------------|--------------------|------------|--|--|
| Entries      | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |
| 2 Entries    | 21            | 3/4" | 10.1059    | 10.1059 NP  | 70.1630            | 70.1630 NP |  |  |
| 1 Entry      | 21            | 3/4" | 10.1049    | 10.1049 NP  | 70.1620            | 70.1620 NP |  |  |
| 2 with cover | 21            | 3/4" | 10.1099    | 10.1099 NP  | 70.1670            | 70.1670 NP |  |  |
| 1 with cover | 21            | 3/4" | 10.1079    | 10.1079 NP  | 70.1660            | 70.1660 NP |  |  |



#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|---------------|------|------------|-------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.1612    | 70.1612 NP  | 70.1632            | 70.1632 NP |
|                | 29            | 1"   | 70.1614    | 70.1614 NP  | 70.1634            | 70.1634 NP |
| 1 Entry        | 21            | 3/4" | 70.1602    | 70.1602 NP  | 70.1622            | 70.1622 NP |
|                | 29            | 1"   | 70.1604    | 70.1604 NP  | 70.1624            | 70.1624 NP |
| 2 Entries with | 21            | 3/4" | 70.1652    | 70.1652 NP  | 70.1672            | 70.1672 NP |
| dust cover     | 29            | 1"   | 70.1654    | 70.1654 NP  | 70.1674            | 70.1674 NP |
| 1 Entry with   | 21            | 3/4" | 70.1642    | 70.1642 NP  | 70.1662            | 70.1662 NP |
| dust cover     | 29            | 1"   | 70.1644    | 70.1644 NP  | 70.1664            | 70.1664 NP |



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
|          | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.1279               | 10.1279 NP | 70.1430            | 70.1430 NP |
| Profile  | 29            | 1"   | 10.1179               | 10.1179 NP | 70.1432            | 70.1432 NP |
| High     | 21            | 3/4" | 70.1424               | 70.1424 NP | 70.1434            | 70.1434 NP |
| Profile  | 29            | 1"   | 70.1426               | 70.1426 NP | 70.1436            | 70.1436 NP |

HBE 24 Housings: Double Levers on Base for HBVE 10 Inserts

#### **HOODS**







#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.1210    | 10.1210 NP  | 70.1510            | 70.1510 NP |
|             | 29            | 1"   | 10.1110    | 10.1110 NP  | 70.1512            | 70.1512 NP |
| Side Entry  | 21            | 3/4" | 10.1130    | 10.1130 NP  | 70.1530            | 70.1530 NP |
|             | 29            | 1"   | 10.1230    | 10.1230 NP  | 70.1532            | 70.1532 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1504    | 70.1504 NP  | 70.1514            | 70.1514 NP |
|             | 29            | 1"   | 70.1506    | 70.1506 NP  | 70.1516            | 70.1516 NP |
| Side Entry  | 21            | 3/4" | 70.1524    | 70.1524 NP  | 70.1534            | 70.1534 NP |
|             | 29            | 1"   | 70.1526    | 70.1526 NP  | 70.1536            | 70.1536 NP |



### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.1020               | 70.1325            |

### **SURFACE MOUNT BASES**





#### STANDARD PROFILE

| # of      | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 10.1050    | 10.1050 NP  | 70.1380            | 70.1380 NP |
| 1 Entry   | 21            | 3/4" | 10.1040    | 10.1040 NP  | 70.1370            | 70.1370 NP |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|--------|---------|------------|-------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 70.1362    | 70.1362 NP  | 70.1382            | 70.1382 NP |
|           | 29     | 1"      | 70.1364    | 70.1364 NP  | 70.1384            | 70.1384 NP |
| 1 Entry   | 21     | 3/4"    | 70.1352    | 70.1352 NP  | 70.1372            | 70.1372 NP |
|           | 29     | 1"      | 70.1354    | 70.1354 NP  | 70.1374            | 70.1374 NP |



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| Tronie   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.1270    | 10.1270 NP  | 70.1410            | 70.1410 NP |
| Profile  | 29            | 1"   | 10.1170    | 10.1170 NP  | 70.1412            | 70.1412 NP |
| High     | 21            | 3/4" | 70.1404    | 70.1404 NP  | 70.1414            | 70.1414 NP |
| Profile  | 29            | 1"   | 70.1406    | 70.1406 NP  | 70.1416            | 70.1416 NP |



HBE 24 Housings: Double Levers on Hood for HBVE 10 Inserts





### **HOODS**

#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.1220    | 10.1220 NP  | 70.1560            | 70.1560 NP |
|             | 29     | 1"      | 10.1120    | 10.1120 NP  | 70.1562            | 70.1562 NP |
| Side Entry  | 21     | 3/4"    | 10.1140    | 10.1140 NP  | 70.1580            | 70.1580 NP |
|             | 29     | 1"      | 10.1240    | 10.1240 NP  | 70.1582            | 70.1582 NP |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.1554    | 70.1554 NP  | 70.1564            | 70.1564 NP |
|             | 29     | 1"      | 70.1556    | 70.1556 NP  | 70.1566            | 70.1566 NP |
| Side Entry  | 21     | 3/4"    | 70.1574    | 70.1574 NP  | 70.1584            | 70.1584 NP |
|             | 29     | 1"      | 70.1576    | 70.1576 NP  | 70.1586            | 70.1586 NP |



#### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| With Dust Cover    | 10.1030               | 70.1335            |  |
| Without Dust Cover | 10.1031               | -                  |  |

## **SURFACE MOUNT BASES**



| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------|---------|------------|-------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 10.1090    | 10.1090 NP  | 70.1480            | 70.1480 NP |
| 1 Entry        | 21     | 3/4"    | 10.1070    | 10.1070 NP  | 70.1470            | 70.1470 NP |
| 2 Entries with | 21     | 3/4"    | 70.1462    | 70.1462 NP  | 70.1482            | 70.1482 NP |
| dust cover     | 29     | 1"      | 70.1464    | 70.1464 NP  | 70.1484            | 70.1484 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1452    | 70.1452 NP  | 70.1472            | 70.1472 NP |
| dust cover     | 29     | 1"      | 70.1454    | 70.1454 NP  | 70.1474            | 70.1474 NP |

### **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 24 Hoods  | 10.1186 |
| Dust cover with single lever bolts for HBE 24 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.1187 |
| Dust cover with double levers and gasket for HBE 24 Hoods  | 10.1195 |
| Dust cover with double lever bolts for HBE 24 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.1180 |
| Dust cover with double lever bolts and gasket for HBE 24 Hoods   | 10.1181 |

**HD Series** 



The HD series inserts are designed for use in industries where a large numbers of contacts are required. These crimp inserts are available with stamped and formed or machine contacts. These inserts fit into the HA and HBE Series housings which are standard with fixed levers.

> **HD 7 Series** 365 **HD 8 Series** 367 **HD 15 Series** 369 **HD 25 Series** 372 **HD 40 Series** 375 **HD 50 Series** 380 **HD 64 Series** 384

> > 389

392

**HD 80 Series** 

**HD 128 Series** 

**HD** Series



#### **TECHNICAL DATA**

**Number of Contacts:** 7, 8, 15, 25, 40, 50, 64, 80, 128(+PE)

Rated Voltage: VDE: 42V (Metal Housing)

250V (Plastic Housing)

**EPIC HD 7 - 8** 

250V EPIC HD 15 - 128

UL: 600V EPIC HD 7 - 128

Rated Current: VDE: 10A EPIC HD 7 - 128

UL: 10A EPIC HD 7 - 128

**Pollution Level:** 3 **Test Voltage:** 2 kV

2.5 kV for HD 40/64/80/128 for

**Machined Contacts** 

**Termination Type:** Crimp termination:

0.14 - 2.5 mm<sup>2</sup> AWG: 22 - 14

Temperature Range: -40°C to 125°C

Contacts: Copper alloy, silver plated/ gold

plated

Contact Resistance: <2mOhm

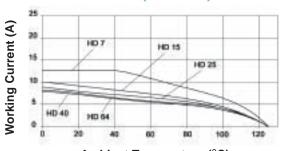
<3mOhm for HD 40/ 64/ 80/

128 for Machined ContactsMating Cycles:100 (higher mating cycles

depends on the application)

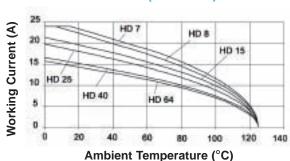
#### **HD INSERTS: DERATING CURVES**

## HD STAMPED & FORMED: 0.5 mm<sup>2</sup> (20 AWG)

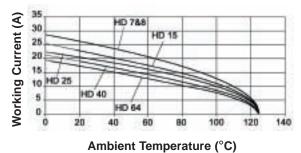


Ambient Temperature (°C)

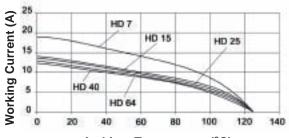
## HD CRIMP MACHINE: 1.5 mm<sup>2</sup> (16 AWG)



## HD CRIMP MACHINE: 2.5 mm<sup>2</sup> (14 AWG)



HD STAMPED & FORMED: 1.5 mm<sup>2</sup> (16 AWG)

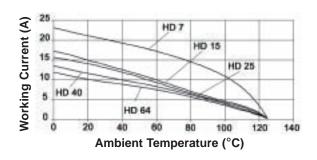


Ambient Temperature (°C)

**HD** Series

#### **HD INSERTS: DERATING CURVES**

## HD STAMPED & FORMED: 2.5 mm<sup>2</sup> (14 AWG)



#### **MATING COMPONENTS**

HD Plugs & Receptacles fit into EPIC® HA or HBE Housings. A quick reference for the mating components is shown. Diagrams are located in the HA or HBE Section of the catalog. Please note that metric parts are available.

Specifications: DIN 43652 Protection class: IP65

Temperature Range: -40°C to +125°C Material: Aluminum alloy, powder coated

#### **Standard Grey Coating (NEMA 4)**

### **EP Black Coating (NEMA 4X)**



HD 7 Plugs & Receptacles



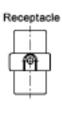
### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**

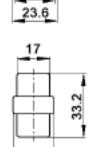


| Plug    | Receptacle |  |  |  |
|---------|------------|--|--|--|
| 11.2505 | 11.2515    |  |  |  |

Contacts Sold Separately



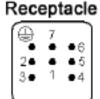




21

View from Cable Side



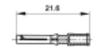


All dimensions are in mm.

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









Bags of 100

|             |         | Silver  |         | G       | old     | Stripping   | Cross Section  |  |
|-------------|---------|---------|---------|---------|---------|-------------|----------------|--|
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |  |
| 0.14 - 0.37 | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |  |
| 0.5         | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |  |
| 0.75 - 1.0  | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |  |
| 1.5         | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |  |
| 2.5         | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |  |

Part number= 1 contact

### **CRIMP TOOLS**



Crimp Tool 11.1470



Crimp Dies



**Locator** 11.1472



Removal Tool 11.1610

## FIBER OPTIC CONTACTS & TOOLS



| Pin     | Socket  |
|---------|---------|
| 11.2141 | 11.2191 |

Fiber Optic Assembly Set 11.184700



HD 7 Plugs & Receptacles



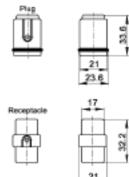
### **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**



Contacts Sold Separately

| Plug    | Receptacle |
|---------|------------|
| 11.2500 | 11.2510    |

Coding Pin 11.1620 Removal Tool: 11.1621



View from Cable Side

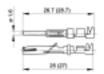




All dimensions are in mm.

### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm²        | Stripping Length (mm) |
|------------|-----------------------|
| 0.14 - 0.5 | 2.5 - 0.5             |
| 0.5 - 1.5  | 3.5 - 0.5             |
| 1.5 - 2.5  | 3.5 - 0.5             |

|            |         |         | Bags    | of 100  | Silver:     | Left Ha | nd Feed     | Reel    |             |  |
|------------|---------|---------|---------|---------|-------------|---------|-------------|---------|-------------|--|
|            |         | Sil     | Silver  |         | Silver Gold |         | Reel of 100 |         | Reel of 200 |  |
| mm²        | AWG     | Pin     | Socket  | Pin     | Socket      | Pin     | Socket      | Pin     | Socket      |  |
| 0.14 - 0.5 | 26 - 20 | 11.2411 | 11.2311 | 11.2431 | 11.2331     | -       | -           | 11.2407 | 11.2307     |  |
| 0.5 - 1.5  | 20 - 16 | 11.2210 | 11.2361 | 11.2213 | 11.2381     | -       | -           | 11.2207 | 11.2357     |  |
| 1.5 - 2.5  | 16 - 14 | 11.2235 | 11.2285 | -       | -           | 11.2230 | 11.2280     | -       | -           |  |

|   |            |         | Reel o  | of 2000: R | ight Hand   | Reel of | 2000: L | eft Hand | l Feed  |         |
|---|------------|---------|---------|------------|-------------|---------|---------|----------|---------|---------|
| _ |            |         | Silver  |            | Silver Gold |         | Silver  |          | Gold    |         |
|   | mm²        | AWG     | Pin     | Socket     | Pin         | Socket  | Pin     | Socket   | Pin     | Socket  |
|   | 0.14 - 0.5 | 26 - 20 | 11.2400 | 11.2300    | -           | -       | 11.2404 | 11.2304  | 11.2305 | 11.2405 |
|   | 0.5 - 1.5  | 20 - 16 | 11.2200 | 11.2350    | 11.2201     | 11.2352 | 11.2260 | 11.2265  | -       | -       |
|   | 1.5 - 2.5  | 16 - 14 | -       | -          | -           | -       | 11.2227 | 11.2277  | -       | -       |

Part number= 1 contact (bags) or 1 reel.



Crimp Tool



### **CRIMP TOOLS**



**Locator** 11.1473

 Crimp Dies

 0.14-0.5:
 11.147170

 0.5-1.5:
 11.147180

 1.5-2.5:
 11.147190



Removal Tool: 11.1610

 Crimp Dies for Reel:

 0.14-0.5:
 11.1536

 0.5-1.5:
 11.1537

 1.5-2.5:
 11.1538





#### **MATING COMPONENTS**

HD 7 Plugs & Receptacles fit into EPIC® HA 3/4 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 239). Please note that metric parts are available.



HD 8 Plugs & Receptacles

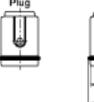


### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**

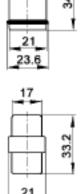


| Plug    | Receptacle |
|---------|------------|
| 11.2525 | 11.2535    |

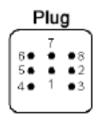
Contacts Sold Separately

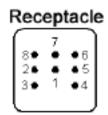






View from Cable Side

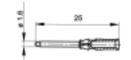


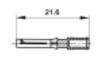


All dimensions are in mm.

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









Bags of 100

|             | <u> </u> |         |         |         |         |             |                      |  |  |  |  |
|-------------|----------|---------|---------|---------|---------|-------------|----------------------|--|--|--|--|
|             |          | Sil     | ver     | Gold    |         | Stripping   | <b>Cross Section</b> |  |  |  |  |
| mm²         | AWG      | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic       |  |  |  |  |
| 0.14 - 0.37 | 26 - 22  | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1                    |  |  |  |  |
| 0.5         | 20       | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2                    |  |  |  |  |
| 0.75 - 1.0  | 18       | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3                    |  |  |  |  |
| 1.5         | 16       | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4                    |  |  |  |  |
| 2.5         | 14       | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5                    |  |  |  |  |

Part number= 1 contact

### **CRIMP TOOLS**



Crimp Tool 11.1470



Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool 11.1610



## FIBER OPTIC CONTACTS & TOOLS

| Pin     | Socket  |
|---------|---------|
| 11.2141 | 11.2191 |

Fiber Optic Assembly Set 11.184700



HA 3/4 Housings: Single Lever on Base for HD 7/8 Inserts

#### **HOODS**



| Material      | Size o | f Entry | Without Cable Gland | With Cable Gland |
|---------------|--------|---------|---------------------|------------------|
| Waterial      | PG     | NPT     | NPT Part #          | PG Part #        |
| Zinc Die Cast | 11     | 1/2"    | 10.5121 NP          | 10.4265          |
| Black Plastic | 11     | 1/2"    | 10.4255 NP          | 10.4267          |
| Grey Plastic  | 11     | 1/2"    | 10.4260 NP          | 10.4264          |

**TOP ENTRY** 

#### **SIDE ENTRY**

| Material      | Size o | f Entry | Without Cable Gland | With Cable Gland |
|---------------|--------|---------|---------------------|------------------|
| Waterial      | PG     | NPT     | NPT Part #          | PG Part #        |
| Zinc Die Cast | 11     | 1/2"    | 10.5123 NP          | 10.4275          |
| Black Plastic | 11     | 1/2"    | 10.4273 NP          | 10.6206          |
| Grey Plastic  | 11     | 1/2"    | 10.4270 NP          | 10.4271          |

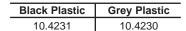


#### PANEL MOUNT BASES

Grey Metal 10.4225

**Grey Plastic** Black Plastic 10.4222 10.4220

| Grey Metal |  |
|------------|--|
| 10.4235    |  |







### **SURFACE MOUNT BASES**

| Material      | Size o | f Entry | Without Cable Gland | With Cable Gland |
|---------------|--------|---------|---------------------|------------------|
| Waterial      | PG     | NPT     | NPT Part #          | PG Part #        |
| Zinc Die Cast | 11     | 1/2"    | 10.5127 NP          | 10.4245          |
| Black Plastic | 11     | 1/2"    | 10.5117 NP          | 10.4247          |
| Grey Plastic  | 11     | 1/2"    | 10.4240 NP          | 10.4242          |



## **CABLE COUPLER HOOD**

| Material      | Size of Entry |      | Without Cable Gland | With Cable Gland |  |
|---------------|---------------|------|---------------------|------------------|--|
| Waterial      | PG            | NPT  | NPT Part #          | PG Part #        |  |
| Zinc Die Cast | 11            | 1/2" | 10.5129 NP          | 10.4295          |  |
| Black Plastic | 11            | 1/2" | 10.4292 NP          | 10.6203          |  |
| Grey Plastic  | 11            | 1/2" | 10.4290 NP          | 10.4291          |  |

### DUST COVERS WITH OR WITHOUT ATTACHMENT STRING



Material: Thermoplastic Resin or Aluminum -40°C to 125°C Temperature:

| Covers for Panel Mount or Surface Mount Bases/ and Cable Coupler Hoods | Part #<br>with string | Part #<br>without string |
|--|-----------------------|--------------------------|
| Dust Cover for HA 3/4 Housings with Male Insert                        | 10.4304               | 10.4300                  |
| Metal Dust Cover for HA 3/4 Housings with Male Insert                  | 10.5130               | 10.4303                  |
| Dust Cover for HA 3/4 Housings with Female Insert                      | 10.4301               | -                        |
| (includes gasket)  |                       |                          |
| Metal Dust Cover for HA 3/4 Housings with Female Insert                |                       | -                        |
| (includes gasket)  | 10.5131               |                          |

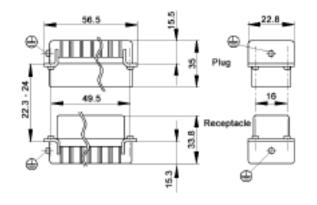


HD 15 Plugs & Receptacles

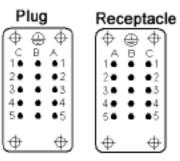


## **CRIMP TERMINATED: MACHINE CONTACT INSERTS**





View from cable side



**Contacts Sold Separately** 

| Plug    | Receptacle |
|---------|------------|
| 11.2832 | 11.2822    |

All dimensions are in mm.

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









Bags of 100

|             |         | Silver Gold |         |         |         | Stripping   | Cross Section  |  |  |  |  |
|-------------|---------|-------------|---------|---------|---------|-------------|----------------|--|--|--|--|
| mm²         | AWG     | Pin         | Socket  | Pin     | Socket  | Length (mm) | Characteristic |  |  |  |  |
| 0.14 - 0.37 | 26 - 22 | 13.1620     | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |  |  |  |  |
| 0.5         | 20      | 13.1621     | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |  |  |  |  |
| 0.75 - 1.0  | 18      | 13.1622     | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |  |  |  |  |
| 1.5         | 16      | 13.1623     | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |  |  |  |  |
| 2.5         | 14      | 13.1624     | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |  |  |  |  |

Part number= 1 contact

# **CRIMP TOOLS**



Crimp Tool 11.1470



Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool 11.1610

#### **MATING COMPONENTS**

HD 15 Plugs & Receptacles fit into EPIC® HA 10 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 242). Please note that metric parts are available.



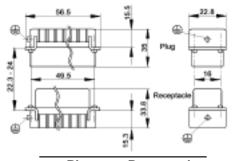
HD 15 Plugs & Receptacles



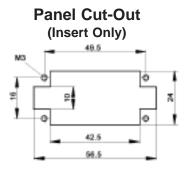
# **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**







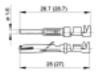
Plug Receptacle 11,2550 11,2560



All dimensions are in mm.

#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm²        | Stripping Length (mm) |
|------------|-----------------------|
| 0.14 - 0.5 | 2.5 - 0.5             |
| 0.5 - 1.5  | 3.5 - 0.5             |
| 1.5 - 2.5  | 3.5 - 0.5             |

|            |         |         | Bags        | Silver: | Left Ha | nd Feed | Reel        |         |         |
|------------|---------|---------|-------------|---------|---------|---------|-------------|---------|---------|
|            |         | Sil     | Silver Gold |         | Reel o  | f 100   | Reel of 200 |         |         |
| mm²        | AWG     | Pin     | Socket      | Pin     | Socket  | Pin     | Socket      | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2411 | 11.2311     | 11.2431 | 11.2331 | -       | -           | 11.2407 | 11.2307 |
| 0.5 - 1.5  | 20 - 16 | 11.2210 | 11.2361     | 11.2213 | 11.2381 | -       | -           | 11.2207 | 11.2357 |
| 1.5 - 2.5  | 16 - 14 | 11.2235 | 11.2285     | -       | -       | 11.2230 | 11.2280     | -       |         |

| Reel of 2000: Right Hand Feed |         |         |         |         |         |         | 2000: L | eft Hanc | l Feed  |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
|                               |         | Silver  |         | Go      | Gold    |         | /er     | Go       | old     |
| mm²                           | AWG     | Pin     | Socket  | Pin     | Socket  | Pin     | Socket  | Pin      | Socket  |
| 0.14 - 0.5                    | 26 - 20 | 11.2400 | 11.2300 | -       | -       | 11.2404 | 11.2304 | 11.2305  | 11.2405 |
| 0.5 - 1.5                     | 20 - 16 | 11.2200 | 11.2350 | 11.2201 | 11.2352 | 11.2260 | 11.2265 | -        | -       |
| 1.5 - 2.5                     | 16 - 14 | -       | -       | -       | -       | 11.2227 | 11.2277 | -        |         |

Part number= 1 contact (bags) or 1 reel.



Crimp Tool 11.1470





**Locator** 11.1473

 Crimp Dies

 0.14-0.5:
 11.147170

 0.5-1.5:
 11.147180

 1.5-2.5:
 11.147190



Removal Tool: 11.1610

 Crimp Dies for Reel:

 0.14-0.5:
 11.1536

 0.5-1.5:
 11.1537

 1.5-2.5:
 11.1538



11.1535



## **MATING COMPONENTS**

HD 15 Plugs & Receptacles fit into EPIC® HA 10 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 242). Please note that metric parts are available.



HA 10 Housings: Single Lever on Base for HD 15 Inserts



#### **HOODS**

#### **STANDARD PROFILE**

| Size of | Entry                | Standard G                          | rey Coating  | Black Coating (EP)   |  |  |
|---------|----------------------|-------------------------------------|--|--|--|--|
| PG      | NPT                  | PG Part #                           | NPT Part #   | PG Part #  | NPT Part #   |  |
| 13.5    | 1/2"                 | 10.446010                           | 10.4460 NP   | -  | -  |  |
| 16      | 1/2"                 | 10.446110                           | 10.4461 NP   | 70.4610  | 70.4610 NP   |  |
| 16      | 1/2"                 | 10.445010                           | 10.4450 NP   | 70.4630  | 70.4630 NP   |  |
| 21      | 3/4"                 | 10.445510                           | 10.4455 NP   | -  | -  |  |
|         | <b>PG</b> 13.5 16 16 | PG NPT  13.5 1/2"  16 1/2"  16 1/2" | PG         NPT         PG Part #           13.5         1/2"         10.446010           16         1/2"         10.446110           16         1/2"         10.445010 | PG         NPT         PG Part #         NPT Part #           13.5         1/2"         10.446010         10.4460 NP           16         1/2"         10.446110         10.4461 NP           16         1/2"         10.445010         10.4450 NP | PG         NPT         PG Part #         NPT Part #         PG Part #           13.5         1/2"         10.446010         10.4460 NP         -           16         1/2"         10.446110         10.4461 NP         70.4610           16         1/2"         10.445010         10.4450 NP         70.4630 |  |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 16     | 1/2"    | 70.4602    | 70.4602 NP  | 70.4612            | 70.4612 NP |
|             | 21     | 3/4"    | 70.4604    | 70.4604 NP  | 70.4614            | 70.4614 NP |
| Side Entry  | 16     | 1/2"    | 70.4622    | 70.4622 NP  | 70.4632            | 70.4632 NP |
|             | 21     | 3/4"    | 70.4624    | 70.4624 NP  | 70.4634            | 70.4634 NP |



#### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.4420               | 70.4425            |  |
| With Dust Cover    | 70.4440               | 70.4445            |  |

#### **SURFACE MOUNT BASES**

#### WITHOUT DUST COVER



| Number of | Number of Size of Entry |      |           | rey Coating | Black Coating (EP) |            |  |
|-----------|-------------------------|------|-----------|-------------|--------------------|------------|--|
| Entries   | PG                      | NPT  | PG Part # | NPT Part #  | PG Part #          | NPT Part # |  |
| 1 Entry   | 16                      | 1/2" | 10.4481   | 10.4481 NP  | 70.4472            | 70.4472 NP |  |
|           | 21                      | 3/4" | 10.4480   | 10.4480 NP  | 70.4474            | 70.4474 NP |  |
| 2 Entries | 16                      | 1/2" | 10.4501   | 10.4501 NP  | 70.4482            | 70.4482 NP |  |
|           | 21                      | 3/4" | 10.4500   | 10.4500 NP  | 70.4484            | 70.4484 NP |  |

#### WITH DUST COVER

| Number of | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|-----------|--------|---------|------------|-------------|-----------|-------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| 1 Entry   | 16     | 1/2"    | 70.4552    | 70.4552 NP  | 70.4572   | 70.4572 NP  |
|           | 21     | 3/4"    | 70.4554    | 70.4554 NP  | 70.4574   | 70.4574 NP  |
| 2 Entries | 16     | 1/2"    | 70.4562    | 70.4562 NP  | 70.4582   | 70.4582 NP  |
|           | 21     | 3/4"    | 70.4564    | 70.4564 NP  | 70.4584   | 70.4584 NP  |



#### **CABLE COUPLER HOOD**

| Profile          | Size of Entry |      | Without C | able Gland | With Cable Gland |            |  |
|------------------|---------------|------|-----------|------------|------------------|------------|--|
| Frome            | PG            | NPT  | PG Part # | NPT Part # | PG Part #        | NPT Part # |  |
| Standard Profile | 13.5          | 1/2" | 10.4390   | 10.4390 NP | -                | -          |  |
|                  | 16            | 1/2" | 70.4500   | 70.4500 NP | 70.4510          | 70.4510 NP |  |
| High Profile     | 21            | 3/4" | 70.4504   | 70.4504 NP | 70.4514          | 70.4514 NP |  |

# **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**

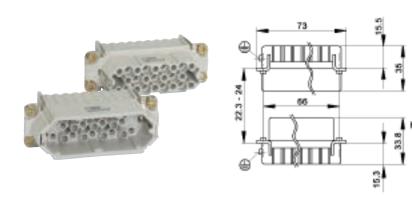


| Material: Thermoplastic Resin       | Temperature:  | -40°C to 125°C |                |
|-------------------------------------|---------------|----------------|----------------|
|                                     |               | Part #         | Part #         |
|                                     |               | with string    | without string |
| Dust cover for HA 10 Panel Mount or | Surface Mount | 10.4575        | 10.4577        |
| Base/ Cable Coupler hoods (includes | s gasket)     |                |                |
| Dust cover for HA 10 Hoods          |               | 10.4576        | 10.4578        |

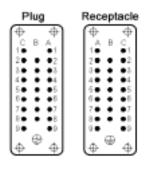
HD 25 Plugs & Receptacles



#### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



View from cable side



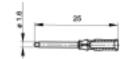
**Contacts Sold Separately** 

| Plug    | Receptacle |
|---------|------------|
| 11.2833 | 11.2823    |

All dimensions are in mm.

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









| Rage | Ωf | 1 | nn |
|------|----|---|----|
| Days | OI |   | υu |

|                 |         | Silver  |         | G       | old     | Stripping   | Cross Section  |
|-----------------|---------|---------|---------|---------|---------|-------------|----------------|
| mm <sup>2</sup> | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |
| 0.14 - 0.37     | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |
| 0.5             | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |
| 0.75 - 1.0      | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |
| 1.5             | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |
| 2.5             | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |

Part number= 1 contact

# **CRIMP TOOLS**



Crimp Tool 11.1470



Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool 11.1610

# **MATING COMPONENTS**

HD 25 Plugs & Receptacles fit into EPIC® HA 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 245). Please note that metric parts are available.



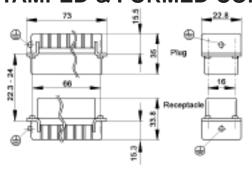
HD 25 Plugs & Receptacles



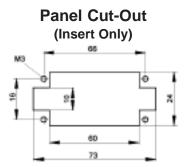
#### **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**



**Contacts Sold Separately** 



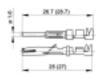
| Plug    | Receptacle |
|---------|------------|
| 11.2600 | 11.2610    |



All dimensions are in mm.

#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm <sup>2</sup> | Stripping Length (mm) |
|-----------------|-----------------------|
| 0.14 - 0.5      | 2.5 - 0.5             |
| 0.5 - 1.5       | 3.5 - 0.5             |
| 1.5 - 2.5       | 3.5 - 0.5             |

| Bags of 100 |         |         |         |         | Silver: | Left Ha     | nd Feed | Reel        |         |
|-------------|---------|---------|---------|---------|---------|-------------|---------|-------------|---------|
|             |         | Silver  |         | Gold    |         | Reel of 100 |         | Reel of 200 |         |
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Pin         | Socket  | Pin         | Socket  |
| 0.14 - 0.5  | 26 - 20 | 11.2411 | 11.2311 | 11.2431 | 11.2331 | -           | -       | 11.2407     | 11.2307 |
| 0.5 - 1.5   | 20 - 16 | 11.2210 | 11.2361 | 11.2213 | 11.2381 | -           | -       | 11.2207     | 11.2357 |
| 1.5 - 2.5   | 16 - 14 | 11.2235 | 11.2285 | -       | -       | 11.2230     | 11.2280 | -           | -       |

|            |         | Reel o  | of 2000: R | ight Hand | Reel of | 2000: L | eft Hand | Feed    |         |
|------------|---------|---------|------------|-----------|---------|---------|----------|---------|---------|
|            |         | Silver  |            | Gold      |         | Silver  |          | Gold    |         |
| mm²        | AWG     | Pin     | Socket     | Pin       | Socket  | Pin     | Socket   | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2400 | 11.2300    | -         | -       | 11.2404 | 11.2304  | 11.2305 | 11.2405 |
| 0.5 - 1.5  | 20 - 16 | 11.2200 | 11.2350    | 11.2201   | 11.2352 | 11.2260 | 11.2265  | -       | -       |
| 1.5 - 2.5  | 16 - 14 | -       | -          | -         | -       | 11.2227 | 11.2277  | -       |         |

Part number= 1 contact (bags) or 1 reel.



**Crimp Tool** 11.1470





**Locator** 11.1473

Crimp Dies
0.14-0.5: 11.147170
0.5-1.5: 11.147180
1.5-2.5: 11.147190



Removal Tool: 11.1610

 Crimp Dies for Reel:

 0.14-0.5:
 11.1536

 0.5-1.5:
 11.1537

 1.5-2.5:
 11.1538

Crimp Tool for Reel

#### **MATING COMPONENTS**

HD 25 Plugs & Receptacles fit into EPIC® HA 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 245). Please note that metric parts are available.



HA 16 Housings: Single Lever on Base for HD 25 Inserts



### **HOODS**

#### STANDARD PROFILE

| Position of  | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |
|--------------|--------|---------|------------|-------------|--------------------|------------|--|--|
| Cable Entry  | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |
| Top Entry    | 16     | 1/2"    | 10.565010  | 10.5650 NP  | 70.4910            | 70.4910 NP |  |  |
|              | 21     | 3/4"    | 10.565210  | 10.5652 NP  | 1                  | -          |  |  |
| Side Entry   | 16     | 1/2"    | 10.564010  | 10.5640 NP  | 70.4930            | 70.4930 NP |  |  |
|              | 21     | 3/4"    | 10.564510  | 10.5645 NP  | -                  | -          |  |  |
| LICH BROEILE |        |         |            |             |                    |            |  |  |

| Position of | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|--------|---------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 16     | 1/2"    | 70.4902               | 70.4902 NP | 70.4912            | 70.4912 NP |
|             | 21     | 3/4"    | 70.4904               | 70.4904 NP | 70.4914            | 70.4914 NP |
| Side Entry  | 16     | 1/2"    | 70.4922               | 70.4922 NP | 70.4932            | 70.4932 NP |
|             | 21     | 3/4"    | 70.4924               | 70.4924 NP | 70.4934            | 70.4934 NP |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.4620               | 70.4725            |  |
| With Dust Cover    | 70.4740               | 70.4745            |  |

#### **SURFACE MOUNT BASES**

#### WITHOUT DUST COVER



| Number of | Size o | f Entry | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-----------|--------|---------|------------|-----------------------|-----------|--------------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| 1 Entry   | 16     | 1/2"    | 10.5671    | 10.5671 NP            | 70.4772   | 70.4772 NP         |  |
|           | 21     | 3/4"    | 10.5670    | 10.5670 NP            | 70.4774   | 70.4774 NP         |  |
| 2 Entries | 16     | 1/2"    | 10.5681    | 10.5681 NP            | 70.4782   | 70.4782 NP         |  |
|           | 21     | 3/4"    | 10.5680    | 10.5680 NP            | 70.4784   | 70.4784 NP         |  |

#### WITH DUST COVER

| Number of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 1 Entry   | 16     | 1/2"    | 70.4852    | 70.4852 NP  | 70.4872            | 70.4872 NP |  |
|           | 21     | 3/4"    | 70.4854    | 70.4854 NP  | 70.4874            | 70.4874 NP |  |
| 2 Entries | 16     | 1/2"    | 70.4862    | 70.4862 NP  | 70.4882            | 70.4882 NP |  |
|           | 21     | 3/4"    | 70.4864    | 70.4864 NP  | 70.4884            | 70.4884 NP |  |



#### **CABLE COUPLER HOOD**

| Profile                 | Size o | f Entry | Without C | able Gland | With Cable Gland |            |  |
|-------------------------|--------|---------|-----------|------------|------------------|------------|--|
| Frome                   | PG     | NPT     | PG Part # | NPT Part # | PG Part #        | NPT Part # |  |
| <b>Standard Profile</b> | 16     | 1/2"    | 10.5630   | 10.5630 NP | 70.4810          | 70.4810 NP |  |
| High Profile            | 16     | 1/2"    | 70.4802   | 70.4802 NP | 70.4812          | 70.4812 NP |  |
|                         | 21     | 3/4"    | 70.4804   | 70.4804 NP | 70.4814          | 70.4814 NP |  |

# **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



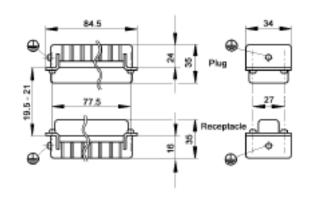
| Material: Thermoplastic Resin       | -40°C to 125°C |             |                |
|-------------------------------------|----------------|-------------|----------------|
|                                     |                | Part #      | Part #         |
|                                     |                | with string | without string |
| Dust cover for HA 16 Panel Mount or | Surface Mount  | 10.4695     | 10.4697        |
| Base/ Cable Coupler hoods (include: | s gasket)      |             |                |
| Dust cover for HA 16 Hoods          |                | 10.4696     | 10.4698        |

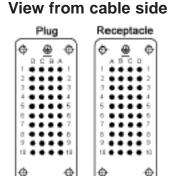
HD 40 Plugs & Receptacles



### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**







**Contacts Sold Separately** 

| Plug    | Receptacle |
|---------|------------|
| 11.2652 | 11.2662    |

All dimensions are in mm.

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









| Bags of 100 | Bags | s of | 1 | 0 | 0 |
|-------------|------|------|---|---|---|
|-------------|------|------|---|---|---|

|             |         | Silver  |         | G       | old     | Stripping | Cross Section  |
|-------------|---------|---------|---------|---------|---------|-----------|----------------|
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  |           | Characteristic |
| 0.14 - 0.37 | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8         | 1              |
| 0.5         | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8         | 2              |
| 0.75 - 1.0  | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8         | 3              |
| 1.5         | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8         | 4              |
| 2.5         | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8       | 5              |

Part number= 1 contact

#### **CRIMP TOOLS**









Crimp Tool 11.1470

Crimp Dies 11.1471

**Locator** 11.1472

Removal Tool 11.1610

# **MATING COMPONENTS**

HD 40 Plugs & Receptacles fit into EPIC® HBE 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.

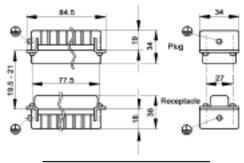
HD 40 Plugs & Receptacles



#### **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**

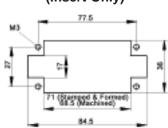


Contacts Sold Separately



Plug Receptacle 11.2650 11.2660

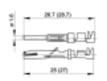
Panel Cut-Out (Insert Only)



All dimensions are in mm.

#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









|   | mm²        | Stripping Length (mm) |
|---|------------|-----------------------|
| ı | 0.14 - 0.5 | 2.5 - 0.5             |
| ı | 0.5 - 1.5  |                       |
| ı | 1.5 - 2.5  | 3.5 - 0.5             |

| Bags of 100 |         |         |         |         |         | Silver:     | Left Ha | nd Feed     | Reel    |
|-------------|---------|---------|---------|---------|---------|-------------|---------|-------------|---------|
|             |         | Silver  |         | Gold    |         | Reel of 100 |         | Reel of 200 |         |
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Pin         | Socket  | Pin         | Socket  |
| 0.14 - 0.5  | 26 - 20 | 11.2411 | 11.2311 | 11.2431 | 11.2331 | -           | -       | 11.2407     | 11.2307 |
| 0.5 - 1.5   | 20 - 16 | 11.2210 | 11.2361 | 11.2213 | 11.2381 | -           | -       | 11.2207     | 11.2357 |
| 1.5 - 2.5   | 16 - 14 | 11.2235 | 11.2285 | -       | -       | 11.2230     | 11.2280 | -           |         |

|            |         | Reel o  | ot 2000: R | ight Hand  | Reel of | 2000: L | ett Hanc | l Feed  |         |
|------------|---------|---------|------------|------------|---------|---------|----------|---------|---------|
|            |         | Silver  |            | ilver Gold |         | Silver  |          | Gold    |         |
| mm²        | AWG     | Pin     | Socket     | Pin        | Socket  | Pin     | Socket   | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2400 | 11.2300    | -          | -       | 11.2404 | 11.2304  | 11.2305 | 11.2405 |
| 0.5 - 1.5  | 20 - 16 | 11.2200 | 11.2350    | 11.2201    | 11.2352 | 11.2260 | 11.2265  | -       | -       |
| 1.5 - 2.5  | 16 - 14 | -       | -          | -          | -       | 11.2227 | 11.2277  | -       | -       |

Part number= 1 contact (bags) or 1 reel.



Crimp Tool





**Locator** 11.1473

 Crimp Dies

 0.14-0.5:
 11.147170

 0.5-1.5:
 11.147180

 1.5-2.5:
 11.147190

# **CRIMP TOOLS**



Removal Tool: 11.1610

Crimp Dies for Reel:0.14-0.5:11.15360.5-1.5:11.15371.5-2.5:11.1538



Crimp Tool for Reel



## **MATING COMPONENTS**

HD 40 Plugs & Receptacles fit into EPIC® HBE 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.

HBE 16 Housings: Single Lever on Base for HD 40 Inserts



#### STANDARD PROFILE



| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.0809    | 10.0809 NP  | 70.0990            | 70.0990 NP |
|             | 29     | 1"      | 10.0909    | 10.0909 NP  | -                  | -          |
| Side Entry  | 21     | 3/4"    | 10.0829    | 10.0829 NP  | 70.1090            | 70.1090 NP |
|             | 29     | 1"      | 10.0929    | 10.0929 NP  | -                  | -          |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 70.0942    | 70.0942 NP  | 70.0992            | 70.0992 NP |  |
|             | 29     | 1"      | 70.0944    | 70.0944 NP  | 70.0994            | 70.0994 NP |  |
| Side Entry  | 21     | 3/4"    | 70.1042    | 70.1042 NP  | 70.1092            | 70.1092 NP |  |
|             | 29     | 1"      | 70.1044    | 70.1044 NP  | 70.1094            | 70.1094 NP |  |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |  |
|--------------------|-----------------------|--------------------|--|--|
| Without Dust Cover | 10.0729               | 70.0827            |  |  |
| With Dust Cover    | 10.0739               | 70.0837            |  |  |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of Size of Entr |    |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------------|----|------|------------|-------------|--------------------|------------|--|
| Entries           | PG | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries         | 21 | 3/4" | 10.0759    | 10.0759 NP  | 70.1130            | 70.1130 NP |  |
| 1 Entry           | 21 | 3/4" | 10.0749    | 10.0749 NP  | 70.1120            | 70.1120 NP |  |
| 2 Entries with    | 21 | 3/4" | 10.0789    | 10.0789 NP  | 70.1170            | 70.1170 NP |  |
| dust cover        | -  | -    | -          | -           | -                  | -          |  |
| 1 Entry with      | 21 | 3/4" | 10.0769    | 10.0769 NP  | 70.1160            | 70.1160 NP |  |
| dust cover        | -  | -    | -          | -           | -                  | -          |  |



#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|--------|---------|-----------------------|------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.1112               | 70.1112 NP | 70.1132            | 70.1132 NP |
|                | 29     | 1"      | 70.1114               | 70.1114 NP | 70.1134            | 70.1134 NP |
| 1 Entry        | 21     | 3/4"    | 70.1102               | 70.1102 NP | 70.1122            | 70.1122 NP |
|                | 29     | 1"      | 70.1104               | 70.1104 NP | 70.1124            | 70.1124 NP |
| 2 Entries with | 21     | 3/4"    | 70.1152               | 70.1152 NP | 70.1172            | 70.1172 NP |
| dust cover     | 29     | 1"      | 70.1154               | 70.1154 NP | 70.1174            | 70.1174 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1142               | 70.1142 NP | 70.1162            | 70.1162 NP |
| dust cover     | 29     | 1"      | 70.1144               | 70.1144 NP | 70.1164            | 70.1164 NP |



## **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| Trome    | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0869               | 10.0869 NP | 70.0930            | 70.0930 NP |
| Profile  | 29            | 1"   | 10.0969               | 10.0969 NP | -                  | -          |
| High     | 21            | 3/4" | 70.0922               | 70.0922 NP | 70.0932            | 70.0932 NP |
| Profile  | 29            | 1"   | 70.0924               | 70.0924 NP | 70.0934            | 70.0934 NP |

HBE 16 Housings: Double Levers on Base for HD 40 Inserts

### **HOODS**



#### **STANDARD PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.0800    | 10.0800 NP  | 70.1010            | 70.1010 NP |
|             | 29            | 1"   | 10.0900    | 10.0900 NP  | -                  | -          |
| Side Entry  | 21            | 3/4" | 10.0820    | 10.0820 NP  | 70.1030            | 70.1030 NP |
|             | 29            | 1"   | 10.0920    | 10.0920 NP  | 1                  |            |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21            | 3/4" | 70.1002    | 70.1002 NP            | 70.1012   | 70.1012 NP         |  |
|             | 29            | 1"   | 70.1004    | 70.1004 NP            | 70.1014   | 70.1014 NP         |  |
| Side Entry  | 21            | 3/4" | 70.1022    | 70.1022 NP            | 70.1032   | 70.1032 NP         |  |
|             | 29            | 1"   | 70.1024    | 70.1024 NP            | 70.1034   | 70.1034 NP         |  |

#### PANEL MOUNT BASES



| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0720               | 70.0825            |  |

# **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of      | Size of Entry |      | try Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|---------------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #                 | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 10.0750                   | 10.0750 NP | 70.0880            | 70.0880 NP |
| 1 Entry   | 21            | 3/4" | 10.0740                   | 10.0740 NP | 70.0870            | 70.0870 NP |

#### **HIGH PROFILE**

| # of      | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 70.0862    | 70.0862 NP  | 70.0882            | 70.0882 NP |
|           | 29            | 1"   | 70.0864    | 70.0864 NP  | 70.0884            | 70.0884 NP |
| 1 Entry   | 21            | 3/4" | 70.0852    | 70.0852 NP  | 70.0872            | 70.0872 NP |
|           | 29            | 1"   | 70.0854    | 70.0854 NP  | 70.0874            | 70.0874 NP |

## **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
|          | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0860               | 10.0860 NP | 70.0910            | 70.0910 NP |
| Profile  | 29            | 1"   | 10.0960               | 10.0960 NP | -                  | -          |
| High     | 21            | 3/4" | 70.0902               | 70.0902 NP | 70.0912            | 70.0912 NP |
| Profile  | 29            | 1"   | 70.0904               | 70.0904 NP | 70.0914            | 70.0914 NP |



HBE 16 Housings: Double Levers on Hood for HD 40 Inserts





#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21            | 3/4" | 10.0810    | 10.0810 NP            | 70.1060   | 70.1060 NP         |  |
|             | 29            | 1"   | 10.0910    | 10.0910 NP            | -         | -                  |  |
| Side Entry  | 21            | 3/4" | 10.0830    | 10.0830 NP            | 70.1080   | 70.1080 NP         |  |
|             | 29            | 1"   | 10.0930    | 10.0930 NP            | 1         |                    |  |

#### **HIGH PROFILE**

| Position of | of Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|------------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG               | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21               | 3/4" | 70.1052               | 70.1052 NP | 70.1062            | 70.1062 NP |
|             | 29               | 1"   | 70.1054               | 70.1054 NP | 70.1064            | 70.1064 NP |
| Side Entry  | 21               | 3/4" | 70.1072               | 70.1072 NP | 70.1082            | 70.1032 NP |
|             | 29               | 1"   | 70.1074               | 70.1074 NP | 70.1084            | 70.1034 NP |



## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0731               | -                  |  |
| With Dust Cover    | 10.0730               | 70.0835            |  |

## **SURFACE MOUNT BASES**



| # of           | Size of Entry |      | Standard G | Standard Grey Coating |           | oating (EP) |
|----------------|---------------|------|------------|-----------------------|-----------|-------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #  |
| 2 Entries      | 21            | 3/4" | 70.0960    | 70.0960 NP            | 70.0980   | 70.0980 NP  |
| 1 Entry        | 21            | 3/4" | 10.0760    | 10.0760 NP            | 70.0970   | 70.0970 NP  |
| 2 Entries with | 21            | 3/4" | 70.0962    | 70.0962 NP            | 70.0982   | 70.0982 NP  |
| dust cover     | 29            | 1"   | 70.0964    | 70.0964 NP            | 70.0984   | 70.0984 NP  |
| 1 Entry with   | 21            | 3/4" | 70.0952    | 70.0952 NP            | 70.0972   | 70.0972 NP  |
| dust cover     | 29            | 1"   | 70.0954    | 70.0954 NP            | 70.0974   | 70.0974 NP  |

## **DUST COVERS WITH ATTACHMENT STRING**



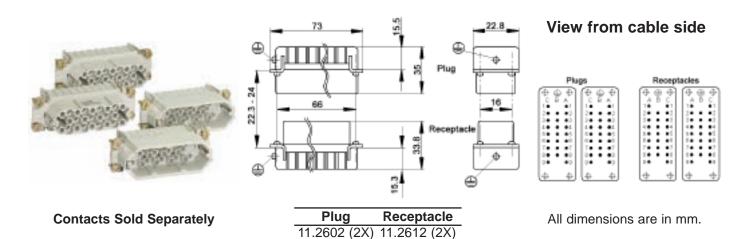
Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 16 Hoods  | 10.0886 |
| Dust cover with single lever bolts for HBE 16 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0887 |
| Dust cover with double levers and gasket for HBE 16 Hoods  | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0870 |
| Dust cover with double lever bolts and gasket for HBE 16 Hoods   | 10.0871 |

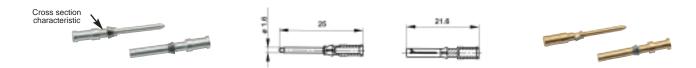
HD 50 Plugs & Receptacles



### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



#### **MACHINE CONTACTS: DIAMETER 1.6 MM**



Dagg of 100

| Bags of 100 |         |            |         |         |         |             |                |  |  |  |
|-------------|---------|------------|---------|---------|---------|-------------|----------------|--|--|--|
|             |         | Silv       | ver     | Go      | old     | Stripping   | Cross Section  |  |  |  |
| mm²         | AWG     | Pin Socket |         | Pin     | Socket  | Length (mm) | Characteristic |  |  |  |
| 0.14 - 0.37 | 26 - 22 | 13.1620    | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |  |  |  |
| 0.5         | 20      | 13.1621    | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |  |  |  |
| 0.75 - 1.0  | 18      | 13.1622    | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |  |  |  |
| 1.5         | 16      | 13.1623    | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |  |  |  |
| 2.5         | 14      | 13.1624    | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |  |  |  |

Part number= 1 contact

#### **CRIMP TOOLS**







Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool 11.1610

#### MATING COMPONENTS

HD 50 Plugs & Receptacles fit into EPIC® HA 32 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 249). Please note that metric parts are available.



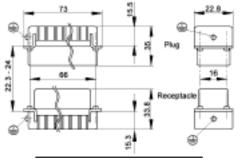
HD 50 Plugs & Receptacles



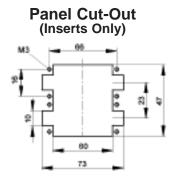
#### **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**



**Contacts Sold Separately** 



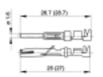
Plug Receptacle 11.2600 (2X) 11.2610 (2X)



All dimensions are in mm.

#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm²        | Stripping Length (mm) |
|------------|-----------------------|
| 0.14 - 0.5 | 2.5 - 0.5             |
| 0.5 - 1.5  | 3.5 - 0.5             |
| 1.5 - 2.5  | 3.5 - 0.5             |

|            |         | Bags of 100 |         |         |         | Silver: Left Hand Feed Reel |         |             |         |
|------------|---------|-------------|---------|---------|---------|-----------------------------|---------|-------------|---------|
|            |         | Silver      |         | Gold    |         | Reel of 100                 |         | Reel of 200 |         |
| mm²        | AWG     | Pin         | Socket  | Pin     | Socket  | Pin                         | Socket  | Pin         | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2411     | 11.2311 | 11.2431 | 11.2331 | -                           | -       | 11.2407     | 11.2307 |
| 0.5 - 1.5  | 20 - 16 | 11.2210     | 11.2361 | 11.2213 | 11.2381 | -                           | -       | 11.2207     | 11.2357 |
| 1.5 - 2.5  | 16 - 14 | 11.2235     | 11.2285 | -       | -       | 11.2230                     | 11.2280 | -           | -       |

|            |         | Reel of 2000: Right Hand Feed |         |         |         | Reel of 2000: Left Hand Feed |         |         |         |
|------------|---------|-------------------------------|---------|---------|---------|------------------------------|---------|---------|---------|
|            |         | Silver                        |         | Gold    |         | Silver                       |         | Gold    |         |
| mm²        | AWG     | Pin                           | Socket  | Pin     | Socket  | Pin                          | Socket  | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2400                       | 11.2300 | -       | -       | 11.2404                      | 11.2304 | 11.2305 | 11.2405 |
| 0.5 - 1.5  | 20 - 16 | 11.2200                       | 11.2350 | 11.2201 | 11.2352 | 11.2260                      | 11.2265 | -       | -       |
| 1.5 - 2.5  | 16 - 14 | -                             | -       | -       | -       | 11.2227                      | 11.2277 | -       |         |

Part number= 1 contact (bags) or 1 reel.



Crimp Tool 11.1470





Locator 11.1473

**Crimp Dies** 0.14-0.5: 11.147170 0.5-1.5: 11.147180 1.5-2.5: 11.147190

CRIMP TOOLS



Removal Tool: 11.1610

**Crimp Dies for Reel:** 0.14-0.5: 11.1536 0.5-1.5: 11.1537 1.5-2.5: 11.1538



**Crimp Tool for Reel** 11.1535



#### **MATING COMPONENTS**

HD 50 Plugs & Receptacles fit into EPIC® HA 32 Housings. A quick reference for the mating components is shown. Diagrams are located in the HA Section of the catalog (Page 249). Please note that metric parts are available.



HA 32 Housings: Double Levers on Base for HD 50 Inserts



#### **HOODS**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|-------------|--------|---------|------------|-------------|-----------|-------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| Top Entry   | 21     | 3/4"    | 10.5820    | 10.5820 NP  | 70.5212   | 70.5212 NP  |
|             | 29     | 1"      | 10.5830    | 10.5830 NP  | 70.5214   | 70.5214 NP  |
| Side Entry  | 21     | 3/4"    | 10.5760    | 10.5760 NP  | 70.5232   | 70.5232 NP  |
|             | 29     | 1"      | 10.5770    | 10.5770 NP  | 70.5234   | 70.5234 NP  |



#### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.4720               | 70.5025            |



## **SURFACE MOUNT BASES**

| # of Siz  |    | Size of Entry Standard Gre |           |            | rey Coating Black Coating (EP) |            |  |
|-----------|----|----------------------------|-----------|------------|--------------------------------|------------|--|
| Entries   | PG | NPT                        | PG Part # | NPT Part # | PG Part #                      | NPT Part # |  |
| 1 Entry   | 21 | 3/4"                       | 10.4740   | 10.4740 NP | 70.5072                        | 70.5072 NP |  |
|           | 29 | 1"                         | 10.4741   | 10.4741 NP | 70.5074                        | 70.5074 NP |  |
| 2 Entries | 21 | 3/4"                       | 10.4820   | 10.4820 NP | 70.5082                        | 70.5082 NP |  |
|           | 29 | 1"                         | 10.4821   | 10.4821 NP | 70.5084                        | 70.5084 NP |  |



## **CABLE COUPLER HOOD**

| Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|---------------|------|------------|-------------|--------------------|------------|--|
| PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 21            | 3/4" | 10.5880    | 10.5880 NP  | 70.5110            | 70.5110 NP |  |
| 29            | 1"   | 10.5885    | 10.5885 NP  | 70.5112            | 70.5112 NP |  |

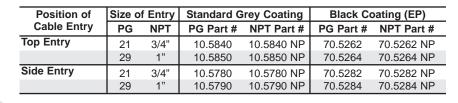
#### **DUST COVERS WITH OR WITHOUT ATTACHMENT STRING**



| Material: Thermoplastic Resin              | -40°C to 125°C   |             |                |
|--|------------------|-------------|----------------|
|  |                  | Part #      | Part #         |
|  |                  | with string | without string |
| <b>Dust cover for HA 32 Panel Mount of</b> | or Surface Mount | 10.4815     | 10.4817        |
| Base/ Cable Coupler hoods                  |                  |             |                |
| Dust cover for HA 32 Hoods (included)      | les gasket)      | 10.4816     | 10.4818        |
|  |                  |             |                |

HA 32 Housings: Double Levers on Hood for HD 50 Inserts









#### WITH DUST COVER

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.4731               | -                  |
| With Dust Cover    | 70.5030               | 70.5035            |

# **SURFACE MOUNT BASES**



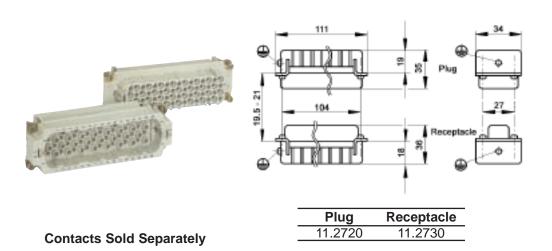
#### WITH DUST COVER

| # of           | # of Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------------|--------------------|------|------------|-------------|--------------------|------------|--|
| Entries        | PG                 | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 1 Entry with   | 21                 | 3/4" | 70.5152    | 70.5152 NP  | 70.5172            | 70.5172 NP |  |
| dust cover     | 29                 | 1"   | 70.5154    | 70.5154 NP  | 70.5174            | 70.5174 NP |  |
| 2 Entries with | 21                 | 3/4" | 70.5162    | 70.5162 NP  | 70.5182            | 70.5182 NP |  |
| dust cover     | 29                 | 1"   | 70.5164    | 70.5164 NP  | 70.5184            | 70.5184 NP |  |

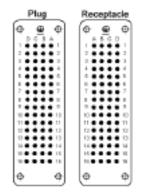
HD 64 Plugs & Receptacles



## **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



#### View from cable side



All dimensions are in mm.

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**



|             | Bags of 100 |            |           |               |         |             |                |  |  |  |  |  |
|-------------|-------------|------------|-----------|---------------|---------|-------------|----------------|--|--|--|--|--|
|             |             | Silv       | Stripping | Cross Section |         |             |                |  |  |  |  |  |
| mm²         | AWG         | Pin Socket |           | Pin           | Socket  | Length (mm) | Characteristic |  |  |  |  |  |
| 0.14 - 0.37 | 26 - 22     | 13.1620    | 13.1630   | 13.1625       | 13.1635 | 8           | 1              |  |  |  |  |  |
| 0.5         | 20          | 13.1621    | 13.1631   | 13.1626       | 13.1636 | 8           | 2              |  |  |  |  |  |
| 0.75 - 1.0  | 18          | 13.1622    | 13.1632   | 13.1627       | 13.1637 | 8           | 3              |  |  |  |  |  |
| 1.5         | 16          | 13.1623    | 13.1633   | 13.1628       | 13.1638 | 8           | 4              |  |  |  |  |  |
| 2.5         | 14          | 13.1624    | 13.1634   | 13.1629       | 13.1639 | 5.8         | 5              |  |  |  |  |  |

Part number= 1 contact

## **CRIMP TOOLS**



**Crimp Tool** 11.1470



Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool 11.1610

## MATING COMPONENTS

HD 64 Plugs & Receptacles fit into EPIC® HBE 24 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 303). Please note that metric parts are available.

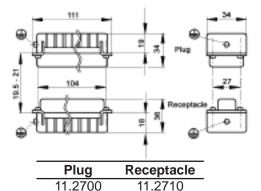
HD 64 Plugs & Receptacles

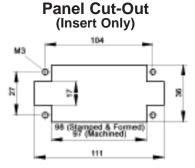


### **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**



**Contacts Sold Separately** 

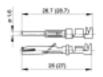




All dimensions are in mm.

#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm²        | Stripping Length (mm) |
|------------|-----------------------|
| 0.14 - 0.5 | 2.5 - 0.5             |
| 0.5 - 1.5  | 3.5 - 0.5             |
| 1.5 - 2.5  | 3.5 - 0.5             |

| Bags of 100 |         |         |         |         |         | Silver: Left Hand Feed Reel |         |             |         |
|-------------|---------|---------|---------|---------|---------|-----------------------------|---------|-------------|---------|
|             |         | Silver  |         | Go      | old     | Reel of 100                 |         | Reel of 200 |         |
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Pin                         | Socket  | Pin         | Socket  |
| 0.14 - 0.5  | 26 - 20 | 11.2411 | 11.2311 | 11.2431 | 11.2331 | -                           | -       | 11.2407     | 11.2307 |
| 0.5 - 1.5   | 20 - 16 | 11.2210 | 11.2361 | 11.2213 | 11.2381 | -                           | -       | 11.2207     | 11.2357 |
| 1.5 - 2.5   | 16 - 14 | 11.2235 | 11.2285 | -       | -       | 11.2230                     | 11.2280 | -           | -       |

|            |         | Reel o  | Reel of 2000: Left Hand Feed |         |         |         |         |         |         |
|------------|---------|---------|------------------------------|---------|---------|---------|---------|---------|---------|
|            |         | Silver  |                              | Go      | old     | Silver  |         | Gold    |         |
| mm²        | AWG     | Pin     | Socket                       | Pin     | Socket  | Pin     | Socket  | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2400 | 11.2300                      | -       | -       | 11.2404 | 11.2304 | 11.2305 | 11.2405 |
| 0.5 - 1.5  | 20 - 16 | 11.2200 | 11.2350                      | 11.2201 | 11.2352 | 11.2260 | 11.2265 | -       | -       |
| 1.5 - 2.5  | 16 - 14 | -       | -                            | -       | -       | 11.2227 | 11.2277 | -       | -       |

Part number= 1 contact (bags) or 1 reel.

**CRIMP TOOLS** 



Crimp Tool 11.1470





Locator 11.1473

**Crimp Dies** 0.14-0.5: 11.147170 0.5-1.5: 11.147180 1.5-2.5: 11.147190





**Crimp Dies for Reel:** 0.14-0.5: 11.1536 0.5-1.5: 11.1537 1.5-2.5: 11.1538





#### MATING COMPONENTS

HD 64 Plugs & Receptacles fit into EPIC® HBE 24 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 303). Please note that metric parts are available.



HBE 24 Housings: Single Lever on Base for HD 64 Inserts



#### **HOODS**

#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.1219    | 10.1219 NP  | 70.1490            | 70.1490 NP |
|             | 29     | 1"      | 10.1119    | 10.1119 NP  | 70.1492            | 70.1492 NP |
| Side Entry  | 21     | 3/4"    | 10.1139    | 10.1139 NP  | 70.1590            | 70.1590 NP |
|             | 29     | 1"      | 10.1239    | 10.1239 NP  | 70.1592            | 70.1592 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|---------------|------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21            | 3/4" | 70.1444    | 70.1444 NP  | 70.1494            | 70.1494 NP |  |
|             | 29            | 1"   | 70.1446    | 70.1446 NP  | 70.1496            | 70.1496 NP |  |
| Side Entry  | 21            | 3/4" | 70.1544    | 70.1544 NP  | 70.1594            | 70.1594 NP |  |
|             | 29            | 1"   | 70.1546    | 70.1546 NP  | 70.1596            | 70.1596 NP |  |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.1029               | 70.1327            |  |
| With Dust Cover    | 10.1039               | 70.1337            |  |

#### **SURFACE MOUNT BASES**



#### STANDARD PROFILE

|              | OTANDARD I NOTICE |      |            |             |                    |            |  |  |  |  |  |
|--------------|-------------------|------|------------|-------------|--------------------|------------|--|--|--|--|--|
| # of         | Size of Entry     |      | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |  |  |
| Entries      | PG                | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |  |  |
| 2 Entries    | 21                | 3/4" | 10.1059    | 10.1059 NP  | 70.1630            | 70.1630 NP |  |  |  |  |  |
| 1 Entry      | 21                | 3/4" | 10.1049    | 10.1049 NP  | 70.1620            | 70.1620 NP |  |  |  |  |  |
| 2 with cover | 21                | 3/4" | 10.1099    | 10.1099 NP  | 70.1670            | 70.1670 NP |  |  |  |  |  |
| 1 with cover | 21                | 3/4" | 10.1079    | 10.1079 NP  | 70.1660            | 70.1660 NP |  |  |  |  |  |



#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------|---------|------------|-------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.1612    | 70.1612 NP  | 70.1632            | 70.1632 NP |
|                | 29     | 1"      | 70.1614    | 70.1614 NP  | 70.1634            | 70.1634 NP |
| 1 Entry        | 21     | 3/4"    | 70.1602    | 70.1602 NP  | 70.1622            | 70.1622 NP |
|                | 29     | 1"      | 70.1604    | 70.1604 NP  | 70.1624            | 70.1624 NP |
| 2 Entries with | 21     | 3/4"    | 70.1652    | 70.1652 NP  | 70.1672            | 70.1672 NP |
| dust cover     | 29     | 1"      | 70.1654    | 70.1654 NP  | 70.1674            | 70.1674 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1642    | 70.1642 NP  | 70.1662            | 70.1662 NP |
| dust cover     | 29     | 1"      | 70.1644    | 70.1644 NP  | 70.1664            | 70.1664 NP |



#### **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------|---------------|------|------------|-------------|--------------------|------------|--|
| Tronie   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Standard | 21            | 3/4" | 10.1279    | 10.1279 NP  | 70.1430            | 70.1430 NP |  |
| Profile  | 29            | 1"   | 10.1179    | 10.1179 NP  | 70.1432            | 70.1432 NP |  |
| High     | 21            | 3/4" | 70.1424    | 70.1424 NP  | 70.1434            | 70.1434 NP |  |
| Profile  | 29            | 1"   | 70.1426    | 70.1426 NP  | 70.1436            | 70.1436 NP |  |



HBE 24 Housings: Double Levers on Base for HD 64 Inserts

### **HOODS**







#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 10.1210    | 10.1210 NP  | 70.1510            | 70.1510 NP |  |
|             | 29     | 1"      | 10.1110    | 10.1110 NP  | 70.1512            | 70.1512 NP |  |
| Side Entry  | 21     | 3/4"    | 10.1130    | 10.1130 NP  | 70.1530            | 70.1530 NP |  |
|             | 29     | 1"      | 10.1230    | 10.1230 NP  | 70.1532            | 70.1532 NP |  |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.1504    | 70.1504 NP  | 70.1514            | 70.1514 NP |
|             | 29     | 1"      | 70.1506    | 70.1506 NP  | 70.1516            | 70.1516 NP |
| Side Entry  | 21     | 3/4"    | 70.1524    | 70.1524 NP  | 70.1534            | 70.1534 NP |
|             | 29     | 1"      | 70.1526    | 70.1526 NP  | 70.1536            | 70.1536 NP |



## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.1020               | 70.1325            |

## **SURFACE MOUNT BASES**





#### STANDARD PROFILE

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 21     | 3/4"    | 10.1050    | 10.1050 NP  | 70.1380            | 70.1380 NP |  |
| 1 Entry   | 21     | 3/4"    | 10.1040    | 10.1040 NP  | 70.1370            | 70.1370 NP |  |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 21     | 3/4"    | 70.1362    | 70.1362 NP  | 70.1382            | 70.1382 NP |  |
|           | 29     | 1"      | 70.1364    | 70.1364 NP  | 70.1384            | 70.1384 NP |  |
| 1 Entry   | 21     | 3/4"    | 70.1352    | 70.1352 NP  | 70.1372            | 70.1372 NP |  |
|           | 29     | 1"      | 70.1354    | 70.1354 NP  | 70.1374            | 70.1374 NP |  |

# **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------|---------------|------|------------|-------------|--------------------|------------|--|
| TTOTILE  | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Standard | 21            | 3/4" | 10.1270    | 10.1270 NP  | 70.1410            | 70.1410 NP |  |
| Profile  | 29            | 1"   | 10.1170    | 10.1170 NP  | 70.1412            | 70.1412 NP |  |
| High     | 21            | 3/4" | 70.1404    | 70.1404 NP  | 70.1414            | 70.1414 NP |  |
| Profile  | 29            | 1"   | 70.1406    | 70.1406 NP  | 70.1416            | 70.1416 NP |  |

HBE 24 Housings: Double Levers on Hood for HD 64 Inserts





#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 10.1220    | 10.1220 NP  | 70.1560            | 70.1560 NP |  |
|             | 29     | 1"      | 10.1120    | 10.1120 NP  | 70.1562            | 70.1562 NP |  |
| Side Entry  | 21     | 3/4"    | 10.1140    | 10.1140 NP  | 70.1580            | 70.1580 NP |  |
|             | 29     | 1"      | 10.1240    | 10.1240 NP  | 70.1582            | 70.1582 NP |  |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 70.1554    | 70.1554 NP  | 70.1564            | 70.1564 NP |  |
|             | 29     | 1"      | 70.1556    | 70.1556 NP  | 70.1566            | 70.1566 NP |  |
| Side Entry  | 21     | 3/4"    | 70.1574    | 70.1574 NP  | 70.1584            | 70.1584 NP |  |
|             | 29     | 1"      | 70.1576    | 70.1576 NP  | 70.1586            | 70.1586 NP |  |



#### **PANEL MOUNT BASES**



| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| With Dust Cover    | 10.1030               | 70.1335            |
| Without Dust Cover | 10.1031               | -                  |

# **SURFACE MOUNT BASES**



| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries      | 21     | 3/4"    | 10.1090    | 10.1090 NP  | 70.1480            | 70.1480 NP |  |
| 1 Entry        | 21     | 3/4"    | 10.1070    | 10.1070 NP  | 70.1470            | 70.1470 NP |  |
| 2 Entries with | 21     | 3/4"    | 70.1462    | 70.1462 NP  | 70.1482            | 70.1482 NP |  |
| dust cover     | 29     | 1"      | 70.1464    | 70.1464 NP  | 70.1484            | 70.1484 NP |  |
| 1 Entry with   | 21     | 3/4"    | 70.1452    | 70.1452 NP  | 70.1472            | 70.1472 NP |  |
| dust cover     | 29     | 1"      | 70.1454    | 70.1454 NP  | 70.1474            | 70.1474 NP |  |

## **DUST COVERS WITH ATTACHMENT STRING**

Material: Thermoplastic Resin



|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 24 Hoods  | 10.1186 |
| Dust cover with single lever bolts for HBE 24 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.1187 |
| Oust cover with double levers and gasket for HBE 24 Hoods  | 10.1195 |
| Dust cover with double lever bolts for HBE 24 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.1180 |
| Dust cover with double lever bolts and gasket for HBE 24 Hoods   | 10.1181 |

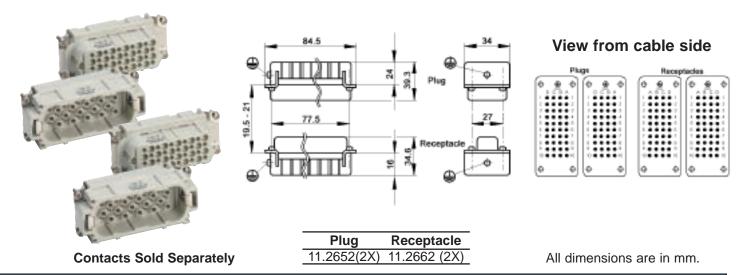
Temperature:

-40°C to 125°C

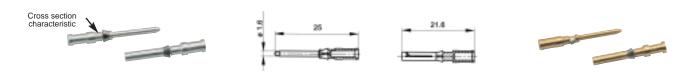
HD 80 Plugs & Receptacles



## **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



#### **MACHINE CONTACTS: DIAMETER 1.6 MM**



|             | Bags of 100 |         |         |            |         |             |                |  |  |  |  |  |
|-------------|-------------|---------|---------|------------|---------|-------------|----------------|--|--|--|--|--|
|             |             | Silv    | Silver  |            | old     | Stripping   | Cross Section  |  |  |  |  |  |
| mm²         | AWG         | Pin     | Socket  | Pin Socket |         | Length (mm) | Characteristic |  |  |  |  |  |
| 0.14 - 0.37 | 26 - 22     | 13.1620 | 13.1630 | 13.1625    | 13.1635 | 8           | 1              |  |  |  |  |  |
| 0.5         | 20          | 13.1621 | 13.1631 | 13.1626    | 13.1636 | 8           | 2              |  |  |  |  |  |
| 0.75 - 1.0  | 18          | 13.1622 | 13.1632 | 13.1627    | 13.1637 | 8           | 3              |  |  |  |  |  |
| 1.5         | 16          | 13.1623 | 13.1633 | 13.1628    | 13.1638 | 8           | 4              |  |  |  |  |  |
| 2.5         | 14          | 13.1624 | 13.1634 | 13.1629    | 13.1639 | 5.8         | 5              |  |  |  |  |  |

# Part number= 1 contact

**Crimp Tool** 11.1470

# **CRIMP TOOLS**



**Crimp Dies** 11.1471



Locator 11.1472



**Removal Tool** 11.1610

## **MATING COMPONENTS**

HD 80 Plugs & Receptacles fit into EPIC® HBE 32 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 313). Please note that metric parts are available.

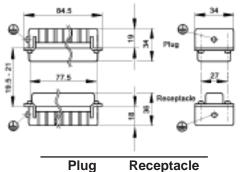


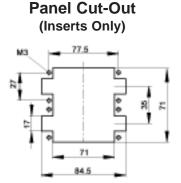
HD 80 Plugs & Receptacles



#### **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**







**Contacts Sold Separately** 

Plug Receptacle 11.2650 (2X) 11.2660 (2X)

All dimensions are in mm.

#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm²        | Stripping Length (mm) |
|------------|-----------------------|
| 0.14 - 0.5 | 2.5 - 0.5             |
| 0.5 - 1.5  | 3.5 - 0.5             |
| 1.5 - 2.5  | 3.5 - 0.5             |

|            |         |         | Bags    | of 100      | Silver: | Left Ha     | nd Feed | Reel        |         |
|------------|---------|---------|---------|-------------|---------|-------------|---------|-------------|---------|
|            |         | Silver  |         | Silver Gold |         | Reel of 100 |         | Reel of 200 |         |
| mm²        | AWG     | Pin     | Socket  | Pin         | Socket  | Pin         | Socket  | Pin         | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2411 | 11.2311 | 11.2431     | 11.2331 | -           | -       | 11.2407     | 11.2307 |
| 0.5 - 1.5  | 20 - 16 | 11.2210 | 11.2361 | 11.2213     | 11.2381 | -           | -       | 11.2207     | 11.2357 |
| 1.5 - 2.5  | 16 - 14 | 11.2235 | 11.2285 | -           | -       | 11.2230     | 11.2280 | -           | -       |

|            |         | Reel of 2000: Right Hand Feed |         |         | Reel of | 2000: L | eft Hanc | l Feed  |         |
|------------|---------|-------------------------------|---------|---------|---------|---------|----------|---------|---------|
|            |         | Silver                        |         | Gold    |         | Silver  |          | Gold    |         |
| mm²        | AWG     | Pin                           | Socket  | Pin     | Socket  | Pin     | Socket   | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2400                       | 11.2300 | -       | -       | 11.2404 | 11.2304  | 11.2305 | 11.2405 |
| 0.5 - 1.5  | 20 - 16 | 11.2200                       | 11.2350 | 11.2201 | 11.2352 | 11.2260 | 11.2265  | -       | -       |
| 1.5 - 2.5  | 16 - 14 | -                             | -       | -       | -       | 11.2227 | 11.2277  | -       | -       |

Part number= 1 contact (bags) or 1 reel.

**CRIMP TOOLS** 

Crimp Tool 11.1470





**Locator** 11.1473

0.14-0.5: 11.147170 0.5-1.5: 11.147180 1.5-2.5: 11.147190

**Crimp Dies** 



Removal Tool: 11.1610

Crimp Dies for Reel:0.14-0.5:11.15360.5-1.5:11.15371.5-2.5:11.1538





#### MATING COMPONENTS

HD 80 Plugs & Receptacles fit into EPIC® HBE 32 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 313). Please note that metric parts are available.

HBE 32 Housings for HD 80 Inserts

#### **DOUBLE LEVERS ON BASE**





| Position of | Size o | f Entry | Standard Grey Coating |            |  |
|-------------|--------|---------|-----------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #             | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 10.1330               | 10.1330 NP |  |
|             | 29     | 1"      | 10.1340               | 10.1340 NP |  |
| Side Entry  | 21     | 3/4"    | 10.1350               | 10.1350 NP |  |
|             | 29     | 1"      | 10.1360               | 10.1360 NP |  |



| # of      | Size of Entry |     | Standard Grey Coating |            |  |
|-----------|---------------|-----|-----------------------|------------|--|
| Entries   | PG            | NPT | PG Part #             | NPT Part # |  |
| 2 Entries | 29            | 1"  | 10.1380               | 10.1380 NP |  |
| 1 Entry   | 29            | 1"  | 10.1370               | 10.1370 NP |  |



|   | Part #  |   |
|---|---------|---|
|   | 10.1320 |   |
|   |         |   |
| D |         | g |

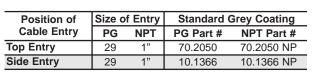


| Size o | f Entry | Standard Grey Coating |            |  |  |  |
|--------|---------|-----------------------|------------|--|--|--|
| PG     | NPT     | PG Part #             | NPT Part # |  |  |  |
| 21     | 3/4"    | 10.1390               | 10.1390    |  |  |  |
| 29     | 1"      | 10.1395               | 10.1395 NP |  |  |  |

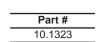
Dust cover with double lever bolts and attachment string for panel mount or surface mount base or cable coupler hood: 10.1420

## **DOUBLE LEVERS ON HOOD**









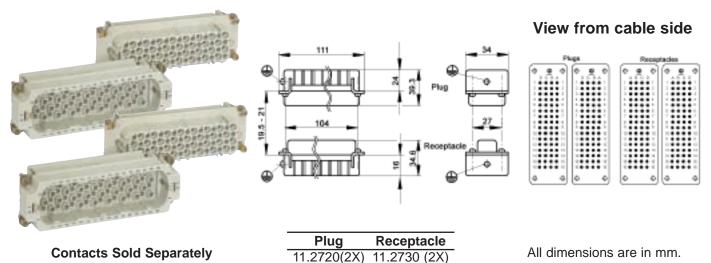


| Size o | f Entry | Standard 0 | Grey Coating |
|--------|---------|------------|--------------|
| PG     | NPT     | PG Part #  | NPT Part #   |
| 29     | 1"      | 10.1373    | 10.1373 NP   |

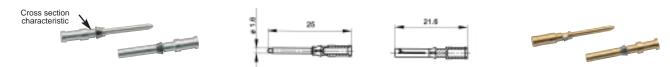
HD 128 Plugs & Receptacles



# **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



#### **MACHINE CONTACTS: DIAMETER 1.6 MM**



|             | Bags of 100 |         |         |         |         |             |                |  |
|-------------|-------------|---------|---------|---------|---------|-------------|----------------|--|
|             |             | Silver  |         | Go      | old     | Stripping   | Cross Section  |  |
| mm²         | AWG         | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |  |
| 0.14 - 0.37 | 26 - 22     | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |  |
| 0.5         | 20          | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |  |
| 0.75 - 1.0  | 18          | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |  |
| 1.5         | 16          | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |  |
| 2.5         | 14          | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |  |

Part number= 1 contact

#### **CRIMP TOOLS**







Crimp Dies



**Locator** 11.1472



Removal Tool 11.1610

## **MATING COMPONENTS**

HD 128 Plugs & Receptacles fit into EPIC® HBE 48 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 317). Please note that metric parts are available.

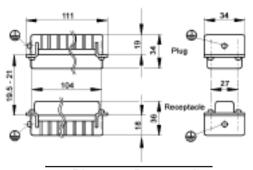
HD 128 Plugs & Receptacles



#### **CRIMP TERMINATED: STAMPED & FORMED CONTACT INSERTS**

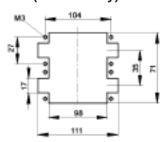






Plug Receptacle 11.2700 (2X) 11.2710 (2X)

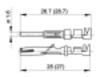
Panel Cut-Out (Inserts Only)



All dimensions are in mm.

#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm²        | Stripping Length (mm) |
|------------|-----------------------|
| 0.14 - 0.5 | 2.5 - 0.5             |
| 0.5 - 1.5  | 3.5 - 0.5             |
| 1.5 - 2.5  | 3.5 - 0.5             |

|            |         | Bags of 100 |         |         |                 | Silver: | Left Ha     | nd Feed | Reel    |
|------------|---------|-------------|---------|---------|-----------------|---------|-------------|---------|---------|
|            |         | Silver      |         | Go      | old Reel of 100 |         | Reel of 200 |         |         |
| mm²        | AWG     | Pin         | Socket  | Pin     | Socket          | Pin     | Socket      | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2411     | 11.2311 | 11.2431 | 11.2331         | -       | -           | 11.2407 | 11.2307 |
| 0.5 - 1.5  | 20 - 16 | 11.2210     | 11.2361 | 11.2213 | 11.2381         | -       | -           | 11.2207 | 11.2357 |
| 1.5 - 2.5  | 16 - 14 | 11.2235     | 11.2285 | -       | -               | 11.2230 | 11.2280     | -       | -       |

|            |         | Reel of 2000: Right Hand Feed |         |         |         | Reel of | 2000: L | ett Hand | I Feed  |
|------------|---------|-------------------------------|---------|---------|---------|---------|---------|----------|---------|
|            |         | Silver                        |         | Gold    |         | Silver  |         | Gold     |         |
| mm²        | AWG     | Pin                           | Socket  | Pin     | Socket  | Pin     | Socket  | Pin      | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2400                       | 11.2300 | -       | -       | 11.2404 | 11.2304 | 11.2305  | 11.2405 |
| 0.5 - 1.5  | 20 - 16 | 11.2200                       | 11.2350 | 11.2201 | 11.2352 | 11.2260 | 11.2265 | -        | -       |
| 1.5 - 2.5  | 16 - 14 | -                             | -       | -       | -       | 11.2227 | 11.2277 | -        |         |

Part number= 1 contact (bags) or 1 reel.

**CRIMP TOOLS** 



Crimp Tool





Locator 11.1473 Crimp Dies

0.14-0.5: 11.147170 0.5-1.5: 11.147180 1.5-2.5: 11.147190



Removal Tool: 11.1610

 Crimp Dies for Reel:

 0.14-0.5:
 11.1536

 0.5-1.5:
 11.1537

 1.5-2.5:
 11.1538





#### **MATING COMPONENTS**

HD 128 Plugs & Receptacles fit into EPIC® HBE 48 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 317). Please note that metric parts are available.



HBE 48 Housings for HD 128 Inserts





| Position   | Size o | of Entry | Standard G | rey Coating |
|------------|--------|----------|------------|-------------|
| of Entry   | PG     | NPT      | PG Part #  | NPT Part #  |
| Top Entry  | 29     | 1"       | 10.1550    | 10.1550 NP  |
|            | 36     | 1 1/4"   | 10.1560    | 10.1560 NP  |
|            | 42     | -        | 10.1570    | -           |
| Side Entry | 29     | 1"       | 10.1580    | 10.1580 NP  |
|            | 36     | 1 1/4"   | 10.1590    | 10.1590 NP  |
|            | 42     | -        | 10.1600    | -           |

## **PANEL MOUNT BASES**



| NAPAL A               | With Dust Cover                               | With Dust Cover                               |
|-----------------------|---|---|
| Without<br>Dust Cover | with hold down screws and no dust cover bolts | with hold down screws<br>and dust cover bolts |
| 10.1610               | 10.1520                                       | 10.1525                                       |

# **SURFACE MOUNT BASES**



| # of           | Size o | of Entry | Standard Grey Coating |            |  |
|----------------|--------|----------|-----------------------|------------|--|
| Entries        | PG     | NPT      | PG Part #             | NPT Part # |  |
| 2 Entries      | 29     | 1"       | 10.1660               | 10.1660 NP |  |
|                | 36     | 1 1/4"   | 10.1661               | 10.1661 NP |  |
| 1 Entry        | 29     | 1"       | 10.1650               | 10.1650 NP |  |
| •              | 36     | 1 1/4"   | 10.1651               | 10.1651 NP |  |
| 2 Entries with | 29     | 1"       | 10.1680               | 10.1680 NP |  |
| dust cover     | 36     | 1 1/4"   | 10.1681               | 10.1681 NP |  |
| 1 Entry with   | 29     | 1"       | 10.1670               | 10.1670 NP |  |
| dust cover     | 36     | 1 1/4"   | 10.1671               | 10.1671 NP |  |

# **HDD Series**



**HDD Series** 

#### TECHNICAL DATA

Inserts:

Number of Contacts: 24, 42, 72, 108, 144, 216 (+PE)

Rated Voltage:

VDE: 250V EPIC HDD 24 - 216

UL: 600V EPIC HDD 24 - 216

CSA: 600V EPIC HDD 24 - 216

Rated Current:

VDE: 10A EPIC HDD 24 - 216 8.5A EPIC HDD 24 - 216 UL:

CSA:

10A EPIC HDD 24 - 216

Pollution Level: 2

Test Voltage: 2.5 kV

Termination Type: Crimp termination:

0.14 - 2.5mm2 AWG: 22 - 14

Temperature Range: -40°C to 125°C

Contacts: Copper alloy, silver plated/

gold plated

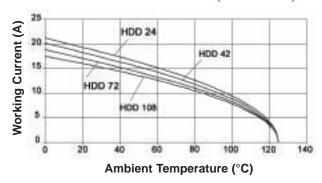
Contact Resistance: <2mOhm

Mating Cycles: 100 (higher mating cycles

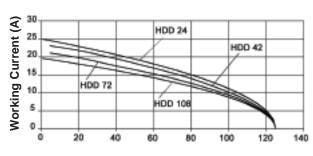
depends on the application)

## HDD INSERTS TECHNICAL DATA: DERATING CURVES

#### HDD CRIMP: 1.5 mm<sup>2</sup> (16 AWG)



#### HDD CRIMP: 2.5 mm<sup>2</sup> (14 AWG)



Ambient Temperature (°C)

#### MATING COMPONENTS

HDD Plugs & Receptacles fit into EPIC® HBE Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog. Please note that metric parts are available.

Specifications: DIN 43652 Temperature Range:

-40°C to +125°C

Protection class: **IP65** 

Material: Aluminum alloy, powder coated

#### Standard Grey Coating (NEMA 4)

# **EP Black Coating (NEMA 4X)**







**METRIC** 





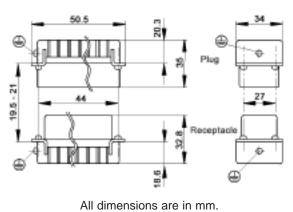


HDD 24 Plugs & Receptacles



#### CRIMP TERMINATED: MACHINE CONTACT INSERTS





View from Cable Side

**Panel Cut-Out** (Insert Only)

36 50.5

**Contacts Sold Separately** 

| Plug    | Receptacle |
|---------|------------|
| 11.2850 | 11.2860    |

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









|             |         | Silver  |         | Go      | old     | Stripping   | Cross Section  |
|-------------|---------|---------|---------|---------|---------|-------------|----------------|
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |
| 0.14 - 0.37 | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |
| 0.5         | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |
| 0.75 - 1.0  | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |
| 1.5         | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |
| 2.5         | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |

Part number= 1 contact

# **CRIMP TOOLS**









**Crimp Tool** 11.1470

**Crimp Dies** 11.1471

Locator 11.1472

**Removal Tool** 11.1610

## **MATING COMPONENTS**

HDD 24 Plugs & Receptacles fit into EPIC® HBE 6 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 278). Please note that metric parts are available.

HBE 6 Housings: Single Lever on Base for HDD 24 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of | Size of | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG      | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 13.5    | 1/2"    | 10.0110    | 10.0110 NP  | 70.0216            | 70.0216 NP |
|             | 16      | 1/2"    | 10.0210    | 10.0210 NP  | 70.0210            | 70.0210 NP |
| Side Entry  | 13.5    | 1/2"    | 10.0120    | 10.0120 NP  | 70.0236            | 70.0236 NP |
|             | 16      | 1/2"    | 10.0220    | 10.0220 NP  | 70.0230            | 70.0230 NP |

#### **HIGH PROFILE**

| Position of Size of Ent |    |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------------------|----|------|------------|-------------|--------------------|------------|
| Cable Entry             | PG | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry               | 21 | 3/4" | 70.0202    | 70.0202 NP  | 70.0212            | 70.0212 NP |
|                         | 29 | 1"   | 70.0204    | 70.0204 NP  | 70.0214            | 70.0214 NP |
| Side Entry              | 21 | 3/4" | 70.0222    | 70.0222 NP  | 70.0232            | 70.0232 NP |
|                         | 29 | 1"   | 70.0224    | 70.0224 NP  | 70.0234            | 70.0234 NP |





## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0030               | 70.0025            |  |
| With Dust Cover    | 10.0040               | 70.0045            |  |

Dust Cover- 10.0150

#### **SURFACE MOUNT BASES**









Dust Cover- 10.0150

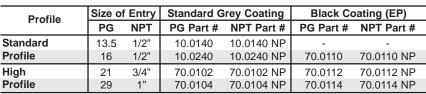
#### **STANDARD PROFILE**

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|--|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |
| 2 Entries      | 16     | 1/2"    | 10.0060    | 10.0060 NP  | 70.0080            | 70.0080 NP |  |  |  |
| 1 Entry        | 16     | 1/2"    | 10.0050    | 10.0050 NP  | 70.0070            | 70.0070 NP |  |  |  |
| 2 Entries with | 16     | 1/2"    | 10.0090    | 10.0090 NP  | 70.0180            | 70.0180 NP |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |
| 1 Entry with   | 16     | 1/2"    | 10.0070    | 10.0070 NP  | 70.0170            | 70.0170 NP |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |

#### **HIGH PROFILE**

| # of           | # of Size of Entry |      |           | rey Coating | Black Co  | oating (EP) |  |  |  |
|----------------|--------------------|------|-----------|-------------|-----------|-------------|--|--|--|
| Entries        | PG                 | NPT  | PG Part # | NPT Part #  | PG Part # | NPT Part #  |  |  |  |
| 2 Entries      | 21                 | 3/4" | 70.0062   | 70.0062 NP  | 70.0082   | 70.0082 NP  |  |  |  |
|                | 29                 | 1"   | 70.0064   | 70.0064 NP  | 70.0084   | 70.0084 NP  |  |  |  |
| 1 Entry        | 21                 | 3/4" | 70.0052   | 70.0052 NP  | 70.0072   | 70.0072 NP  |  |  |  |
|                | 29                 | 1"   | 70.0054   | 70.0054 NP  | 70.0074   | 70.0074 NP  |  |  |  |
| 2 Entries with | 21                 | 3/4" | 70.0162   | 70.0162 NP  | 70.0182   | 70.0182 NP  |  |  |  |
| dust cover     | 29                 | 1"   | 70.0164   | 70.0164 NP  | 70.0184   | 70.0184 NP  |  |  |  |
| 1 Entry with   | 21                 | 3/4" | 70.0152   | 70.0152 NP  | 70.0172   | 70.0172 NP  |  |  |  |
| dust cover     | 29                 | 1"   | 70.0154   | 70.0154 NP  | 70.0174   | 70.0174 NP  |  |  |  |

#### **CABLE COUPLER HOODS**



Dust Cover- 10.0150

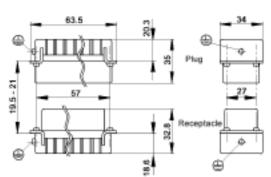


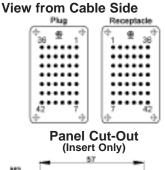
HDD 42 Plugs & Receptacles



#### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**







All dimensions are in mm.

**Contacts Sold Separately** 

| Plug    | Receptacle |
|---------|------------|
| 11.2851 | 11.2861    |

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









#### Bags of 100

| <del>_</del> |         |         |         |         |         |             |                |  |  |
|--------------|---------|---------|---------|---------|---------|-------------|----------------|--|--|
|              |         | Sil     | ver     | Go      | old     | Stripping   | Cross Section  |  |  |
| mm²          | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |  |  |
| 0.14 - 0.37  | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |  |  |
| 0.5          | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |  |  |
| 0.75 - 1.0   | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |  |  |
| 1.5          | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |  |  |
| 2.5          | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |  |  |

Part number= 1 contact

#### **CRIMP TOOLS**









Crimp Tool 11.1470 Crimp Dies 11.1471 **Locator** 11.1472

Removal Tool 11.1610

## **MATING COMPONENTS**

HDD 42 Plugs & Receptacles fit into EPIC® HBE 10 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 283). Please note that metric parts are available.



HBE 10 Housings: Single Lever on Base for HDD 42 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of   | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |
|---------------|--------|---------|------------|-------------|--------------------|------------|--|--|
| Cable Entry   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |
| Top Entry     | 16     | 1/2"    | 10.0409    | 10.0409 NP  | 70.0490            | 70.0490 NP |  |  |
|               | 21     | 3/4"    | 10.0407    | 10.0407 NP  | 70.0496            | 70.0496 NP |  |  |
| Side Entry    | 16     | 1/2"    | 10.0429    | 10.0429 NP  | 70.0590            | 70.0590 NP |  |  |
|               | 21     | 3/4"    | 10.0428    | 10.0428 NP  | 70.0596            | 70.0596 NP |  |  |
| LUCUI PROFILE |        |         |            |             |                    |            |  |  |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0442    | 70.0442 NP  | 70.0492            | 70.0492 NP |
|             | 29            | 1"   | 70.0444    | 70.0444 NP  | 70.0494            | 70.0494 NP |
| Side Entry  | 21            | 3/4" | 70.0542    | 70.0542 NP  | 70.0592            | 70.0592 NP |
|             | 29            | 1"   | 70.0544    | 70.0544 NP  | 70.0594            | 70.0594 NP |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0329               | 70.0327            |  |
| With Dust Cover    | 10.0339               | 70.0337            |  |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

|                | O // ((ID) ((IO) IEE |      |            |             |                    |            |  |  |  |  |
|----------------|----------------------|------|------------|-------------|--------------------|------------|--|--|--|--|
| # of           | Size of Entry        |      | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |  |
| Entries        | PG                   | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |  |
| 2 Entries      | 16                   | 1/2" | 10.0359    | 10.0359 NP  | 70.0630            | 70.0630 NP |  |  |  |  |
| 1 Entry        | 16                   | 1/2" | 10.0349    | 10.0349 NP  | 70.0620            | 70.0620 NP |  |  |  |  |
|                | 21                   | 3/4" | 10.0347    | 10.0347 NP  | -                  | -          |  |  |  |  |
| 2 Entries with | 16                   | 1/2" | 10.0389    | 10.0389 NP  | 70.0670            | 70.0670 NP |  |  |  |  |
| dust cover     | -                    | -    | -          | -           | -                  | -          |  |  |  |  |
| 1 Entry with   | 16                   | 1/2" | 10.0369    | 10.0369 NP  | 70.0660            | 70.0660 NP |  |  |  |  |
| dust cover     | -                    | -    | -          | -           | 1                  | -          |  |  |  |  |



#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------|---------|------------|-------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.0612    | 70.0612 NP  | 70.0632            | 70.0632 NP |
|                | 29     | 1"      | 70.0614    | 70.0614 NP  | 70.0634            | 70.0634 NP |
| 1 Entry        | 21     | 3/4"    | 70.0602    | 70.0602 NP  | 70.0622            | 70.0622 NP |
|                | 29     | 1"      | 70.0604    | 70.0604 NP  | 70.0624            | 70.0624 NP |
| 2 Entries with | 21     | 3/4"    | 70.0652    | 70.0652 NP  | 70.0672            | 70.0672 NP |
| dust cover     | 29     | 1"      | 70.0654    | 70.0654 NP  | 70.0674            | 70.0674 NP |
| 1 Entry with   | 21     | 3/4"    | 70.0642    | 70.0642 NP  | 70.0662            | 70.0662 NP |
| dust cover     | 29     | 1"      | 70.0644    | 70.0644 NP  | 70.0664            | 70.0664 NP |



## **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| rionie   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0469    | 10.0469 NP  | 70.0430            | 70.0430 NP |
| Profile  | 21            | 3/4" | 70.0422    | 70.0422 NP  | 70.0432            | 70.0432 NP |
| High     | 21            | 3/4" | 70.0424    | 70.0424 NP  | 70.0434            | 70.0434 NP |
| Profile  | 29            | 1"   | 70.0426    | 70.0426 NP  | 70.0436            | 70.0436 NP |



HBE 10 Housings: Double Levers on Base for HDD 42 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 10.0400    | 10.0400 NP  | 70.0510            | 70.0510 NP |
|             | 21            | 3/4" | 10.0401    | 10.0401 NP  | 70.0512            | 70.0512 NP |
| Side Entry  | 16            | 1/2" | 10.0420    | 10.0420 NP  | 70.0530            | 70.0530 NP |
|             | 21            | 3/4" | 10.0421    | 10.0421 NP  | 70.0532            | 70.0532 NP |

#### **HIGH PROFILE**

| Position of | f Entry | Standard G | rey Coating | Black Co   | Black Coating (EP) |            |
|-------------|---------|------------|-------------|------------|--------------------|------------|
| Cable Entry | PG      | NPT        | PG Part #   | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21      | 3/4"       | 70.0504     | 70.0504 NP | 70.0514            | 70.0514 NP |
|             | 29      | 1"         | 70.0506     | 70.0506 NP | 70.0516            | 70.0516 NP |
| Side Entry  | 21      | 3/4"       | 70.0524     | 70.0524 NP | 70.0534            | 70.0534 NP |
|             | 29      | 1"         | 70.0526     | 70.0526 NP | 70.0536            | 70.0536 NP |



#### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0320               | 70.0325            |

## **SURFACE MOUNT BASES**





#### STANDARD PROFILE

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 16     | 1/2"    | 10.0350    | 10.0350 NP  | 70.0380            | 70.0380 NP |  |
| 1 Entry   | 16     | 1/2"    | 10.0340    | 10.0340 NP  | 70.0370            | 70.0370 NP |  |

#### **HIGH PROFILE**

| # of      | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 70.0362    | 70.0362 NP  | 70.0382            | 70.0382 NP |
|           | 29            | 1"   | 70.0364    | 70.0364 NP  | 70.0384            | 70.0384 NP |
| 1 Entry   | 21            | 3/4" | 70.0352    | 70.0352 NP  | 70.0372            | 70.0372 NP |
|           | 29            | 1"   | 70.0354    | 70.0354 NP  | 70.0374            | 70.0374 NP |





| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| Tionie   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0460    | 10.0460 NP  | 70.0410            | 70.0410 NP |
| Profile  | 21            | 3/4" | 70.0402    | 70.0402 NP  | 70.0412            | 70.0412 NP |
| High     | 16            | 1/2" | 70.0404    | 70.0404 NP  | 70.0414            | 70.0414 NP |
| Profile  | 21            | 3/4" | 70.0406    | 70.0406 NP  | 70.0416            | 70.0416 NP |

HBE 10 Housings: Double Levers on Hood for HDD 42 Inserts



#### **HOODS**

#### **STANDARD PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 10.0410    | 10.0410 NP  | 70.0560            | 70.0560 NP |
| Side Entry  | 16            | 1/2" | 10.0450    | 10.0450 NP  | 70.0580            | 70.0580 NP |

#### **HIGH PROFILE**

| Position of | , , |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|-----|------|------------|-------------|--------------------|------------|
| Cable Entry |     |      | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21  | 3/4" | 70.0552    | 70.0552 NP  | 70.0562            | 70.0562 NP |
|             | 29  | 1"   | 70.0554    | 70.0554 NP  | 70.0564            | 70.0564 NP |
| Side Entry  | 21  | 3/4" | 70.0572    | 70.0572 NP  | 70.0582            | 70.0582 NP |
|             | 29  | 1"   | 70.0574    | 70.0574 NP  | 70.0584            | 70.0584 NP |



## **PANEL MOUNT BASES**

| Description     | Standard Grey Coating | Black Coating (EP) |
|-----------------|-----------------------|--------------------|
| With Dust Cover | 10.0330               | 70.0335            |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 16     | 1/2"    | 10.0380    | 10.0380 NP  | 70.0480            | 70.0480 NP |  |
| 1 Entry   | 16     | 1/2"    | 10.0360    | 10.0360 NP  | 70.0470            | 70.0470 NP |  |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|--------|---------|------------|-------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 70.0462    | 70.0462 NP  | 70.0482            | 70.0482 NP |
|           | 29     | 1"      | 70.0464    | 70.0464 NP  | 70.0484            | 70.0484 NP |
| 1 Entry   | 21     | 3/4"    | 70.0452    | 70.0452 NP  | 70.0472            | 70.0472 NP |
|           | 29     | 1"      | 70.0454    | 70.0454 NP  | 70.0474            | 70.0474 NP |

#### **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 10 Hoods  | 10.0486 |
| Dust cover with single lever bolts for HBE 10 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0487 |
| Dust cover with double levers and gasket for HBE 10 Hoods  | 10.0485 |
| Dust cover with double lever bolts for HBE 10 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0470 |
| Dust cover with double lever bolts and gasket for HBE 10 Hoods   | 10.0471 |

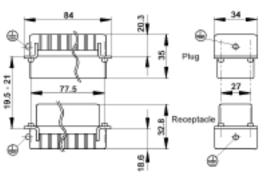


HDD 72 Plugs & Receptacles



#### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**





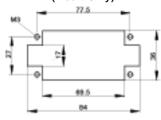
View from Cable Side

All dimensions are in mm.

**Contacts Sold Separately** 

| Plug    | Receptacle |
|---------|------------|
| 11.2852 | 11.2862    |

Panel Cut-Out (Insert Only)



#### MACHINE CONTACTS: DIAMETER 1.6 MM









|                 |         | Silver  |         | Gold    |         | Stripping   | Cross Section  |
|-----------------|---------|---------|---------|---------|---------|-------------|----------------|
| mm <sup>2</sup> | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |
| 0.14 - 0.37     | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |
| 0.5             | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |
| 0.75 - 1.0      | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |
| 1.5             | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |
| 2.5             | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |

Part number= 1 contact

#### **CRIMP TOOLS**



Crimp Tool 11.1470



Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool 11.1610

## **MATING COMPONENTS**

HDD 72 Plugs & Receptacles fit into EPIC® HBE 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.

HBE 16 Housings: Single Lever on Base for HDD 72 Inserts



#### **HOODS**

#### STANDARD PROFILE

| Position of | n of Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG                 | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21                 | 3/4" | 10.0809    | 10.0809 NP  | 70.0990            | 70.0990 NP |
|             | 29                 | 1"   | 10.0909    | 10.0909 NP  | -                  | -          |
| Side Entry  | 21                 | 3/4" | 10.0829    | 10.0829 NP  | 70.1090            | 70.1090 NP |
|             | 29                 | 1"   | 10.0929    | 10.0929 NP  | -                  | -          |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0942               | 70.0942 NP | 70.0992            | 70.0992 NP |
|             | 29            | 1"   | 70.0944               | 70.0944 NP | 70.0994            | 70.0994 NP |
| Side Entry  | 21            | 3/4" | 70.1042               | 70.1042 NP | 70.1092            | 70.1092 NP |
|             | 29            | 1"   | 70.1044               | 70.1044 NP | 70.1094            | 70.1094 NP |



## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0729               | 70.0827            |  |
| With Dust Cover    | 10.0739               | 70.0837            |  |

## **SURFACE MOUNT BASES**







#### STANDARD PROFILE

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |
| 2 Entries      | 21     | 3/4"    | 10.0759    | 10.0759 NP  | 70.1130            | 70.1130 NP |  |  |
| 1 Entry        | 21     | 3/4"    | 10.0749    | 10.0749 NP  | 70.1120            | 70.1120 NP |  |  |
| 2 Entries with | 21     | 3/4"    | 10.0789    | 10.0789 NP  | 70.1170            | 70.1170 NP |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |
| 1 Entry with   | 21     | 3/4"    | 10.0769    | 10.0769 NP  | 70.1160            | 70.1160 NP |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |

#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.1112               | 70.1112 NP | 70.1132            | 70.1132 NP |
|                | 29            | 1"   | 70.1114               | 70.1114 NP | 70.1134            | 70.1134 NP |
| 1 Entry        | 21            | 3/4" | 70.1102               | 70.1102 NP | 70.1122            | 70.1122 NP |
|                | 29            | 1"   | 70.1104               | 70.1104 NP | 70.1124            | 70.1124 NP |
| 2 Entries with | 21            | 3/4" | 70.1152               | 70.1152 NP | 70.1172            | 70.1172 NP |
| dust cover     | 29            | 1"   | 70.1154               | 70.1154 NP | 70.1174            | 70.1174 NP |
| 1 Entry with   | 21            | 3/4" | 70.1142               | 70.1142 NP | 70.1162            | 70.1162 NP |
| dust cover     | 29            | 1"   | 70.1144               | 70.1144 NP | 70.1164            | 70.1164 NP |



# **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
|          | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0869               | 10.0869 NP | 70.0930            | 70.0930 NP |
| Profile  | 29            | 1"   | 10.0969               | 10.0969 NP | -                  | -          |
| High     | 21            | 3/4" | 70.0922               | 70.0922 NP | 70.0932            | 70.0932 NP |
| Profile  | 29            | 1"   | 70.0924               | 70.0924 NP | 70.0934            | 70.0934 NP |



HBE 16 Housings: Double Levers on Base for HDD 72 Inserts

#### **HOODS**







#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|-------------|--------|---------|------------|-------------|-----------|-------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| Top Entry   | 21     | 3/4"    | 10.0800    | 10.0800 NP  | 70.1010   | 70.1010 NP  |
|             | 29     | 1"      | 10.0900    | 10.0900 NP  | -         | -           |
| Side Entry  | 21     | 3/4"    | 10.0820    | 10.0820 NP  | 70.1030   | 70.1030 NP  |
|             | 29     | 1"      | 10.0920    | 10.0920 NP  | -         |             |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|-------------|--------|---------|------------|-------------|-----------|-------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| Top Entry   | 21     | 3/4"    | 70.1002    | 70.1002 NP  | 70.1012   | 70.1012 NP  |
|             | 29     | 1"      | 70.1004    | 70.1004 NP  | 70.1014   | 70.1014 NP  |
| Side Entry  | 21     | 3/4"    | 70.1022    | 70.1022 NP  | 70.1032   | 70.1032 NP  |
|             | 29     | 1"      | 70.1024    | 70.1024 NP  | 70.1034   | 70.1034 NP  |

#### PANEL MOUNT BASES



| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0720               | 70.0825            |

### **SURFACE MOUNT BASES**





#### **STANDARD PROFILE**

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 10.0750               | 10.0750 NP | 70.0880            | 70.0880 NP |
| 1 Entry   | 21            | 3/4" | 10.0740               | 10.0740 NP | 70.0870            | 70.0870 NP |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|-----------|--------|---------|------------|-------------|-----------|-------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| 2 Entries | 21     | 3/4"    | 70.0862    | 70.0862 NP  | 70.0882   | 70.0882 NP  |
|           | 29     | 1"      | 70.0864    | 70.0864 NP  | 70.0884   | 70.0884 NP  |
| 1 Entry   | 21     | 3/4"    | 70.0852    | 70.0852 NP  | 70.0872   | 70.0872 NP  |
|           | 29     | 1"      | 70.0854    | 70.0854 NP  | 70.0874   | 70.0874 NP  |

### **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| Tronie   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0860               | 10.0860 NP | 70.0910            | 70.0910 NP |
| Profile  | 29            | 1"   | 10.0960               | 10.0960 NP | -                  | -          |
| High     | 21            | 3/4" | 70.0902               | 70.0902 NP | 70.0912            | 70.0912 NP |
| Profile  | 29            | 1"   | 70.0904               | 70.0904 NP | 70.0914            | 70.0914 NP |

HBE 16 Housings: Double Levers on Hood for HDD 72 Inserts





#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|-------------|--------|---------|------------|-------------|-----------|-------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| Top Entry   | 21     | 3/4"    | 10.0810    | 10.0810 NP  | 70.1060   | 70.1060 NP  |
|             | 29     | 1"      | 10.0910    | 10.0910 NP  | i         | -           |
| Side Entry  | 21     | 3/4"    | 10.0830    | 10.0830 NP  | 70.1080   | 70.1080 NP  |
|             | 29     | 1"      | 10.0930    | 10.0930 NP  | 1         |             |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|-------------|--------|---------|------------|-------------|-----------|-------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| Top Entry   | 21     | 3/4"    | 70.1052    | 70.1052 NP  | 70.1062   | 70.1062 NP  |
|             | 29     | 1"      | 70.1054    | 70.1054 NP  | 70.1064   | 70.1064 NP  |
| Side Entry  | 21     | 3/4"    | 70.1072    | 70.1072 NP  | 70.1082   | 70.1032 NP  |
|             | 29     | 1"      | 70.1074    | 70.1074 NP  | 70.1084   | 70.1034 NP  |



### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0731               | -                  |
| With Dust Cover    | 10.0730               | 70.0835            |

### **SURFACE MOUNT BASES**



| # of           | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|----------------|--------|---------|------------|-------------|-----------|-------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| 2 Entries      | 21     | 3/4"    | 70.0960    | 70.0960 NP  | 70.0980   | 70.0980 NP  |
| 1 Entry        | 21     | 3/4"    | 10.0760    | 10.0760 NP  | 70.0970   | 70.0970 NP  |
| 2 Entries with | 21     | 3/4"    | 70.0962    | 70.0962 NP  | 70.0982   | 70.0982 NP  |
| dust cover     | 29     | 1"      | 70.0964    | 70.0964 NP  | 70.0984   | 70.0984 NP  |
| 1 Entry with   | 21     | 3/4"    | 70.0952    | 70.0952 NP  | 70.0972   | 70.0972 NP  |
| dust cover     | 29     | 1"      | 70.0954    | 70.0954 NP  | 70.0974   | 70.0974 NP  |

### **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

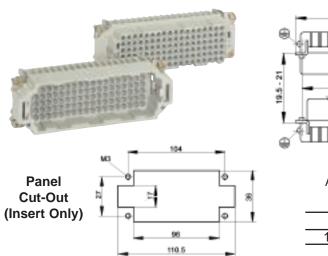
|   | Part #  |
|---|---------|
| Dust cover with single lever for HBE 16 Hoods   | 10.0886 |
| Dust cover with single lever bolts for HBE 16 Panel Mount or Surface MountBase/ Cable Coupler Hood    | 10.0887 |
| Dust cover with double levers and gasket for HBE 16 Hoods   | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or<br>Surface MountBase/ Cable Coupler Hood | 10.0870 |
| Dust cover with double lever bolts and gasket for HBE 16 Hoods  | 10.0871 |

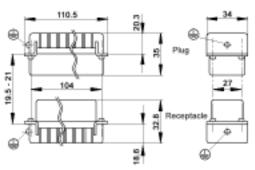


HDD 108 Plugs & Receptacles



#### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**

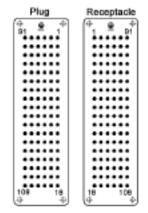




All dimensions are in mm.

| Plug    | Receptacle |
|---------|------------|
| 11.2853 | 11.2863    |

View from Cable Side



**Contacts Sold Separately** 

#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









| Bag | S | of | 1 | 0 | 0 |
|-----|---|----|---|---|---|
|     |   |    |   |   |   |

|                 |         | Silver  |         | Go      | old     | Stripping   | Cross Section  |
|-----------------|---------|---------|---------|---------|---------|-------------|----------------|
| mm <sup>2</sup> | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |
| 0.14 - 0.37     | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |
| 0.5             | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |
| 0.75 - 1.0      | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |
| 1.5             | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |
| 2.5             | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |

Part number= 1 contact

#### **CRIMP TOOLS**







Crimp Dies 11.1471



**Locator** 11.1472



Removal Tool 11.1610

### **MATING COMPONENTS**

HDD 108 Plugs & Receptacles fit into EPIC® HBE 24 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 303). Please note that metric parts are available.

HBE 24 Housings: Single Lever on Base for HDD 108 Inserts



#### **HOODS**

#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|--------|---------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21     | 3/4"    | 10.1219    | 10.1219 NP            | 70.1490   | 70.1490 NP         |  |
|             | 29     | 1"      | 10.1119    | 10.1119 NP            | 70.1492   | 70.1492 NP         |  |
| Side Entry  | 21     | 3/4"    | 10.1139    | 10.1139 NP            | 70.1590   | 70.1590 NP         |  |
|             | 29     | 1"      | 10.1239    | 10.1239 NP            | 70.1592   | 70.1592 NP         |  |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21            | 3/4" | 70.1444    | 70.1444 NP            | 70.1494   | 70.1494 NP         |  |
|             | 29            | 1"   | 70.1446    | 70.1446 NP            | 70.1496   | 70.1496 NP         |  |
| Side Entry  | 21            | 3/4" | 70.1544    | 70.1544 NP            | 70.1594   | 70.1594 NP         |  |
|             | 29            | 1"   | 70.1546    | 70.1546 NP            | 70.1596   | 70.1596 NP         |  |



### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.1029               | 70.1327            |  |
| With Dust Cover    | 10.1039               | 70.1337            |  |

#### **SURFACE MOUNT BASES**







#### STANDARD PROFILE

|              | OTHER TROPIES |         |            |             |                    |            |  |  |  |  |
|--------------|---------------|---------|------------|-------------|--------------------|------------|--|--|--|--|
| # of         | Size o        | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |  |
| Entries      | PG            | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |  |
| 2 Entries    | 21            | 3/4"    | 10.1059    | 10.1059 NP  | 70.1630            | 70.1630 NP |  |  |  |  |
| 1 Entry      | 21            | 3/4"    | 10.1049    | 10.1049 NP  | 70.1620            | 70.1620 NP |  |  |  |  |
| 2 with cover | 21            | 3/4"    | 10.1099    | 10.1099 NP  | 70.1670            | 70.1670 NP |  |  |  |  |
| 1 with cover | 21            | 3/4"    | 10.1079    | 10.1079 NP  | 70.1660            | 70.1660 NP |  |  |  |  |

#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|--------|---------|-----------------------|------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.1612               | 70.1612 NP | 70.1632            | 70.1632 NP |
|                | 29     | 1"      | 70.1614               | 70.1614 NP | 70.1634            | 70.1634 NP |
| 1 Entry        | 21     | 3/4"    | 70.1602               | 70.1602 NP | 70.1622            | 70.1622 NP |
|                | 29     | 1"      | 70.1604               | 70.1604 NP | 70.1624            | 70.1624 NP |
| 2 Entries with | 21     | 3/4"    | 70.1652               | 70.1652 NP | 70.1672            | 70.1672 NP |
| dust cover     | 29     | 1"      | 70.1654               | 70.1654 NP | 70.1674            | 70.1674 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1642               | 70.1642 NP | 70.1662            | 70.1662 NP |
| dust cover     | 29     | 1"      | 70.1644               | 70.1644 NP | 70.1664            | 70.1664 NP |



#### **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| Frome    | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.1279    | 10.1279 NP  | 70.1430            | 70.1430 NP |
| Profile  | 29            | 1"   | 10.1179    | 10.1179 NP  | 70.1432            | 70.1432 NP |
| High     | 21            | 3/4" | 70.1424    | 70.1424 NP  | 70.1434            | 70.1434 NP |
| Profile  | 29            | 1"   | 70.1426    | 70.1426 NP  | 70.1436            | 70.1436 NP |



HBE 24 Housings: Double Levers on Base for HDD 108 Inserts

#### **HOODS**







#### **STANDARD PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 10.1210    | 10.1210 NP  | 70.1510            | 70.1510 NP |  |
|             | 29     | 1"      | 10.1110    | 10.1110 NP  | 70.1512            | 70.1512 NP |  |
| Side Entry  | 21     | 3/4"    | 10.1130    | 10.1130 NP  | 70.1530            | 70.1530 NP |  |
|             | 29     | 1"      | 10.1230    | 10.1230 NP  | 70.1532            | 70.1532 NP |  |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 70.1504    | 70.1504 NP  | 70.1514            | 70.1514 NP |  |
|             | 29     | 1"      | 70.1506    | 70.1506 NP  | 70.1516            | 70.1516 NP |  |
| Side Entry  | 21     | 3/4"    | 70.1524    | 70.1524 NP  | 70.1534            | 70.1534 NP |  |
|             | 29     | 1"      | 70.1526    | 70.1526 NP  | 70.1536            | 70.1536 NP |  |



### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.1020               | 70.1325            |

#### **SURFACE MOUNT BASES**





#### STANDARD PROFILE

| # of      | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|---------------|------|------------|-------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 10.1050    | 10.1050 NP  | 70.1380            | 70.1380 NP |
| 1 Entry   | 21            | 3/4" | 10.1040    | 10.1040 NP  | 70.1370            | 70.1370 NP |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 21     | 3/4"    | 70.1362    | 70.1362 NP  | 70.1382            | 70.1382 NP |  |
|           | 29     | 1"      | 70.1364    | 70.1364 NP  | 70.1384            | 70.1384 NP |  |
| 1 Entry   | 21     | 3/4"    | 70.1352    | 70.1352 NP  | 70.1372            | 70.1372 NP |  |
|           | 29     | 1"      | 70.1354    | 70.1354 NP  | 70.1374            | 70.1374 NP |  |



### **CABLE COUPLER HOODS**

| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------|---------------|------|------------|-------------|--------------------|------------|--|
| TTOTILE  | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Standard | 21            | 3/4" | 10.1270    | 10.1270 NP  | 70.1410            | 70.1410 NP |  |
| Profile  | 29            | 1"   | 10.1170    | 10.1170 NP  | 70.1412            | 70.1412 NP |  |
| High     | 21            | 3/4" | 70.1404    | 70.1404 NP  | 70.1414            | 70.1414 NP |  |
| Profile  | 29            | 1"   | 70.1406    | 70.1406 NP  | 70.1416            | 70.1416 NP |  |

HBE 24 Housings: Double Levers on Hood for HDD 108 Inserts





#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 10.1220    | 10.1220 NP  | 70.1560            | 70.1560 NP |  |
|             | 29     | 1"      | 10.1120    | 10.1120 NP  | 70.1562            | 70.1562 NP |  |
| Side Entry  | 21     | 3/4"    | 10.1140    | 10.1140 NP  | 70.1580            | 70.1580 NP |  |
|             | 29     | 1"      | 10.1240    | 10.1240 NP  | 70.1582            | 70.1582 NP |  |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|---------------|------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21            | 3/4" | 70.1554    | 70.1554 NP  | 70.1564            | 70.1564 NP |  |
|             | 29            | 1"   | 70.1556    | 70.1556 NP  | 70.1566            | 70.1566 NP |  |
| Side Entry  | 21            | 3/4" | 70.1574    | 70.1574 NP  | 70.1584            | 70.1584 NP |  |
|             | 29            | 1"   | 70.1576    | 70.1576 NP  | 70.1586            | 70.1586 NP |  |





| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| With Dust Cover    | 10.1030               | 70.1335            |  |
| Without Dust Cover | 10.1031               | -                  |  |

### **SURFACE MOUNT BASES**



| # of           | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|---------------|------|------------|-------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 10.1090    | 10.1090 NP  | 70.1480            | 70.1480 NP |
| 1 Entry        | 21            | 3/4" | 10.1070    | 10.1070 NP  | 70.1470            | 70.1470 NP |
| 2 Entries with | 21            | 3/4" | 70.1462    | 70.1462 NP  | 70.1482            | 70.1482 NP |
| dust cover     | 29            | 1"   | 70.1464    | 70.1464 NP  | 70.1484            | 70.1484 NP |
| 1 Entry with   | 21            | 3/4" | 70.1452    | 70.1452 NP  | 70.1472            | 70.1472 NP |
| dust cover     | 29            | 1"   | 70.1454    | 70.1454 NP  | 70.1474            | 70.1474 NP |

#### **DUST COVERS WITH ATTACHMENT STRING**



| Material: Thermoplastic Resin  | Temperature:        | -40 | °C to 125°C |
|--|---------------------|-----|-------------|
|  |                     |     | Part #      |
| Dust cover with single lever for HBE 24 Hoo  | ods                 |     | 10.1186     |
| Dust cover with single lever bolts for HBE 2<br>Surface Mount Base/ Cable Coupler Hood | 24 Panel Mount or   |     | 10.1187     |
| Dust cover with double levers and gasket for   | or HBE 24 Hoods     |     | 10.1195     |
| Dust cover with double lever bolts for HBE Surface Mount Base/ Cable Coupler Hood      | 24 Panel Mount or   |     | 10.1180     |
| Dust cover with double lever bolts and gash  | ket for HBE 24 Hood | ls  | 10.1181     |

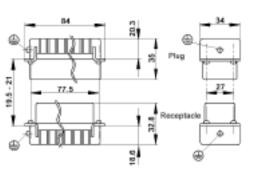
HDD 144 Plugs & Receptacles

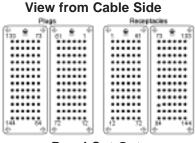




#### **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



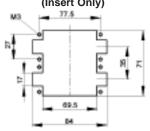




All dimensions are in mm.

|         | Plug    | Receptacle |
|---------|---------|------------|
| #1-72   | 11.2852 | 11.2862    |
| 470 444 | 11 2051 | 11 2061    |

**Panel Cut-Out** (Insert Only)



**Contacts Sold Separately** 

### **MACHINE CONTACTS: DIAMETER 1.6 MM**









| Bags | of | 1 | 0 | 0 |
|------|----|---|---|---|
|------|----|---|---|---|

|             |         | Silver  |         | Go      | old     | Stripping   | Cross Section  |
|-------------|---------|---------|---------|---------|---------|-------------|----------------|
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |
| 0.14 - 0.37 | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |
| 0.5         | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |
| 0.75 - 1.0  | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |
| 1.5         | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |
| 2.5         | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |

Part number= 1 contact

#### **CRIMP TOOLS**









**Crimp Tool** 11.1470

**Crimp Dies** 11.1471

Locator 11.1472 **Removal Tool** 11.1610

### **MATING COMPONENTS**

HDD 144 Plugs & Receptacles fit into EPIC® HBE 32 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 313). Please note that metric parts are available.

HBE 32 Housings for HDD 144 Inserts

#### **DOUBLE LEVERS ON BASE**





| Position of | Size o | f Entry | Standard Grey Coating |            |  |
|-------------|--------|---------|-----------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #             | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 10.1330               | 10.1330 NP |  |
|             | 29     | 1"      | 10.1340               | 10.1340 NP |  |
| Side Entry  | 21     | 3/4"    | 10.1350               | 10.1350 NP |  |
|             | 29     | 1"      | 10.1360               | 10.1360 NP |  |



| # of      | Size of Entry |     | Standard Grey Coating |            |  |
|-----------|---------------|-----|-----------------------|------------|--|
| Entries   | PG            | NPT | PG Part #             | NPT Part # |  |
| 2 Entries | 29            | 1"  | 10.1380               | 10.1380 NP |  |
| 1 Entry   | 29            | 1"  | 10.1370               | 10.1370 NP |  |



| Part #  |  |
|---------|--|
| 10.1320 |  |



| Size of Entry |      | Standard Grey Coating |            |  |
|---------------|------|-----------------------|------------|--|
| PG            | NPT  | PG Part #             | NPT Part # |  |
| 21            | 3/4" | 10.1390               | 10.1390    |  |
| 29            | 1"   | 10.1395               | 10.1395 NP |  |

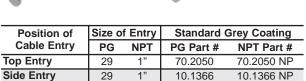
Dust cover with double lever bolts and attachment string for panel mount or surface mount base or cable coupler hood: 10.1420

### **DOUBLE LEVERS ON HOOD**















| Size of Entry Standard Grey Co |     | Grey Coating |            |
|--------------------------------|-----|--------------|------------|
| PG                             | NPT | PG Part #    | NPT Part # |
| 29                             | 1"  | 10.1373      | 10.1373 NP |

HDD 216 Plugs & Receptacles

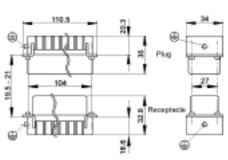


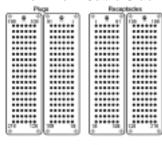
View from Cable Side



## **CRIMP TERMINATED: MACHINE CONTACT INSERTS**



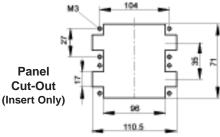




All dimensions are in mm.

**Contacts Sold Separately** 

|          | Plug    | Receptacle |
|----------|---------|------------|
| #1-108   | 11.2853 | 11.2863    |
| #109-216 | 11.2855 | 11.2865    |



#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









| Bags | of | 1 | 0 | 0 |
|------|----|---|---|---|
|------|----|---|---|---|

|             |         | Silver  |         | Gold    |         | Stripping   | Cross Section  |
|-------------|---------|---------|---------|---------|---------|-------------|----------------|
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |
| 0.14 - 0.37 | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |
| 0.5         | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |
| 0.75 - 1.0  | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |
| 1.5         | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |
| 2.5         | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |

Part number= 1 contact

### **CRIMP TOOLS**



**Crimp Tool** 11.1470



**Crimp Dies** 11.1471



Locator 11.1472



**Removal Tool** 11.1610

### **MATING COMPONENTS**

HDD 216 Plugs & Receptacles fit into EPIC® HBE 48 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 317). Please note that metric parts are available.

HBE 48 Housings for HDD 216 Inserts





| Position   | Size o | of Entry | Standard Grey Coating |            |  |
|------------|--------|----------|-----------------------|------------|--|
| of Entry   | PG     | NPT      | PG Part #             | NPT Part # |  |
| Top Entry  | 29     | 1"       | 10.1550               | 10.1550 NP |  |
|            | 36     | 1 1/4"   | 10.1560               | 10.1560 NP |  |
|            | 42     | -        | 10.1570               | -          |  |
| Side Entry | 29     | 1"       | 10.1580               | 10.1580 NP |  |
|            | 36     | 1 1/4"   | 10.1590               | 10.1590 NP |  |
|            | 42 -   |          | 10.1600               | -          |  |

### **PANEL MOUNT BASES**



|   | Without<br>Dust Cover | With Dust Cover<br>with hold down screws<br>and no dust cover bolts | With Dust Cover<br>with hold down screws<br>and dust cover bolts |
|---|-----------------------|---|--|
| _ | 10.1610               | 10.1520   | 10.1525  |

## **SURFACE MOUNT BASES**



| # of           | Size of Entry |        | Standard Grey Coating |            |  |
|----------------|---------------|--------|-----------------------|------------|--|
| Entries        | PG            | NPT    | PG Part #             | NPT Part # |  |
| 2 Entries      | 29            | 1"     | 10.1660               | 10.1660 NP |  |
|                | 36            | 1 1/4" | 10.1661               | 10.1661 NP |  |
| 1 Entry        | 29            | 1"     | 10.1650               | 10.1650 NP |  |
| ·              | 36            | 1 1/4" | 10.1651               | 10.1651 NP |  |
| 2 Entries with | 29            | 1"     | 10.1680               | 10.1680 NP |  |
| dust cover     | 36            | 1 1/4" | 10.1681               | 10.1681 NP |  |
| 1 Entry with   | 29            | 1"     | 10.1670               | 10.1670 NP |  |
| dust cover     | 36            | 1 1/4" | 10.1671               | 10.1671 NP |  |

**Modular Series** 



### **Modular Series**

The Modular series inserts provide flexibility. A combination of 2 up to 14 Modules can be combined into one frame. The available modules include coax, high voltage, cage clamp, crimp, and screw terminated.

These inserts fit into the HBE Series housings which are now standard with fixed levers.



| 2 Contact Module: 2 Working Contacts | 421 |
|--------------------------------------|-----|
| 2 Contact Module with ground         | 421 |
| 3 Contact Coax Module                | 422 |
| 3 Contact Module                     | 423 |
| 3 Contact High Voltage Module        | 424 |
| 4 Contact HE Module                  | 425 |
| 4+PE Contact High Voltage Module     | 426 |
| 5 Contact High Voltage Module        | 427 |
| 10 Contact Module: Stamped & Formed  | 428 |
| 10 Contact Module: Machine Crimp     | 429 |
| 20 Contact Module                    | 430 |
| Dummy Module                         | 431 |
| 4 Contact Cage Clamp Module          | 431 |
| Profibus DP Module                   | 431 |
| Frames for 2 modules                 | 432 |
| Frames for 3 modules                 | 434 |
| Frames for 5 modules                 | 438 |
| Frames for 7 modules                 | 442 |
| Frames for 10 modules                | 446 |
| Frames for 14 modules                | 448 |

Modular Series: Technical Data



#### TECHNICAL DATA

Inserts:

Number of Contacts: 2 - 280 (+PE)

Rated Voltage: VDE: 30 - 1000V

100 - 600V UL:

CSA: 100 - 600V

Rated Current: VDE: 1 - 82A

> 4 - 40A UL:

> CSA: 4 - 35A

Pollution Level: 3 Temperature Range: -40°C to 125°C

Termination Type: Crimp termination: .06 - 10 mm<sup>2</sup>.

AWG: 30 - 6 AWG

Cage Clamp: 0.5 - 2.5 mm<sup>2</sup>, AWG: 20 - 14

Screw: 4 - 16 mm<sup>2</sup>, AWG: 12 - 6

Contacts: Copper alloy, silver plated/ gold plated

<1mOhm - <5MOhm Contact Resistance:

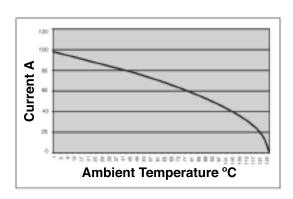
1.5 - 8kV, depending on module Dimension transient:

Mating Cycles: 100 (higher mating cycles depends on the

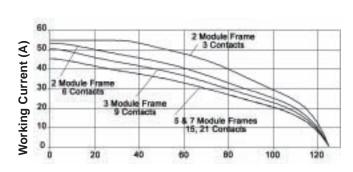
application)

#### **TECHNICAL DATA: DERATING CURVES**

**2 CONTACT MODULE:** 4 - 16 mm<sup>2</sup> (12 - 6 AWG)



**3 MODULE MACHINE CONTACTS:** 6 mm<sup>2</sup> (10 AWG)



Ambient Temperature (°C)

### **TECHNICAL DATA: HBE HOUSINGS**

Specifications: DIN 43652 Temperature Range: -40°C to +125°C

**Standard Grey Coating (NEMA 4)** 

PG NPT **METRIC** 

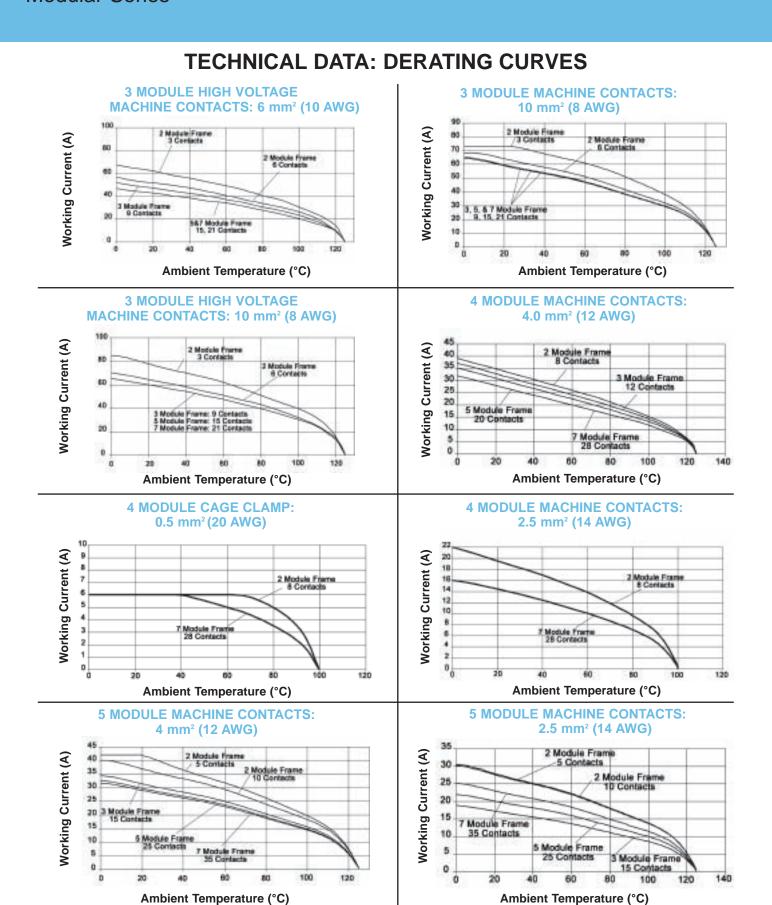
**IP65** Protection class:

Material: Aluminum alloy, powder coated

**Black Coating (Environmentally Protected)** 



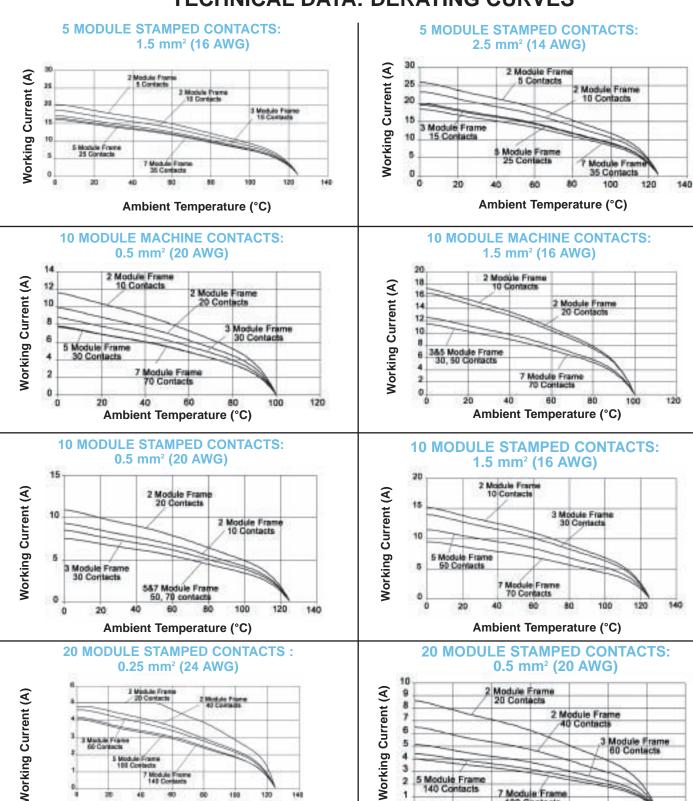
**Modular Series** 



**EXAMPLE SERVICE** 

**Modular Series** 

#### **TECHNICAL DATA: DERATING CURVES**



Module Fra

0

100 Contacts

Ambient Temperature (°C)

120

140

Ambient Temperature (°C)

100

120

**Modular Series** 

### **CHOOSE YOUR MODULES**

|                                      | 5.        | 5          | Rated   | Rated   | Page |
|--------------------------------------|-----------|------------|---------|---------|------|
| Modules                              | Plug      | Receptacle | Voltage | Current | #    |
| 2 Contact Module: 2 Working Contacts | 10.344100 | 10.345100  | 1000V   | 82A     | 421  |
| 2 Contact Module with ground         | 10.344600 | 10.345600  | 1000V   | 82A     | 421  |
| 3 Contact Coax Module                | 10.3992   | 10.3993    | 250V    | -       | 422  |
| 3 Contact Module                     | 10.3820   | 10.3821    | 630V    | 40A     | 423  |
| 3 Contact High Voltage Module        | 10.3998   | 10.3999    | 1000V   | 50A     | 424  |
| 4 Contact Module                     | 10.3990   | 10.3991    | 630V    | 25A     | 425  |
| 4+PE Contact High Voltage Module     | 10.3832   | 10.3833    | 1000V   | 16A     | 426  |
| 5 Contact Module                     | 10.3822   | 10.3823    | 400V    | 20A     | 427  |
| 10 Contact Module: Stamped & Formed  | 10.3834   | 10.3835    | 250V    | 10A     | 428  |
| 10 Contact Module: Machine Crimp     | 10.3824   | 10.3825    | 250V    | 10A     | 429  |
| 20 Contact Module                    | 10.3836   | 10.3837    | 100V    | 4A      | 430  |
| Dummy Module                         | 10.3994   | 10.3995    | -       | -       | 431  |
| 4 Contact Cage Clamp Module          | 10.3996   | 10.3997    | 400V    | 14A     | 431  |
| Profibus DP Module                   | 10.3904   | 10.3905    | 30V     | 1A      | 431  |

## CHOOSE YOUR FRAME BASED ON THE NUMBER OF MODULES

|                       | For         | For         | For Corresponding |     |
|-----------------------|-------------|-------------|-------------------|-----|
| Frames                | Plugs       | Receptacles | Housing           | #   |
| Frames for 2 modules  | 10.3810     | 10.3811     | HBE 6 Series      | 432 |
| Frames for 3 modules  | 10.3812     | 10.3813     | HBE 10 Series     | 434 |
| Frames for 5 modules  | 10.3814     | 10.3815     | HBE 16 Series     | 438 |
| Frames for 7 modules  | 10.3816     | 10.3817     | HBE 24 Series     | 442 |
| Frames for 10 modules | 10.3814(2X) | 10.3815(2X) | HBE 32 Series     | 446 |
| Frames for 14 modules | 10.3816(2X) | 10.3817(2X) | HBE 48 Series     | 448 |

Modules snap into frame



Note: Color of components may be different then

shown.

Modular Series: Plugs & Receptacles

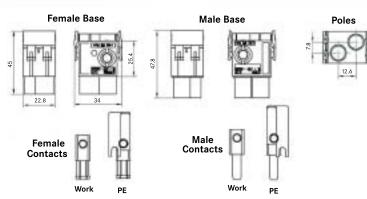


#### **2 CONTACT MODULES**

#### **2 Working Contacts**

#### 1 Working Contact & 1 Ground





All dimensions are in mm.

|                              |           |            | Rated   | Rated   |
|------------------------------|-----------|------------|---------|---------|
| Description                  | Plug      | Receptacle | Voltage | Current |
| 2 Working Contacts           | 10.344100 | 10.345100  | 1000V   | 82A     |
| 1 Working Contact & 1 Ground | 10.344600 | 10.345600  | 1000V   | 82A     |

#### **TECHNICAL DATA**

 Termination Type:
 mm²
 AWG

 Screw:
 4 - 16
 12 - 6

Contacts:

Material: Basic material brass; 2µ Nickel and 2-3µ Silver (AG)

Contact Material: Silver plated

Mating Cycles: 100 (higher mating cycles depending on the application)

Contact Resistance:  $1.5 - 4 \text{ m}\Omega$ 

#### **FEATURES**

- The new module can be inserted into the standard EPIC® Modular Frames.
- The modules can be inserted or removed from the frame without a tool because of the snap hooks.
- These screw contact modules can be easily wired with a standard screwdriver.
- The flexibility of the modular series allows the arrangement of modules to fit requirements.
- This module takes up 2 slots in the modular frame.
- The high current modules require the usage of high profile HBE 16 and HBE 24 housings.

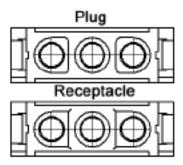


Modular Series: Plugs & Receptacles



### **3 CONTACT COAX MODULES**





Plug

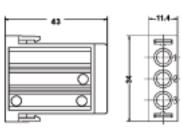
31.4

#### **Contacts Sold Separately**

|         |            | Rated   | Cable |           |
|---------|------------|---------|-------|-----------|
| Plug    | Receptacle | Voltage | Sizes | Impedance |
| 10.3992 | 10.3993    | 250V    | RG 58 | 50 Ohm    |

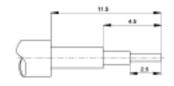
**DIN 41612** 

#### Receptacle



## **COAX CONTACTS**





| Sil     | ver     | Wire  |
|---------|---------|-------|
| Pin     | Socket  | Gauge |
| 11.2142 | 11.2192 | RG 58 |

## **TOOLS**



**Locator** 11.147130



**Crimp Tool** 11.1470



Removal Tool 11.1711



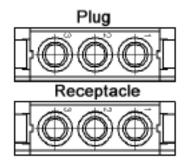
Modular Series: Plugs & Receptacles



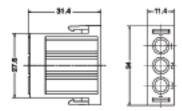
### **3 CONTACT MODULES**







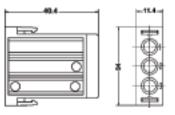
Plug



| , | Plug    | Receptacle | Rated<br>Voltage | Rated<br>Current |
|---|---------|------------|------------------|------------------|
|   | 10.3820 | 10.3821    | 630V             | 40A              |

**Contacts Sold Separately** 

#### Receptacle



### **MACHINE CONTACTS: DIAMETER 3.6 MM**



| Bags of 100      |     |         |         |        |  |  |
|------------------|-----|---------|---------|--------|--|--|
| Silver Stripping |     |         |         |        |  |  |
| mm²              | AWG | Pin     | Socket  | Length |  |  |
| 1.5              | 16  | 11.2107 | 11.2157 | 10     |  |  |
| 2.5              | 14  | 11.2106 | 11.2156 | 10     |  |  |
| 4.0              | 12  | 11.2100 | 11.2150 | 10     |  |  |
| 6.0              | 10  | 11.2101 | 11.2151 | 10     |  |  |
| 10               | 8   | 11.2102 | 11.2152 | 10     |  |  |

Part number= 1 contact

### **TOOLS**



**Locator** 11.147210



**Crimp Dies**1.5 - 2.5: 11.147110
4.0 - 10: 11.147120



**Crimp Tool** 11.1470



Removal Tool 11.1711

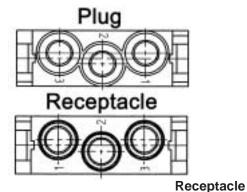


Modular Series: Plugs & Receptacles

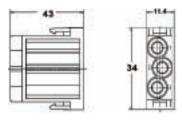


### **3 CONTACT HIGH VOLTAGE MODULES**



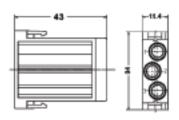


Plug



| Plug    | Receptacle | Rated<br>Voltage | Rated<br>Current |
|---------|------------|------------------|------------------|
| 10.3998 | 10.3999    | 1000V            | 50A              |

**Contacts Sold Separately** 



### **MACHINE CONTACTS: DIAMETER 3.6 MM**



| Bags of 100 |     |         |         |                     |  |  |  |
|-------------|-----|---------|---------|---------------------|--|--|--|
|             |     | Sil     | Silver  |                     |  |  |  |
| mm²         | AWG | Pin     | Socket  | Stripping<br>Length |  |  |  |
| 1.5         | 16  | 11.2107 | 11.2157 | 10                  |  |  |  |
| 2.5         | 14  | 11.2106 | 11.2156 | 10                  |  |  |  |
| 4.0         | 12  | 11.2100 | 11.2150 | 10                  |  |  |  |
| 6.0         | 10  | 11.2101 | 11.2151 | 10                  |  |  |  |
| 10          | 8   | 11.2102 | 11.2152 | 10                  |  |  |  |

Part number= 1 contact

## **TOOLS**



**Locator** 11.147210



**Crimp Dies**1.5 - 2.5: 11.147110
4.0 - 10: 11.147120



**Crimp Tool** 11.1470



Removal Tool 11.1711

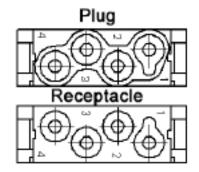


Modular Series: Plugs & Receptacles



### **4 CONTACT HE MODULES**



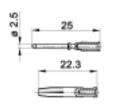


|         |            | Rated   | Rated   |
|---------|------------|---------|---------|
| Plug    | Receptacle | Voltage | Current |
| 10.3990 | 10.3991    | 630V    | 25A     |

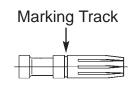
**Contacts Sold Separately** 

#### **MACHINE CONTACTS: DIAMETER 2.5 MM**









|           | Bags of 100 |         |         |         |         |                      |              |  |
|-----------|-------------|---------|---------|---------|---------|----------------------|--------------|--|
|           |             | Sil     | ver     | Gold    |         | Stripping            | # of Marking |  |
| mm²       | AWG         | Pin     | Socket  | Pin     | Socket  | Length (mm)          | Tracks       |  |
| 0.5       | 20          | 11.1900 | 11.1950 | 11.1920 | 11.1970 | Pin=7.4, Socket =7.3 | -            |  |
| .75 - 1.0 | 18          | 11.1901 | 11.1951 | 11.1921 | 11.1971 | Pin=7.4, Socket =7.3 | 1            |  |
| 1.5       | 16          | 11.1902 | 11.1952 | 11.1922 | 11.1972 | Pin=7.4, Socket =7.3 | 2            |  |
| 2.5       | 14          | 11.1903 | 11.1953 | -       | -       | Pin=7.4, Socket =7.3 | 3            |  |
| 4.0       | 12          | 11.1904 | 11.1954 | -       | -       | Pin=7.4, Socket =7.3 | -            |  |

Part number= 1 contact

### **CRIMP TOOLS**









**Crimp Tool** 11.1470

Crimp Dies 11.1471

**Locator** 11.1472

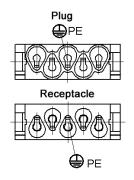
Removal Tool 11.1825



Modular Series: Plugs & Receptacles



#### **4+PE CONTACT HIGH VOLTAGE MODULES**





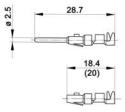


|         |            | Rated   | Rated   |
|---------|------------|---------|---------|
| Plug    | Receptacle | Voltage | Current |
| 10.3832 | 10.3833    | 1000V   | 16A     |

**Contacts Sold Separately** 

#### STAMPED & FORMED CONTACTS: DIAMETER 2.5 MM







Reel feeds from the left.

|           |         | Bags of 100 |         | Reels of 100  |         | Reels of 200 |         |           |           |
|-----------|---------|-------------|---------|---------------|---------|--------------|---------|-----------|-----------|
|           |         | Silver      |         | Silver Silver |         | ver          | Silver  |           | Stripping |
| mm²       | AWG     | Pin         | Socket  | Pin           | Socket  | Pin          | Socket  | Length    |           |
| 0.5 - 1.5 | 20 - 16 | 11.2010     | 11.2050 | -             | -       | 11.2080      | 11.2090 | 3.5 - 0.5 |           |
| 1.5 - 2.5 | 16 - 14 | 11.2020     | 11.2060 | 11.2085       | 11.2095 | -            | -       | 3.5 - 0.5 |           |

Part number= 1 contact (bags) or 1 reel.

### **TOOLS**



**Crimp Tool** 11.1470





Locator

0.5 - 1.5: 11.1473 1.5 - 2.5: 11.147310

#### **Crimp Dies**

0.5 - 1.5: 11.147180 1.5 - 2.5: 11.147190



Removal Tool

11.1600

#### **Crimp Dies for Reel:**

0.5 - 1.5: 11.1537 1.5 - 2.5: 11.1538



Crimp Tool for Reel 11.1535





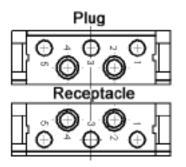
Modular Series: Plugs & Receptacles



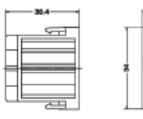
## **5 CONTACT HIGH VOLTAGE MODULES**





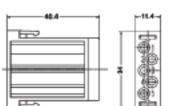


Plug



| Plug    | Receptacle | Rated<br>Voltage | Rated<br>Current |
|---------|------------|------------------|------------------|
| 10.3822 | 10.3823    | 400V             | 20A              |

**Contacts Sold Separately** 



Receptacle

### **MACHINE CONTACTS: DIAMETER 2.5 MM**



| Bags of 100 |     |                            |         |        |        |  |  |
|-------------|-----|----------------------------|---------|--------|--------|--|--|
|             |     | Silver Stripping # of Mark |         |        |        |  |  |
| mm²         | AWG | Pin                        | Socket  | Length | Tracks |  |  |
| 0.5         | 20  | 11.2130                    | 11.2180 | 7.8    | -      |  |  |
| 0.75 - 1.0  | 18  | 11.2131                    | 11.2181 | 7.8    | 1      |  |  |
| 1.5         | 16  | 11.2132                    | 11.2182 | 7.8    | 2      |  |  |
| 2.5         | 14  | 11.2133                    | 11.2183 | 7.8    | 3      |  |  |
| 4.0         | 12  | 11.213400                  | 11.2184 | 7.8    | -      |  |  |

Part number= 1 contact

### **CRIMP TOOLS**









**Crimp Tool** 11.1470

**Crimp Dies** 11.1471

**Locator** 11.1472

Removal Tool 11.1710

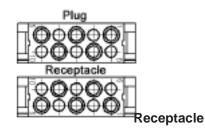


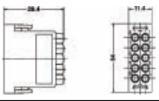
Modular Series: Plugs & Receptacles



### 10 CONTACT MODULES: STAMPED & FORMED CONTACTS

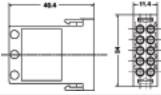






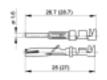
|         |            | Rated   |         |
|---------|------------|---------|---------|
| Plug    | Receptacle | Voltage | Current |
| 10.3834 | 10.3835    | 250V    | 10 A    |

**Contacts Sold Separately** 



#### STAMPED & FORMED CONTACTS: DIAMETER 1.6 MM









| mm²        | Stripping Length (mm) |
|------------|-----------------------|
| 0.14 - 0.5 | 2.5 - 0.5             |
| 0.5 - 1.5  | 3.5 - 0.5             |
| 1.5 - 2.5  | 3.5 - 0.5             |

|            |         | Bags of 100 |         |         | Silver: | Left Ha | nd Feed | Reel    |         |
|------------|---------|-------------|---------|---------|---------|---------|---------|---------|---------|
|            |         | Silver Gold |         | Reel o  | f 100   | Reel    | of 200  |         |         |
| mm²        | AWG     | Pin         | Socket  | Pin     | Socket  | Pin     | Socket  | Pin     | Socket  |
| 0.14 - 0.5 | 26 - 20 | 11.2411     | 11.2311 | 11.2431 | 11.2331 | -       | -       | 11.2407 | 11.2307 |
| 0.5 - 1.5  | 20 - 16 | 11.2210     | 11.2361 | 11.2213 | 11.2381 | -       | -       | 11.2207 | 11.2357 |
| 1.5 - 2.5  | 16 - 14 | 11.2235     | 11.2285 | -       | -       | 11.2230 | 11.2280 | -       | -       |

| Reel of 2000: Right Hand Feed |         |         | Reel of | 2000: L | ett Hand | ı reea  |         |         |         |
|-------------------------------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
|                               |         | Silver  |         | Gold    |          | Silver  |         | Gold    |         |
| mm²                           | AWG     | Pin     | Socket  | Pin     | Socket   | Pin     | Socket  | Pin     | Socket  |
| 0.14 - 0.5                    | 26 - 20 | 11.2400 | 11.2300 | -       | -        | 11.2404 | 11.2304 | 11.2305 | 11.2405 |
| 0.5 - 1.5                     | 20 - 16 | 11.2200 | 11.2350 | 11.2201 | 11.2352  | 11.2260 | 11.2265 | -       | -       |
| 1.5 - 2.5                     | 16 - 14 | -       | -       | -       | -        | 11.2227 | 11.2277 | -       | -       |

Part number= 1 contact (bags) or 1 reel.



**Crimp Tool** 11.1470



**Locator** 11.1473

**Crimp Dies** 

0.14-0.5: 11.147170 0.5-1.5: 11.147180 1.5-2.5: 11.147190



Removal Tool 11.1610

**Crimp Dies for Reel:** 

0.14-0.5: 11.1536 0.5-1.5: 11.1537 1.5-2.5: 11.1538



Crimp Tool for Reel 11.1535





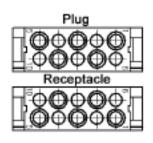
Modular Series: Plugs & Receptacles



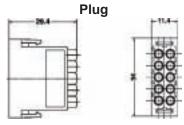
### 10 CONTACT MODULES: MACHINE CRIMP CONTACTS

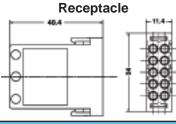


| Plug    | Receptacle | Rated<br>Voltage | Rated<br>Current |
|---------|------------|------------------|------------------|
| 10.3824 | 10.3825    | 250V             | 10 A             |



Contacts Sold Separately

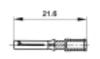




#### **MACHINE CONTACTS: DIAMETER 1.6 MM**









| <b>Bags</b> | of | 1 | 0 | 0 |
|-------------|----|---|---|---|
|-------------|----|---|---|---|

|             |         | Silver  |         | Gold    |         | Stripping   | Cross Section  |
|-------------|---------|---------|---------|---------|---------|-------------|----------------|
| mm²         | AWG     | Pin     | Socket  | Pin     | Socket  | Length (mm) | Characteristic |
| 0.14 - 0.37 | 26 - 22 | 13.1620 | 13.1630 | 13.1625 | 13.1635 | 8           | 1              |
| 0.5         | 20      | 13.1621 | 13.1631 | 13.1626 | 13.1636 | 8           | 2              |
| 0.75 - 1.0  | 18      | 13.1622 | 13.1632 | 13.1627 | 13.1637 | 8           | 3              |
| 1.5         | 16      | 13.1623 | 13.1633 | 13.1628 | 13.1638 | 8           | 4              |
| 2.5         | 14      | 13.1624 | 13.1634 | 13.1629 | 13.1639 | 5.8         | 5              |

Part number= 1 contact

#### **CRIMP TOOLS**



**Crimp Tool** 11.1470



Crimp Dies



**Locator** 11.1472



Removal Tool 11.1610

### **FIBER OPTIC CONTACTS & TOOLS**



| Pin     | Socket  |
|---------|---------|
| 11.2141 | 11.2191 |

| Fiber Optic              |  |  |  |  |  |
|--------------------------|--|--|--|--|--|
| <b>Assembly Tool Set</b> |  |  |  |  |  |
| 11.184700                |  |  |  |  |  |



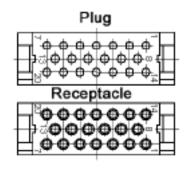
Modular Series: Plugs & Receptacles



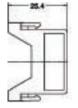
#### **20 CONTACT MODULES**







Plug

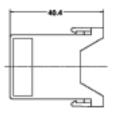


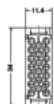


|         |            | Rated   | Rated   |
|---------|------------|---------|---------|
| Plug    | Receptacle | Voltage | Current |
| 10.3836 | 10.3837    | 100V    | 4 A     |

**Contacts Sold Separately** 







### STAMPED & FORMED CONTACTS: DIAMETER 1.0 MM



| Reel of 300    |         |         |         |           |  |  |
|----------------|---------|---------|---------|-----------|--|--|
| Gold Stripping |         |         |         |           |  |  |
| mm²            | AWG     | Pin     | Socket  | Length    |  |  |
| .08 - 0.2      | 28 - 26 | 11.3025 | 11.3027 | 2.5 - 0.5 |  |  |
| 0.252          | 26 - 20 | 11.3026 | 11.3028 | 2.5 - 0.5 |  |  |

#### Reel feeds from the left

#### THERMOCOUPLE CONTACTS



|        |       | Strip of 25 |          |         |         |            |         |        |           |
|--------|-------|-------------|----------|---------|---------|------------|---------|--------|-----------|
|        |       | Тур         | e K      | Type J  |         |            |         | Color  | Stripping |
| mm²    | AWG   | Pin         | Socket   | Pin     | Socket  | Material   | Polariy | Code   | Length    |
|        |       | TC-CH-P     | TC-CH-S  | -       | -       | Chromel    | +       | White  | 2.5 - 0.5 |
| 0.2552 | 24-20 | -           | -        | TC-IR-P | TC-IP-S | Iron       | +       | Black  | 2.5 - 0.5 |
|        |       | TC-AL-P     | TC-ASL-S | -       | -       | Alumel     | -       | Green  | 2.5 - 0.5 |
|        |       | -           | -        | TC-CO-P | TC-CO-S | Constantan | -       | Yellow | 2.5 - 0.5 |

### **TOOLS**



Crimp Tool 11.1584



Removal Tool

11.1325



<sup>\*</sup> This conversion to AWG is approximate.

Modular Series: Plugs & Receptacles



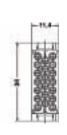


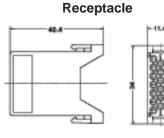
### **DUMMY MODULES: 0 CONTACTS**









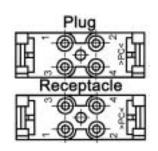


| Plug    | Receptacle |
|---------|------------|
| 10.3994 | 10.3995    |

### **CAGE CLAMP MODULES: 4 CONTACTS**

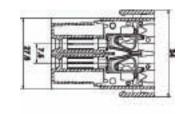






| Р     | lug |   |
|-------|-----|---|
| 2 5 C |     | 3 |
|       |     |   |

Receptacle

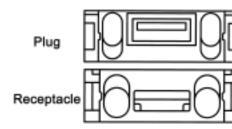




|         |            | Rated   | Rated   | Wire         |                     |
|---------|------------|---------|---------|--------------|---------------------|
| Plug    | Receptacle | Voltage | Current | Gaug         | е                   |
| 10.3996 | 10.3997    | 400V    | 14 A    | Single Wire: | 4.0 mm <sup>2</sup> |
|         |            |         |         | Fine Wire:   | 2.5 mm <sup>2</sup> |

## PROFIBUS DP MODULES: 2 CONTACTS & SHIELD





Mount in High Profile Housings only.

|         |            | Rated   | Rated   |
|---------|------------|---------|---------|
| Plug    | Receptacle | Voltage | Current |
| 10.3904 | 10.3905    | 30V     | 1 A     |

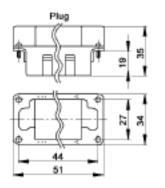
Modular Series: Frames

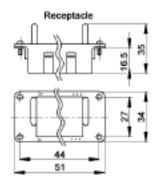
#### 2 MODULE FRAME



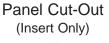
These frames hold two modules.

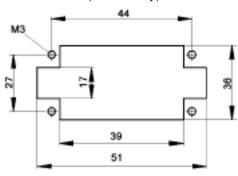
| Plug    | Receptacle |
|---------|------------|
| 10.3810 | 10.3811    |





All dimensions are in mm.





### **MODULE REMOVAL TOOL**



Removal Tool: 11.1712

### **MATING COMPONENTS**

2 module frames fit into EPIC® HBE 6 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 278). Please note that metric parts are available.



HBE 6 Housings: Single Lever on Base for 2 Module Frames



### **HOODS**

#### **STANDARD PROFILE**

| Position of Size of Entry |      | Standard Grey Coating |           | Black Coating (EP) |           |            |
|---------------------------|------|-----------------------|-----------|--------------------|-----------|------------|
| Cable Entry               | PG   | NPT                   | PG Part # | NPT Part #         | PG Part # | NPT Part # |
| Top Entry                 | 13.5 | 1/2"                  | 10.0110   | 10.0110 NP         | 70.0216   | 70.0216 NP |
|                           | 16   | 1/2"                  | 10.0210   | 10.0210 NP         | 70.0210   | 70.0210 NP |
| Side Entry                | 13.5 | 1/2"                  | 10.0120   | 10.0120 NP         | 70.0236   | 70.0236 NP |
|                           | 16   | 1/2"                  | 10.0220   | 10.0220 NP         | 70.0230   | 70.0230 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0202               | 70.0202 NP | 70.0212            | 70.0212 NP |
|             | 29            | 1"   | 70.0204               | 70.0204 NP | 70.0214            | 70.0214 NP |
| Side Entry  | 21            | 3/4" | 70.0222               | 70.0222 NP | 70.0232            | 70.0232 NP |
|             | 29            | 1"   | 70.0224               | 70.0224 NP | 70.0234            | 70.0234 NP |



#### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0030               | 70.0025            |  |
| With Dust Cover    | 10.0040               | 70.0045            |  |

Dust Cover- 10.0150

### **SURFACE MOUNT BASES**









Dust Cover- 10.0150

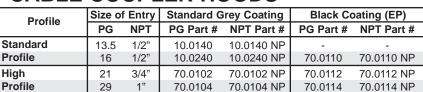
#### STANDARD PROFILE

| # of           | # of Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------------------|------|------------|-------------|--------------------|------------|
| Entries        | PG                 | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 16                 | 1/2" | 10.0060    | 10.0060 NP  | 70.0080            | 70.0080 NP |
| 1 Entry        | 16                 | 1/2" | 10.0050    | 10.0050 NP  | 70.0070            | 70.0070 NP |
| 2 Entries with | 16                 | 1/2" | 10.0090    | 10.0090 NP  | 70.0180            | 70.0180 NP |
| dust cover     | -                  | -    | -          | -           | -                  | -          |
| 1 Entry with   | 16                 | 1/2" | 10.0070    | 10.0070 NP  | 70.0170            | 70.0170 NP |
| dust cover     | -                  | -    | -          | _           | -                  | _          |

#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|--------|---------|-----------------------|------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 70.0062               | 70.0062 NP | 70.0082            | 70.0082 NP |
|                | 29     | 1"      | 70.0064               | 70.0064 NP | 70.0084            | 70.0084 NP |
| 1 Entry        | 21     | 3/4"    | 70.0052               | 70.0052 NP | 70.0072            | 70.0072 NP |
|                | 29     | 1"      | 70.0054               | 70.0054 NP | 70.0074            | 70.0074 NP |
| 2 Entries with | 21     | 3/4"    | 70.0162               | 70.0162 NP | 70.0182            | 70.0182 NP |
| dust cover     | 29     | 1"      | 70.0164               | 70.0164 NP | 70.0184            | 70.0184 NP |
| 1 Entry with   | 21     | 3/4"    | 70.0152               | 70.0152 NP | 70.0172            | 70.0172 NP |
| dust cover     | 29     | 1"      | 70.0154               | 70.0154 NP | 70.0174            | 70.0174 NP |





Dust Cover- 10.0150



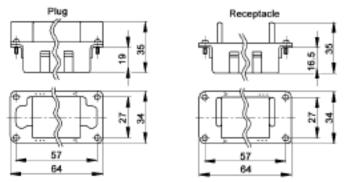
Modular Series: Frames

#### 3 MODULE FRAME

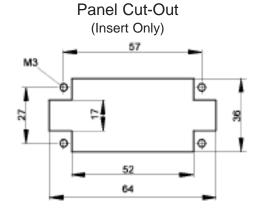


These frames hold three modules.

| Plug    | Receptacle |
|---------|------------|
| 10.3812 | 10.3813    |



All dimensions are in mm.



#### **MODULE REMOVAL TOOL**



Removal Tool: 11.1712

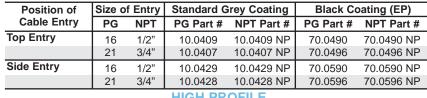
#### **MATING COMPONENTS**

3 module frames fit into EPIC® HBE 10 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 283). Please note that metric parts are available.

HBE 10 Housings: Single Lever on Base for 3 Module Frames







|   | $\sim$ 1 I |                    | $\sim$ |   |
|---|------------|--------------------|--------|---|
| _ | GH         | $\boldsymbol{\nu}$ |        | _ |
|   |            |                    | OI I   |   |
|   |            |                    |        |   |

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|---------------|------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21            | 3/4" | 70.0442    | 70.0442 NP  | 70.0492            | 70.0492 NP |  |
|             | 29            | 1"   | 70.0444    | 70.0444 NP  | 70.0494            | 70.0494 NP |  |
| Side Entry  | 21            | 3/4" | 70.0542    | 70.0542 NP  | 70.0592            | 70.0592 NP |  |
|             | 29            | 1"   | 70.0544    | 70.0544 NP  | 70.0594            | 70.0594 NP |  |



### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0329               | 70.0327            |  |
| With Dust Cover    | 10.0339               | 70.0337            |  |

#### **SURFACE MOUNT BASES**

#### **STANDARD PROFILE**



| # of           | Size o | f Entry | Standard G | Standard Grey Coating |           | oating (EP) |
|----------------|--------|---------|------------|-----------------------|-----------|-------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #  |
| 2 Entries      | 16     | 1/2"    | 10.0359    | 10.0359 NP            | 70.0630   | 70.0630 NP  |
| 1 Entry        | 16     | 1/2"    | 10.0349    | 10.0349 NP            | 70.0620   | 70.0620 NP  |
|                | 21     | 3/4"    | 10.0347    | 10.0347 NP            | ı         | -           |
| 2 Entries with | 16     | 1/2"    | 10.0389    | 10.0389 NP            | 70.0670   | 70.0670 NP  |
| dust cover     | -      | -       | -          | -                     | -         | -           |
| 1 Entry with   | 16     | 1/2"    | 10.0369    | 10.0369 NP            | 70.0660   | 70.0660 NP  |
| dust cover     | -      | -       | -          | -                     | ı         | -           |



#### **HIGH PROFILE**

| # of           | Size o | f Entry | Standard G | Standard Grey Coating |           | oating (EP) |
|----------------|--------|---------|------------|-----------------------|-----------|-------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #  |
| 2 Entries      | 21     | 3/4"    | 70.0612    | 70.0612 NP            | 70.0632   | 70.0632 NP  |
|                | 29     | 1"      | 70.0614    | 70.0614 NP            | 70.0634   | 70.0634 NP  |
| 1 Entry        | 21     | 3/4"    | 70.0602    | 70.0602 NP            | 70.0622   | 70.0622 NP  |
|                | 29     | 1"      | 70.0604    | 70.0604 NP            | 70.0624   | 70.0624 NP  |
| 2 Entries with | 21     | 3/4"    | 70.0652    | 70.0652 NP            | 70.0672   | 70.0672 NP  |
| dust cover     | 29     | 1"      | 70.0654    | 70.0654 NP            | 70.0674   | 70.0674 NP  |
| 1 Entry with   | 21     | 3/4"    | 70.0642    | 70.0642 NP            | 70.0662   | 70.0662 NP  |
| dust cover     | 29     | 1"      | 70.0644    | 70.0644 NP            | 70.0664   | 70.0664 NP  |

## **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
|          | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0469    | 10.0469 NP  | 70.0430            | 70.0430 NP |
| Profile  | 21            | 3/4" | 70.0422    | 70.0422 NP  | 70.0432            | 70.0432 NP |
| High     | 21            | 3/4" | 70.0424    | 70.0424 NP  | 70.0434            | 70.0434 NP |
| Profile  | 29            | 1"   | 70.0426    | 70.0426 NP  | 70.0436            | 70.0436 NP |

HBE 10 Housings: Double Levers on Base for 3 Module Frames



#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 10.0400               | 10.0400 NP | 70.0510            | 70.0510 NP |
|             | 21            | 3/4" | 10.0401               | 10.0401 NP | 70.0512            | 70.0512 NP |
| Side Entry  | 16            | 1/2" | 10.0420               | 10.0420 NP | 70.0530            | 70.0530 NP |
|             | 21            | 3/4" | 10.0421               | 10.0421 NP | 70.0532            | 70.0532 NP |

#### **HIGH PROFILE**

| Position of | Size o | f Entry | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|--------|---------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21     | 3/4"    | 70.0504    | 70.0504 NP            | 70.0514   | 70.0514 NP         |  |
|             | 29     | 1"      | 70.0506    | 70.0506 NP            | 70.0516   | 70.0516 NP         |  |
| Side Entry  | 21     | 3/4"    | 70.0524    | 70.0524 NP            | 70.0534   | 70.0534 NP         |  |
|             | 29     | 1"      | 70.0526    | 70.0526 NP            | 70.0536   | 70.0536 NP         |  |



#### **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0320               | 70.0325            |  |

#### **SURFACE MOUNT BASES**





#### STANDARD PROFILE

| # of      | of Size of Entry Standard Grey Coating |      |           | Black Coating (EP) |           |            |
|-----------|--|------|-----------|--------------------|-----------|------------|
| Entries   | PG                                     | NPT  | PG Part # | NPT Part #         | PG Part # | NPT Part # |
| 2 Entries | 16                                     | 1/2" | 10.0350   | 10.0350 NP         | 70.0380   | 70.0380 NP |
| 1 Entry   | 16                                     | 1/2" | 10.0340   | 10.0340 NP         | 70.0370   | 70.0370 NP |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|--------|---------|------------|-------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 70.0362    | 70.0362 NP  | 70.0382            | 70.0382 NP |
|           | 29     | 1"      | 70.0364    | 70.0364 NP  | 70.0384            | 70.0384 NP |
| 1 Entry   | 21     | 3/4"    | 70.0352    | 70.0352 NP  | 70.0372            | 70.0372 NP |
|           | 29     | 1"      | 70.0354    | 70.0354 NP  | 70.0374            | 70.0374 NP |

### **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| Trome    | PG NPT        |      | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 16            | 1/2" | 10.0460               | 10.0460 NP | 70.0410            | 70.0410 NP |
| Profile  | 21            | 3/4" | 70.0402               | 70.0402 NP | 70.0412            | 70.0412 NP |
| High     | 16            | 1/2" | 70.0404               | 70.0404 NP | 70.0414            | 70.0414 NP |
| Profile  | 21            | 3/4" | 70.0406               | 70.0406 NP | 70.0416            | 70.0416 NP |



HBE 10 Housings: Double Levers on Hood for 3 Module Frames





#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 16            | 1/2" | 10.0410               | 10.0410 NP | 70.0560            | 70.0560 NP |
| Side Entry  | 16            | 1/2" | 10.0450               | 10.0450 NP | 70.0580            | 70.0580 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0552               | 70.0552 NP | 70.0562            | 70.0562 NP |
|             | 29            | 1"   | 70.0554               | 70.0554 NP | 70.0564            | 70.0564 NP |
| Side Entry  | 21            | 3/4" | 70.0572               | 70.0572 NP | 70.0582            | 70.0582 NP |
|             | 29            | 1"   | 70.0574               | 70.0574 NP | 70.0584            | 70.0584 NP |

#### PANEL MOUNT BASES



| Description     | Standard Grey Coating | Black Coating (EP) |
|-----------------|-----------------------|--------------------|
| With Dust Cover | 10.0330               | 70.0335            |

#### **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 16            | 1/2" | 10.0380               | 10.0380 NP | 70.0480            | 70.0480 NP |
| 1 Entry   | 16            | 1/2" | 10.0360               | 10.0360 NP | 70.0470            | 70.0470 NP |

#### **HIGH PROFILE**

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 70.0462               | 70.0462 NP | 70.0482            | 70.0482 NP |
|           | 29            | 1"   | 70.0464               | 70.0464 NP | 70.0484            | 70.0484 NP |
| 1 Entry   | 21            | 3/4" | 70.0452               | 70.0452 NP | 70.0472            | 70.0472 NP |
|           | 29            | 1"   | 70.0454               | 70.0454 NP | 70.0474            | 70.0474 NP |

## **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

|  | Part #  |
|--|---------|
|  | Part#   |
| Dust cover with single lever for HBE 10 Hoods                  | 10.0486 |
| Dust cover with single lever bolts for HBE 10 Panel Mount or   | 10.0487 |
| Surface Mount Base/ Cable Coupler Hood                         |         |
| Dust cover with double levers and gasket for HBE 10 Hoods      | 10.0485 |
| Dust cover with double lever bolts for HBE 10 Panel Mount or   | 10.0470 |
| Surface Mount Base/ Cable Coupler Hood                         |         |
| Dust cover with double lever bolts and gasket for HBE 10 Hoods | 10.0471 |

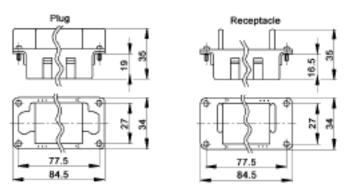
Modular Series: Frames

#### **5 MODULE FRAME**



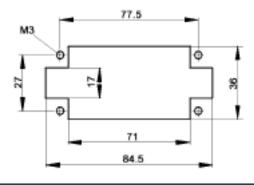
These frames hold five modules.

| Plug    | Receptacle |
|---------|------------|
| 10.3814 | 10.3815    |



All dimensions are in mm.

# Panel Cut-Out (Insert Only)



#### **MODULE REMOVAL TOOL**



Removal Tool: 11.1712

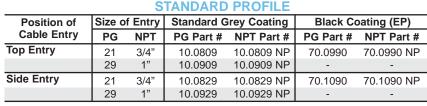
#### **MATING COMPONENTS**

5 module frames fit into EPIC® HBE 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.



HBE 16 Housings: Single Lever on Base for 5 Module Frames







| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0942               | 70.0942 NP | 70.0992            | 70.0992 NP |
|             | 29            | 1"   | 70.0944               | 70.0944 NP | 70.0994            | 70.0994 NP |
| Side Entry  | 21            | 3/4" | 70.1042               | 70.1042 NP | 70.1092            | 70.1092 NP |
|             | 29            | 1"   | 70.1044               | 70.1044 NP | 70.1094            | 70.1094 NP |



#### PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0729               | 70.0827            |  |
| With Dust Cover    | 10.0739               | 70.0837            |  |

# **SURFACE MOUNT BASES**



| # of           | Size of Entry |      | Standard G | Standard Grey Coating |           | ating (EP) |
|----------------|---------------|------|------------|-----------------------|-----------|------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part # |
| 2 Entries      | 21            | 3/4" | 10.0759    | 10.0759 NP            | 70.1130   | 70.1130 NP |
| 1 Entry        | 21            | 3/4" | 10.0749    | 10.0749 NP            | 70.1120   | 70.1120 NP |
| 2 Entries with | 21            | 3/4" | 10.0789    | 10.0789 NP            | 70.1170   | 70.1170 NP |
| dust cover     | -             | -    | -          | -                     | -         | -          |
| 1 Entry with   | 21            | 3/4" | 10.0769    | 10.0769 NP            | 70.1160   | 70.1160 NP |
| dust cover     | -             | -    | -          | -                     | -         | -          |

STANDARD PROFILE



#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.1112               | 70.1112 NP | 70.1132            | 70.1132 NP |
|                | 29            | 1"   | 70.1114               | 70.1114 NP | 70.1134            | 70.1134 NP |
| 1 Entry        | 21            | 3/4" | 70.1102               | 70.1102 NP | 70.1122            | 70.1122 NP |
|                | 29            | 1"   | 70.1104               | 70.1104 NP | 70.1124            | 70.1124 NP |
| 2 Entries with | 21            | 3/4" | 70.1152               | 70.1152 NP | 70.1172            | 70.1172 NP |
| dust cover     | 29            | 1"   | 70.1154               | 70.1154 NP | 70.1174            | 70.1174 NP |
| 1 Entry with   | 21            | 3/4" | 70.1142               | 70.1142 NP | 70.1162            | 70.1162 NP |
| dust cover     | 29            | 1"   | 70.1144               | 70.1144 NP | 70.1164            | 70.1164 NP |

# **CABLE COUPLER HOODS**



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| i ionie  | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0869               | 10.0869 NP | 70.0930            | 70.0930 NP |
| Profile  | 29            | 1"   | 10.0969               | 10.0969 NP | -                  | -          |
| High     | 21            | 3/4" | 70.0922               | 70.0922 NP | 70.0932            | 70.0932 NP |
| Profile  | 29            | 1"   | 70.0924               | 70.0924 NP | 70.0934            | 70.0934 NP |

HBE 16 Housings: Double Levers on Base for 5 Module Frames

#### **HOODS**



#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.0800               | 10.0800 NP | 70.1010            | 70.1010 NP |
|             | 29            | 1"   | 10.0900               | 10.0900 NP | -                  | -          |
| Side Entry  | 21            | 3/4" | 10.0820               | 10.0820 NP | 70.1030            | 70.1030 NP |
|             | 29            | 1"   | 10.0920               | 10.0920 NP | -                  |            |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1002               | 70.1002 NP | 70.1012            | 70.1012 NP |
|             | 29            | 1"   | 70.1004               | 70.1004 NP | 70.1014            | 70.1014 NP |
| Side Entry  | 21            | 3/4" | 70.1022               | 70.1022 NP | 70.1032            | 70.1032 NP |
|             | 29            | 1"   | 70.1024               | 70.1024 NP | 70.1034            | 70.1034 NP |



#### PANEL MOUNT BASES



| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0720               | 70.0825            |  |

### **SURFACE MOUNT BASES**



#### STANDARD PROFILE

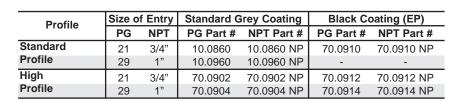
| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 10.0750               | 10.0750 NP | 70.0880            | 70.0880 NP |
| 1 Entry   | 21            | 3/4" | 10.0740               | 10.0740 NP | 70.0870            | 70.0870 NP |

#### **HIGH PROFILE**

| # of      | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|---------------|------|-----------------------|------------|--------------------|------------|
| Entries   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21            | 3/4" | 70.0862               | 70.0862 NP | 70.0882            | 70.0882 NP |
|           | 29            | 1"   | 70.0864               | 70.0864 NP | 70.0884            | 70.0884 NP |
| 1 Entry   | 21            | 3/4" | 70.0852               | 70.0852 NP | 70.0872            | 70.0872 NP |
|           | 29            | 1"   | 70.0854               | 70.0854 NP | 70.0874            | 70.0874 NP |



# **CABLE COUPLER HOODS**





HBE 16 Housings: Double Levers on Hood for 5 Module Frames

## **HOODS**



#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.0810               | 10.0810 NP | 70.1060            | 70.1060 NP |
|             | 29            | 1"   | 10.0910               | 10.0910 NP | -                  | -          |
| Side Entry  | 21            | 3/4" | 10.0830               | 10.0830 NP | 70.1080            | 70.1080 NP |
|             | 29            | 1"   | 10.0930               | 10.0930 NP | -                  |            |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21            | 3/4" | 70.1052    | 70.1052 NP            | 70.1062   | 70.1062 NP         |  |
|             | 29            | 1"   | 70.1054    | 70.1054 NP            | 70.1064   | 70.1064 NP         |  |
| Side Entry  | 21            | 3/4" | 70.1072    | 70.1072 NP            | 70.1082   | 70.1032 NP         |  |
|             | 29            | 1"   | 70.1074    | 70.1074 NP            | 70.1084   | 70.1034 NP         |  |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0731               | -                  |
| With Dust Cover    | 10.0730               | 70.0835            |

## **SURFACE MOUNT BASES**



| # of           | Size of Entry |      | Standard G | Standard Grey Coating |           | oating (EP) |
|----------------|---------------|------|------------|-----------------------|-----------|-------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #  |
| 2 Entries      | 21            | 3/4" | 70.0960    | 70.0960 NP            | 70.0980   | 70.0980 NP  |
| 1 Entry        | 21            | 3/4" | 10.0760    | 10.0760 NP            | 70.0970   | 70.0970 NP  |
| 2 Entries with | 21            | 3/4" | 70.0962    | 70.0962 NP            | 70.0982   | 70.0982 NP  |
| dust cover     | 29            | 1"   | 70.0964    | 70.0964 NP            | 70.0984   | 70.0984 NP  |
| 1 Entry with   | 21            | 3/4" | 70.0952    | 70.0952 NP            | 70.0972   | 70.0972 NP  |
| dust cover     | 29            | 1"   | 70.0954    | 70.0954 NP            | 70.0974   | 70.0974 NP  |

## **DUST COVERS WITH ATTACHMENT STRING**



| Material: Thermoplastic Resin | Temperature: | -40°C to 125°C |
|-------------------------------|--------------|----------------|
|                               |              |                |

|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 16 Hoods  | 10.0886 |
| Dust cover with single lever bolts for HBE 16 Panel Mount or Surface MountBase/ Cable Coupler Hood | 10.0887 |
| Dust cover with double levers and gasket for HBE 16 Hoods  | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or Surface MountBase/ Cable Coupler Hood | 10.0870 |
| Dust cover with double lever bolts and gasket for HBE 16 Hoods                                     | 10.0871 |

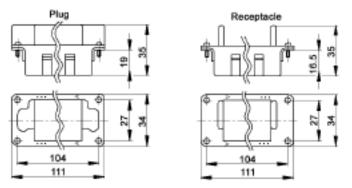
Modular Series: Frames

### 7 MODULE FRAME



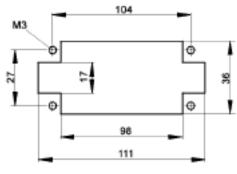
These frames hold seven modules.

| Plug    | Receptacle |
|---------|------------|
| 10.3816 | 10 3817    |



All dimensions are in mm.





### **MODULE REMOVAL TOOL**



Removal Tool: 11.1712

## **MATING COMPONENTS**

7 module frames fit into EPIC® HBE 24 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 303). Please note that metric parts are available.

HBE 24 Housings: Single Lever on Base for 7 Module Frames





| Position of | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|-------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| Top Entry   | 21            | 3/4" | 10.1219    | 10.1219 NP            | 70.1490   | 70.1490 NP         |  |
|             | 29            | 1"   | 10.1119    | 10.1119 NP            | 70.1492   | 70.1492 NP         |  |
| Side Entry  | 21            | 3/4" | 10.1139    | 10.1139 NP            | 70.1590   | 70.1590 NP         |  |
|             | 29            | 1"   | 10.1239    | 10.1239 NP            | 70.1592   | 70.1592 NP         |  |

**STANDARD PROFILE** 

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1444               | 70.1444 NP | 70.1494            | 70.1494 NP |
|             | 29            | 1"   | 70.1446               | 70.1446 NP | 70.1496            | 70.1496 NP |
| Side Entry  | 21            | 3/4" | 70.1544               | 70.1544 NP | 70.1594            | 70.1594 NP |
|             | 29            | 1"   | 70.1546               | 70.1546 NP | 70.1596            | 70.1596 NP |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.1029               | 70.1327            |  |
| With Dust Cover    | 10.1039               | 70.1337            |  |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of         | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |  |  |
|--------------|---------------|------|-----------------------|------------|--------------------|------------|--|--|
| Entries      | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |  |  |
| 2 Entries    | 21            | 3/4" | 10.1059               | 10.1059 NP | 70.1630            | 70.1630 NP |  |  |
| 1 Entry      | 21            | 3/4" | 10.1049               | 10.1049 NP | 70.1620            | 70.1620 NP |  |  |
| 2 with cover | 21            | 3/4" | 10.1099               | 10.1099 NP | 70.1670            | 70.1670 NP |  |  |
| 1 with cover | 21            | 3/4" | 10.1079               | 10.1079 NP | 70.1660            | 70.1660 NP |  |  |



#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard G | Standard Grey Coating |           | Black Coating (EP) |  |
|----------------|---------------|------|------------|-----------------------|-----------|--------------------|--|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #            | PG Part # | NPT Part #         |  |
| 2 Entries      | 21            | 3/4" | 70.1612    | 70.1612 NP            | 70.1632   | 70.1632 NP         |  |
|                | 29            | 1"   | 70.1614    | 70.1614 NP            | 70.1634   | 70.1634 NP         |  |
| 1 Entry        | 21            | 3/4" | 70.1602    | 70.1602 NP            | 70.1622   | 70.1622 NP         |  |
|                | 29            | 1"   | 70.1604    | 70.1604 NP            | 70.1624   | 70.1624 NP         |  |
| 2 Entries with | 21            | 3/4" | 70.1652    | 70.1652 NP            | 70.1672   | 70.1672 NP         |  |
| dust cover     | 29            | 1"   | 70.1654    | 70.1654 NP            | 70.1674   | 70.1674 NP         |  |
| 1 Entry with   | 21            | 3/4" | 70.1642    | 70.1642 NP            | 70.1662   | 70.1662 NP         |  |
| dust cover     | 29            | 1"   | 70.1644    | 70.1644 NP            | 70.1664   | 70.1664 NP         |  |



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
|          | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.1279               | 10.1279 NP | 70.1430            | 70.1430 NP |
| Profile  | 29            | 1"   | 10.1179               | 10.1179 NP | 70.1432            | 70.1432 NP |
| High     | 21            | 3/4" | 70.1424               | 70.1424 NP | 70.1434            | 70.1434 NP |
| Profile  | 29            | 1"   | 70.1426               | 70.1426 NP | 70.1436            | 70.1436 NP |

HBE 24 Housings: Double Levers on Base for 7 Module Frames

## **HOODS**







#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.1210               | 10.1210 NP | 70.1510            | 70.1510 NP |
|             | 29            | 1"   | 10.1110               | 10.1110 NP | 70.1512            | 70.1512 NP |
| Side Entry  | 21            | 3/4" | 10.1130               | 10.1130 NP | 70.1530            | 70.1530 NP |
|             | 29            | 1"   | 10.1230               | 10.1230 NP | 70.1532            | 70.1532 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1504               | 70.1504 NP | 70.1514            | 70.1514 NP |
|             | 29            | 1"   | 70.1506               | 70.1506 NP | 70.1516            | 70.1516 NP |
| Side Entry  | 21            | 3/4" | 70.1524               | 70.1524 NP | 70.1534            | 70.1534 NP |
|             | 29            | 1"   | 70.1526               | 70.1526 NP | 70.1536            | 70.1536 NP |



## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.1020               | 70.1325            |

## **SURFACE MOUNT BASES**





#### STANDARD PROFILE

|           |    | Standard G | Standard Grey Coating |            | Black Coating (EP) |            |
|-----------|----|------------|-----------------------|------------|--------------------|------------|
| Entries   | PG | NPT        | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries | 21 | 3/4"       | 10.1050               | 10.1050 NP | 70.1380            | 70.1380 NP |
| 1 Entry   | 21 | 3/4"       | 10.1040               | 10.1040 NP | 70.1370            | 70.1370 NP |

#### **HIGH PROFILE**

| # of Size of Entry |    | Standard G | Standard Grey Coating |            | oating (EP) |            |
|--------------------|----|------------|-----------------------|------------|-------------|------------|
| Entries            | PG | NPT        | PG Part #             | NPT Part # | PG Part #   | NPT Part # |
| 2 Entries          | 21 | 3/4"       | 70.1362               | 70.1362 NP | 70.1382     | 70.1382 NP |
|                    | 29 | 1"         | 70.1364               | 70.1364 NP | 70.1384     | 70.1384 NP |
| 1 Entry            | 21 | 3/4"       | 70.1352               | 70.1352 NP | 70.1372     | 70.1372 NP |
|                    | 29 | 1"         | 70.1354               | 70.1354 NP | 70.1374     | 70.1374 NP |



| Profile  | Size o | f Entry | Standard G | rey Coating | Black Co  | oating (EP) |
|----------|--------|---------|------------|-------------|-----------|-------------|
| Trome    | PG     | NPT     | PG Part #  | NPT Part #  | PG Part # | NPT Part #  |
| Standard | 21     | 3/4"    | 10.1270    | 10.1270 NP  | 70.1410   | 70.1410 NP  |
| Profile  | 29     | 1"      | 10.1170    | 10.1170 NP  | 70.1412   | 70.1412 NP  |
| High     | 21     | 3/4"    | 70.1404    | 70.1404 NP  | 70.1414   | 70.1414 NP  |
| Profile  | 29     | 1"      | 70.1406    | 70.1406 NP  | 70.1416   | 70.1416 NP  |



HBE 24 Housings: Double Levers on Hood for 7 Module Frames







|             |    | Standard G | rey Coating | Black Coating (EP) |           |            |
|-------------|----|------------|-------------|--------------------|-----------|------------|
| Cable Entry | PG | NPT        | PG Part #   | NPT Part #         | PG Part # | NPT Part # |
| Top Entry   | 21 | 3/4"       | 10.1220     | 10.1220 NP         | 70.1560   | 70.1560 NP |
|             | 29 | 1"         | 10.1120     | 10.1120 NP         | 70.1562   | 70.1562 NP |
| Side Entry  | 21 | 3/4"       | 10.1140     | 10.1140 NP         | 70.1580   | 70.1580 NP |
|             | 29 | 1"         | 10.1240     | 10.1240 NP         | 70.1582   | 70.1582 NP |

STANDARD PROFILE

#### **HIGH PROFILE**



| Position of | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|--------|---------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 70.1554               | 70.1554 NP | 70.1564            | 70.1564 NP |
|             | 29     | 1"      | 70.1556               | 70.1556 NP | 70.1566            | 70.1566 NP |
| Side Entry  | 21     | 3/4"    | 70.1574               | 70.1574 NP | 70.1584            | 70.1584 NP |
|             | 29     | 1"      | 70.1576               | 70.1576 NP | 70.1586            | 70.1586 NP |
|             | 29     | 1"      | 70.1576               | 70.1576 NP | 70.1586            | 70.1586 N  |

## **PANEL MOUNT BASES**



| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| With Dust Cover    | 10.1030               | 70.1335            |
| Without Dust Cover | 10.1031               | -                  |

## **SURFACE MOUNT BASES**



| # of           | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |
|----------------|--------|---------|-----------------------|------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 10.1090               | 10.1090 NP | 70.1480            | 70.1480 NP |
| 1 Entry        | 21     | 3/4"    | 10.1070               | 10.1070 NP | 70.1470            | 70.1470 NP |
| 2 Entries with | 21     | 3/4"    | 70.1462               | 70.1462 NP | 70.1482            | 70.1482 NP |
| dust cover     | 29     | 1"      | 70.1464               | 70.1464 NP | 70.1484            | 70.1484 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1452               | 70.1452 NP | 70.1472            | 70.1472 NP |
| dust cover     | 29     | 1"      | 70.1454               | 70.1454 NP | 70.1474            | 70.1474 NP |

## **DUST COVERS WITH ATTACHMENT STRING**

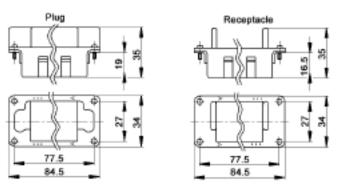


| Material: Thermoplastic Resin  | Temperature:         | -40°C to 125°C | ) |
|--|----------------------|----------------|---|
|  |                      | Part #         |   |
| Dust cover with single lever for HBE 24 He   | oods                 | 10.1186        |   |
| Dust cover with single lever bolts for HBE Surface Mount Base/ Cable Coupler Hood    | 24 Panel Mount or    | 10.1187        |   |
| Dust cover with double levers and gasket   | for HBE 24 Hoods     | 10.1195        |   |
| Dust cover with double lever bolts for HBI<br>Surface Mount Base/ Cable Coupler Hood | E 24 Panel Mount or  | 10.1180        |   |
| Dust cover with double lever bolts and ga  | sket for HBE 24 Hood | ds 10.1181     |   |

Modular Series: Frames

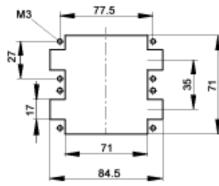
### 10 MODULE FRAME





All dimensions are in mm.

Panel Cut-Out (Insert Only)



By using two sets of 5 module frames, 10 modules can be accommodated.

| Plug        | Receptacle  |
|-------------|-------------|
| 10.3814(2X) | 10.3815(2X) |

## **MODULE REMOVAL TOOL**



Removal Tool: 11.1712

## **MATING COMPONENTS**

10 module frames fit into EPIC® HBE 32 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 313). Please note that metric parts are available.



HBE 32 Housings for 10 Module Frames

## **DOUBLE LEVERS ON BASE**





| Position of | Size of Entry Star |             | Standard (         | andard Grey Coating |  |
|-------------|--------------------|-------------|--------------------|---------------------|--|
| Cable Entry | PG                 | NPT         | PG Part # NPT Part |                     |  |
| Top Entry   | 21                 | 3/4" 10.133 |                    | 10.1330 NP          |  |
|             | 29                 | 1"          | 10.1340            | 10.1340 NP          |  |
| Side Entry  | 21                 | 3/4"        | 10.1350            | 10.1350 NP          |  |
|             | 29                 | 1"          | 10.1360            | 10.1360 NP          |  |



| # of      | Size of Entry<br>PG NPT |    | Standard Grey Coatin |            |
|-----------|-------------------------|----|----------------------|------------|
| Entries   |                         |    | PG Part #            | NPT Part # |
| 2 Entries | 29                      | 1" | 10.1380              | 10.1380 NP |
| 1 Entry   | 29                      | 1" | 10.1370              | 10.1370 NP |



Part #

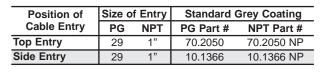
|   | 10.1320 |   |
|---|---------|---|
|   |         |   |
|   |         | , |
|   |         |   |
| 1 | R RIV   |   |

| Size of Entry |      | Standard Grey Coating |            |  |
|---------------|------|-----------------------|------------|--|
| PG            | NPT  | PG Part #             | NPT Part # |  |
| 21            | 3/4" | 10.1390               | 10.1390    |  |
| 29            | 1"   | 10.1395               | 10.1395 NP |  |

Dust cover with double lever bolts and attachment string for panel mount or surface mount base or cable coupler hood: 10.1420

## **DOUBLE LEVERS ON HOOD**









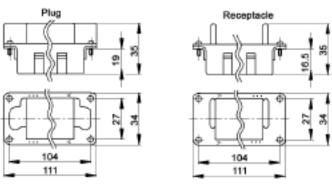


| Size of Entry |    | Standard Grey Coating |            |  |
|---------------|----|-----------------------|------------|--|
| PG NPT        |    | PG Part # NPT Part    |            |  |
| 29            | 1" | 10.1373               | 10.1373 NP |  |
|               |    |                       |            |  |

Modular Series: Frames

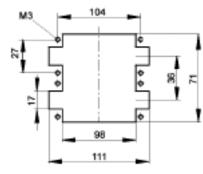
### 14 MODULE FRAME





All dimensions are in mm.

Panel Cut-Out (Insert Only)



By using two sets of 7 module frames, 14 modules can be accommodated.

| Plug        | Receptacle  |
|-------------|-------------|
| 10.3814(2X) | 10.3815(2X) |

### **MODULE REMOVAL TOOL**



Removal Tool: 11.1712

### **MATING COMPONENTS**

14 module frames fit into EPIC® HBE 48 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page317). Please note that metric parts are available.



HBE 48 Housings: Single Lever on Base for 14 Module Frames





| Position     | Size c | of Entry | Standard Grey Coating |            |  |
|--------------|--------|----------|-----------------------|------------|--|
| of Entry     | PG     | NPT      | PG Part #             | NPT Part # |  |
| Top Entry 29 |        | 1"       | 10.1550               | 10.1550 NP |  |
|              | 36     | 1 1/4"   | 10.1560               | 10.1560 NP |  |
|              | 42     | -        | 10.1570 -             |            |  |
| Side Entry   | 29     | 1"       | 10.1580               | 10.1580 NP |  |
|              | 36     | 1 1/4"   | 10.1590               | 10.1590 NP |  |
|              | 42     | -        | 10.1600               | -          |  |

## PANEL MOUNT BASES



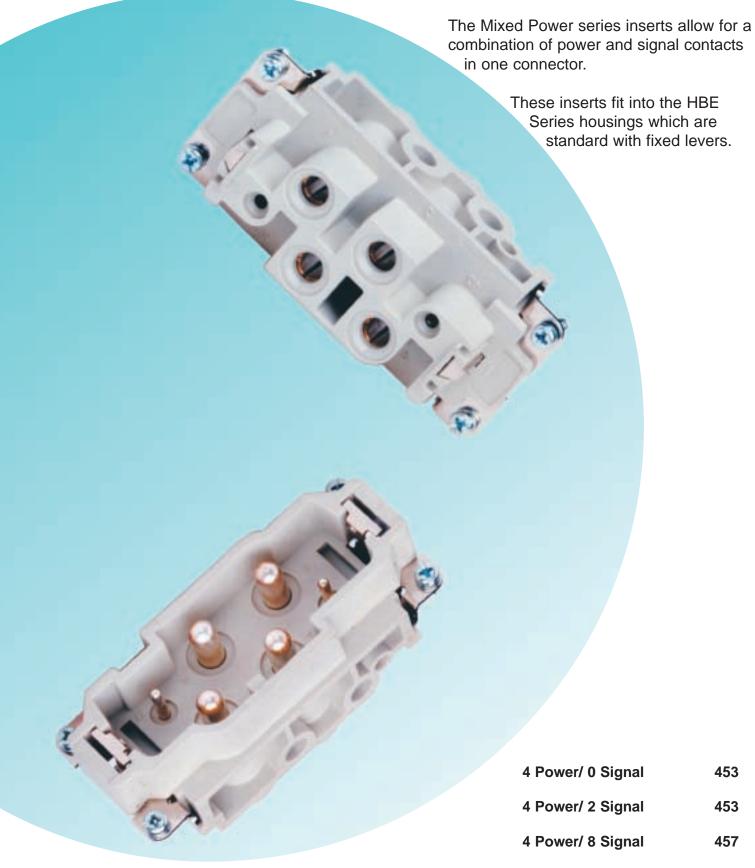
| Without<br>Dust Cover | With Dust Cover<br>with hold down screws<br>and no dust cover bolts | With Dust Cover<br>with hold down screws<br>and dust cover bolts |
|-----------------------|---|--|
| 10.1610               | 10.1520   | 10.1525  |

## **SURFACE MOUNT BASES**



| # of           | Size o             | of Entry | Standard Grey Coating |            |  |
|----------------|--------------------|----------|-----------------------|------------|--|
| Entries        | PG                 | NPT      | PG Part #             | NPT Part # |  |
| 2 Entries      | 29 1"<br>36 1 1/4" |          | 10.1660               | 10.1660 NP |  |
|                |                    |          | 10.1661               | 10.1661 NP |  |
| 1 Entry        | 29                 | 1"       | 10.1650               | 10.1650 NP |  |
| ·              | 36 1 1/4"          |          | 10.1651               | 10.1651 NP |  |
| 2 Entries with | 29                 | 1"       | 10.1680               | 10.1680 NP |  |
| dust cover     | 36                 | 1 1/4"   | 10.1681               | 10.1681 NP |  |
| 1 Entry with   | 29 1"              |          | 10.1670               | 10.1670 NP |  |
| dust cover     | 36                 | 1 1/4"   | 10.1671               | 10.1671 NP |  |

**Mixed Power Series** 



## **Mixed Power Series**

### TECHNICAL DATA

Number of Contacts: 4 Power/ X Signal contacts

4X8 Principal Poles: 80A, 400V - 475V

Pollution Level:

600V UL/CSA Rated Voltage: Test Voltage: 6 kV(4x0); 6kV/4kV (4X2); 4kV (4X8)

4X0 and 4/2 Principal Poles:

Temperature Range: -40°C to 125°C

80A, 690V - 830V

Contact Material: Copper alloy, hard silver plated Thermoplastic resin, fiberglass Molding Material:

4X8 and 4X2 Auxiliary Poles:

reinforced

16A, 400V - 475V

Contact Resistance: < 0.3 mOhm (Principle); DIN VDE 0110/01.89 4X8 Principal Poles: 80A, 400V

< 1 mOhm (Auxillary)

Termination Type: Screw Insulation Group:

Wire Size:

4X0 and 4/2 Principal Poles:

Screw termination: up to 6 AWG, 16

80A, 690V

mm<sup>2</sup> for power contacts Screw termination: up to 14 AWG, 2.5

**UL File #E115072** 

4X8 and 4X2 Auxiliary Poles:

mm<sup>2</sup> for signal contacts

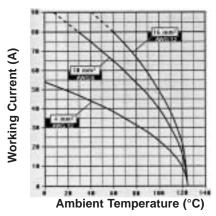
16A, 400V

CSA#LR82270

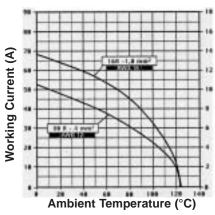
DIN VDE 0110/02.79

### TECHNICAL DATA: DERATING CURVES

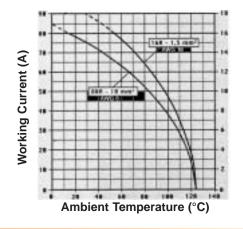
### 4 POWER/ 0 SIGNAL



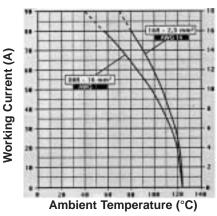
### 4 POWER/ 2 SIGNAL



#### 4 POWER/ 2 SIGNAL



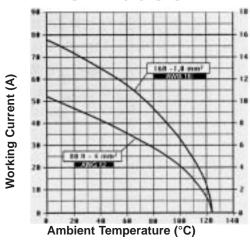
### 4 POWER/ 2 SIGNAL



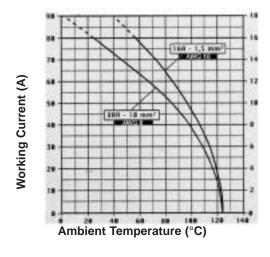
**Mixed Power Series** 

## **TECHNICAL DATA: DERATING CURVES**

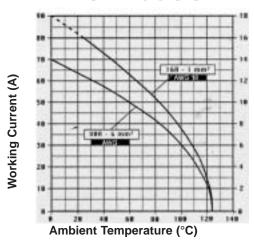
#### 4 POWER/ 8 SIGNAL



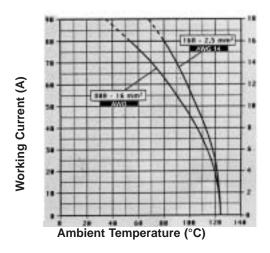
#### 4 POWER/ 8 SIGNAL



#### 4 POWER/ 8 SIGNAL



#### 4 POWER/ 8 SIGNAL



### MATING COMPONENTS

Specifications: DIN 43652 Temperature Range: -40°C to +125°C

Material: Aluminum alloy, powder coated

**Standard Grey Coating (NEMA 4) NPT** 



**METRIC** 

PG

Protection class:



**EP Black Coating (NEMA 4X)** 

**METRIC** 







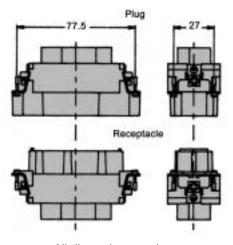
PG

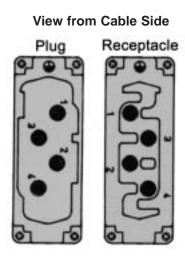
**Mixed Power Series** 



## 4 POWER/ 0 SIGNAL MIXED POWER INSERTS





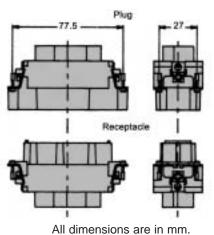


All dimensions are in mm.

| Plug    | Receptacle |  |
|---------|------------|--|
| MP.M400 | MP.F400    |  |

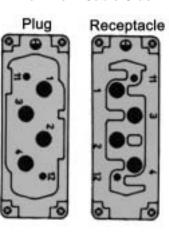
## **4 POWER/ 2 SIGNAL MIXED POWER INSERTS**





Plug Receptacle
MP.M402 MP.F402

View from Cable Side



### **MATING COMPONENTS**

4X0 and 4X2 Plugs & Receptacles fit into EPIC® HBE 16 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 293). Please note that metric parts are available.

HBE 16 Housings: Single Lever on Base for 4 Power/0 Signal,

4 Power/2 Signal Inserts

## **HOODS**



| STANDARD PROFILE |        |         |                       |            |                    |            |  |  |  |
|------------------|--------|---------|-----------------------|------------|--------------------|------------|--|--|--|
| Position of      | Size o | f Entry | Standard Grey Coating |            | Black Coating (EP) |            |  |  |  |
| Cable Entry      | PG     | NPT     | PG Part #             | NPT Part # | PG Part #          | NPT Part # |  |  |  |
| Top Entry        | 21     | 3/4"    | 10.0809               | 10.0809 NP | 70.0990            | 70.0990 NP |  |  |  |
|                  | 29     | 1"      | 10.0909               | 10.0909 NP | -                  | -          |  |  |  |
| Side Entry       | 21     | 3/4"    | 10.0829               | 10.0829 NP | 70.1090            | 70.1090 NP |  |  |  |
|                  | 29     | 1"      | 10.0929               | 10.0929 NP | -                  | -          |  |  |  |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.0942    | 70.0942 NP  | 70.0992            | 70.0992 NP |
|             | 29            | 1"   | 70.0944    | 70.0944 NP  | 70.0994            | 70.0994 NP |
| Side Entry  | 21            | 3/4" | 70.1042    | 70.1042 NP  | 70.1092            | 70.1092 NP |
|             | 29            | 1"   | 70.1044    | 70.1044 NP  | 70.1094            | 70.1094 NP |



## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |  |
|--------------------|-----------------------|--------------------|--|
| Without Dust Cover | 10.0729               | 70.0827            |  |
| With Dust Cover    | 10.0739               | 70.0837            |  |

## **SURFACE MOUNT BASES**



### STANDARD PROFILE

| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |  |  |
|----------------|--------|---------|------------|-------------|--------------------|------------|--|--|--|--|--|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |  |  |
| 2 Entries      | 21     | 3/4"    | 10.0759    | 10.0759 NP  | 70.1130            | 70.1130 NP |  |  |  |  |  |
| 1 Entry        | 21     | 3/4"    | 10.0749    | 10.0749 NP  | 70.1120            | 70.1120 NP |  |  |  |  |  |
| 2 Entries with | 21     | 3/4"    | 10.0789    | 10.0789 NP  | 70.1170            | 70.1170 NP |  |  |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |  |  |
| 1 Entry with   | 21     | 3/4"    | 10.0769    | 10.0769 NP  | 70.1160            | 70.1160 NP |  |  |  |  |  |
| dust cover     | -      | -       | -          | -           | -                  | -          |  |  |  |  |  |



#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|---------------|------|------------|-------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.1112    | 70.1112 NP  | 70.1132            | 70.1132 NP |
|                | 29            | 1"   | 70.1114    | 70.1114 NP  | 70.1134            | 70.1134 NP |
| 1 Entry        | 21            | 3/4" | 70.1102    | 70.1102 NP  | 70.1122            | 70.1122 NP |
|                | 29            | 1"   | 70.1104    | 70.1104 NP  | 70.1124            | 70.1124 NP |
| 2 Entries with | 21            | 3/4" | 70.1152    | 70.1152 NP  | 70.1172            | 70.1172 NP |
| dust cover     | 29            | 1"   | 70.1154    | 70.1154 NP  | 70.1174            | 70.1174 NP |
| 1 Entry with   | 21            | 3/4" | 70.1142    | 70.1142 NP  | 70.1162            | 70.1162 NP |
| dust cover     | 29            | 1"   | 70.1144    | 70.1144 NP  | 70.1164            | 70.1164 NP |



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| Tionie   | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0869    | 10.0869 NP  | 70.0930            | 70.0930 NP |
| Profile  | 29            | 1"   | 10.0969    | 10.0969 NP  | -                  | -          |
| High     | 21            | 3/4" | 70.0922    | 70.0922 NP  | 70.0932            | 70.0932 NP |
| Profile  | 29            | 1"   | 70.0924    | 70.0924 NP  | 70.0934            | 70.0934 NP |



HBE 16 Housings: Double Levers on Base for 4 Power/0 Signal,

4 Power/2 Signal Inserts









#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.0800    | 10.0800 NP  | 70.1010            | 70.1010 NP |
|             | 29     | 1"      | 10.0900    | 10.0900 NP  | -                  | -          |
| Side Entry  | 21     | 3/4"    | 10.0820    | 10.0820 NP  | 70.1030            | 70.1030 NP |
|             | 29     | 1"      | 10.0920    | 10.0920 NP  | -                  |            |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1002    | 70.1002 NP  | 70.1012            | 70.1012 NP |
|             | 29            | 1"   | 70.1004    | 70.1004 NP  | 70.1014            | 70.1014 NP |
| Side Entry  | 21            | 3/4" | 70.1022    | 70.1022 NP  | 70.1032            | 70.1032 NP |
|             | 29            | 1"   | 70.1024    | 70.1024 NP  | 70.1034            | 70.1034 NP |



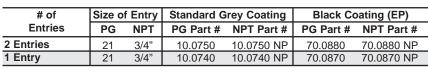
## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0720               | 70.0825            |



## **SURFACE MOUNT BASES**







#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-----------|--------|---------|------------|-------------|--------------------|------------|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries | 21     | 3/4"    | 70.0862    | 70.0862 NP  | 70.0882            | 70.0882 NP |
|           | 29     | 1"      | 70.0864    | 70.0864 NP  | 70.0884            | 70.0884 NP |
| 1 Entry   | 21     | 3/4"    | 70.0852    | 70.0852 NP  | 70.0872            | 70.0872 NP |
|           | 29     | 1"      | 70.0854    | 70.0854 NP  | 70.0874            | 70.0874 NP |



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------|---------------|------|------------|-------------|--------------------|------------|
| PG       |               | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.0860    | 10.0860 NP  | 70.0910            | 70.0910 NP |
| Profile  | 29            | 1"   | 10.0960    | 10.0960 NP  | -                  | -          |
| High     | 21            | 3/4" | 70.0902    | 70.0902 NP  | 70.0912            | 70.0912 NP |
| Profile  | 29            | 1"   | 70.0904    | 70.0904 NP  | 70.0914            | 70.0914 NP |

HBE 16 Housings: Double Levers on Hood for 4 Power/0 Signal,

4 Power/2 Signal Inserts

## **HOODS**



#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|--------|---------|------------|-------------|--------------------|------------|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21     | 3/4"    | 10.0810    | 10.0810 NP  | 70.1060            | 70.1060 NP |
|             | 29     | 1"      | 10.0910    | 10.0910 NP  | -                  | -          |
| Side Entry  | 21     | 3/4"    | 10.0830    | 10.0830 NP  | 70.1080            | 70.1080 NP |
|             | 29     | 1"      | 10.0930    | 10.0930 NP  | -                  |            |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1052    | 70.1052 NP  | 70.1062            | 70.1062 NP |
|             | 29            | 1"   | 70.1054    | 70.1054 NP  | 70.1064            | 70.1064 NP |
| Side Entry  | 21            | 3/4" | 70.1072    | 70.1072 NP  | 70.1082            | 70.1032 NP |
|             | 29            | 1"   | 70.1074    | 70.1074 NP  | 70.1084            | 70.1034 NP |



## PANEL MOUNT BASES

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.0731               | -                  |
| With Dust Cover    | 10.0730               | 70.0835            |

## **SURFACE MOUNT BASES**



| # of           | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|---------------|------|------------|-------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.0960    | 70.0960 NP  | 70.0980            | 70.0980 NP |
| 1 Entry        | 21            | 3/4" | 10.0760    | 10.0760 NP  | 70.0970            | 70.0970 NP |
| 2 Entries with | 21            | 3/4" | 70.0962    | 70.0962 NP  | 70.0982            | 70.0982 NP |
| dust cover     | 29            | 1"   | 70.0964    | 70.0964 NP  | 70.0984            | 70.0984 NP |
| 1 Entry with   | 21            | 3/4" | 70.0952    | 70.0952 NP  | 70.0972            | 70.0972 NP |
| dust cover     | 29            | 1"   | 70.0954    | 70.0954 NP  | 70.0974            | 70.0974 NP |

## **DUST COVERS WITH ATTACHMENT STRING**



Material: Thermoplastic Resin Temperature: -40°C to 125°C

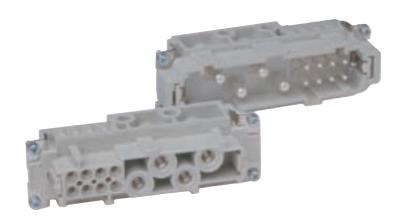
|  | Part #  |
|--|---------|
| Dust cover with single lever for HBE 16 Hoods  | 10.0886 |
| Dust cover with single lever bolts for HBE 16 Panel Mount or Surface Mount Base/ Cable Coupler Hood    | 10.0887 |
| Dust cover with double levers and gasket for HBE 16 Hoods  | 10.0885 |
| Dust cover with double lever bolts for HBE 16 Panel Mount or<br>Surface Mount Base/ Cable Coupler Hood | 10.0870 |
| Dust cover with double lever bolts and gasket for HBE 16 Hoods   | 10.0871 |

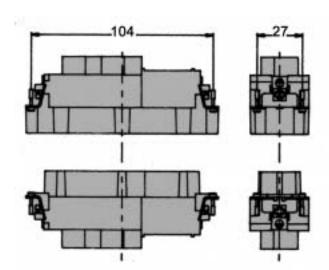


Mixed Power Plugs & Receptacles

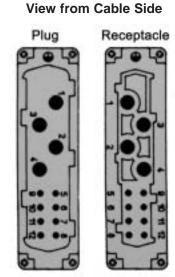


## **4 POWER/ 8 SIGNAL MIXED POWER INSERTS**





All dimensions are in mm.



| Plug    | Receptacle |
|---------|------------|
| 11.2408 | 11.1408    |
|         |            |

## **MATING COMPONENTS**

4X8 Plugs & Receptacles fit into EPIC® HBE 24 Housings. A quick reference for the mating components is shown. Diagrams are located in the HBE Section of the catalog (Page 303). Please note that metric parts are available.

HBE 24 Housings: Single Lever on Base for 4 Power/8 Signal Inserts



## **HOODS**

#### **STANDARD PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.1219    | 10.1219 NP  | 70.1490            | 70.1490 NP |
|             | 29            | 1"   | 10.1119    | 10.1119 NP  | 70.1492            | 70.1492 NP |
| Side Entry  | 21            | 3/4" | 10.1139    | 10.1139 NP  | 70.1590            | 70.1590 NP |
|             | 29            | 1"   | 10.1239    | 10.1239 NP  | 70.1592            | 70.1592 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1444    | 70.1444 NP  | 70.1494            | 70.1494 NP |
|             | 29            | 1"   | 70.1446    | 70.1446 NP  | 70.1496            | 70.1496 NP |
| Side Entry  | 21            | 3/4" | 70.1544    | 70.1544 NP  | 70.1594            | 70.1594 NP |
|             | 29            | 1"   | 70.1546    | 70.1546 NP  | 70.1596            | 70.1596 NP |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.1029               | 70.1327            |
| With Dust Cover    | 10.1039               | 70.1337            |

## **SURFACE MOUNT BASES**



#### STANDARD PROFILE

| # of         | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |  |  |
|--------------|--------|---------|------------|-------------|--------------------|------------|--|--|--|
| Entries      | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |  |  |
| 2 Entries    | 21     | 3/4"    | 10.1059    | 10.1059 NP  | 70.1630            | 70.1630 NP |  |  |  |
| 1 Entry      | 21     | 3/4"    | 10.1049    | 10.1049 NP  | 70.1620            | 70.1620 NP |  |  |  |
| 2 with cover | 21     | 3/4"    | 10.1099    | 10.1099 NP  | 70.1670            | 70.1670 NP |  |  |  |
| 1 with cover | 21     | 3/4"    | 10.1079    | 10.1079 NP  | 70.1660            | 70.1660 NP |  |  |  |



#### **HIGH PROFILE**

| # of           | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|---------------|------|------------|-------------|--------------------|------------|
| Entries        | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21            | 3/4" | 70.1612    | 70.1612 NP  | 70.1632            | 70.1632 NP |
|                | 29            | 1"   | 70.1614    | 70.1614 NP  | 70.1634            | 70.1634 NP |
| 1 Entry        | 21            | 3/4" | 70.1602    | 70.1602 NP  | 70.1622            | 70.1622 NP |
|                | 29            | 1"   | 70.1604    | 70.1604 NP  | 70.1624            | 70.1624 NP |
| 2 Entries with | 21            | 3/4" | 70.1652    | 70.1652 NP  | 70.1672            | 70.1672 NP |
| dust cover     | 29            | 1"   | 70.1654    | 70.1654 NP  | 70.1674            | 70.1674 NP |
| 1 Entry with   | 21            | 3/4" | 70.1642    | 70.1642 NP  | 70.1662            | 70.1662 NP |
| dust cover     | 29            | 1"   | 70.1644    | 70.1644 NP  | 70.1664            | 70.1664 NP |



| Profile  | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|----------|---------------|------|-----------------------|------------|--------------------|------------|
| Tronie   | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Standard | 21            | 3/4" | 10.1279               | 10.1279 NP | 70.1430            | 70.1430 NP |
| Profile  | 29            | 1"   | 10.1179               | 10.1179 NP | 70.1432            | 70.1432 NP |
| High     | 21            | 3/4" | 70.1424               | 70.1424 NP | 70.1434            | 70.1434 NP |
| Profile  | 29            | 1"   | 70.1426               | 70.1426 NP | 70.1436            | 70.1436 NP |



HBE 24 Housings: Double Levers on Base for 4 Power/8 Signal Inserts

## **HOODS**







#### STANDARD PROFILE

| Position of | Size of Entry |      | Standard Grey Coating |            | Black Coating (EP) |            |
|-------------|---------------|------|-----------------------|------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #             | NPT Part # | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 10.1210               | 10.1210 NP | 70.1510            | 70.1510 NP |
|             | 29            | 1"   | 10.1110               | 10.1110 NP | 70.1512            | 70.1512 NP |
| Side Entry  | 21            | 3/4" | 10.1130               | 10.1130 NP | 70.1530            | 70.1530 NP |
|             | 29            | 1"   | 10.1230               | 10.1230 NP | 70.1532            | 70.1532 NP |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |
|-------------|---------------|------|------------|-------------|--------------------|------------|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| Top Entry   | 21            | 3/4" | 70.1504    | 70.1504 NP  | 70.1514            | 70.1514 NP |
|             | 29            | 1"   | 70.1506    | 70.1506 NP  | 70.1516            | 70.1516 NP |
| Side Entry  | 21            | 3/4" | 70.1524    | 70.1524 NP  | 70.1534            | 70.1534 NP |
|             | 29            | 1"   | 70.1526    | 70.1526 NP  | 70.1536            | 70.1536 NP |



## **PANEL MOUNT BASES**

| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| Without Dust Cover | 10.1020               | 70.1325            |

## **SURFACE MOUNT BASES**



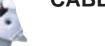


#### STANDARD PROFILE

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 21     | 3/4"    | 10.1050    | 10.1050 NP  | 70.1380            | 70.1380 NP |  |
| 1 Entry   | 21     | 3/4"    | 10.1040    | 10.1040 NP  | 70.1370            | 70.1370 NP |  |

#### **HIGH PROFILE**

| # of      | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-----------|--------|---------|------------|-------------|--------------------|------------|--|
| Entries   | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| 2 Entries | 21     | 3/4"    | 70.1362    | 70.1362 NP  | 70.1382            | 70.1382 NP |  |
|           | 29     | 1"      | 70.1364    | 70.1364 NP  | 70.1384            | 70.1384 NP |  |
| 1 Entry   | 21     | 3/4"    | 70.1352    | 70.1352 NP  | 70.1372            | 70.1372 NP |  |
|           | 29     | 1"      | 70.1354    | 70.1354 NP  | 70.1374            | 70.1374 NP |  |



| Profile  | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|----------|---------------|------|------------|-------------|--------------------|------------|--|
| Trome    | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Standard | 21            | 3/4" | 10.1270    | 10.1270 NP  | 70.1410            | 70.1410 NP |  |
| Profile  | 29            | 1"   | 10.1170    | 10.1170 NP  | 70.1412            | 70.1412 NP |  |
| High     | 21            | 3/4" | 70.1404    | 70.1404 NP  | 70.1414            | 70.1414 NP |  |
| Profile  | 29            | 1"   | 70.1406    | 70.1406 NP  | 70.1416            | 70.1416 NP |  |

HBE 24 Housings: Double Levers on Hood for 4 Power/8 Signal Inserts









#### STANDARD PROFILE

| Position of | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|--------|---------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21     | 3/4"    | 10.1220    | 10.1220 NP  | 70.1560            | 70.1560 NP |  |
|             | 29     | 1"      | 10.1120    | 10.1120 NP  | 70.1562            | 70.1562 NP |  |
| Side Entry  | 21     | 3/4"    | 10.1140    | 10.1140 NP  | 70.1580            | 70.1580 NP |  |
|             | 29     | 1"      | 10.1240    | 10.1240 NP  | 70.1582            | 70.1582 NP |  |

#### **HIGH PROFILE**

| Position of | Size of Entry |      | Standard G | rey Coating | Black Coating (EP) |            |  |
|-------------|---------------|------|------------|-------------|--------------------|------------|--|
| Cable Entry | PG            | NPT  | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |  |
| Top Entry   | 21            | 3/4" | 70.1554    | 70.1554 NP  | 70.1564            | 70.1564 NP |  |
|             | 29            | 1"   | 70.1556    | 70.1556 NP  | 70.1566            | 70.1566 NP |  |
| Side Entry  | 21            | 3/4" | 70.1574    | 70.1574 NP  | 70.1584            | 70.1584 NP |  |
|             | 29            | 1"   | 70.1576    | 70.1576 NP  | 70.1586            | 70.1586 NP |  |

## **PANEL MOUNT BASES**



| Description        | Standard Grey Coating | Black Coating (EP) |
|--------------------|-----------------------|--------------------|
| With Dust Cover    | 10.1030               | 70.1335            |
| Without Dust Cover | 10.1031               | -                  |

## **SURFACE MOUNT BASES**



| # of           | Size o | f Entry | Standard G | rey Coating | Black Coating (EP) |            |
|----------------|--------|---------|------------|-------------|--------------------|------------|
| Entries        | PG     | NPT     | PG Part #  | NPT Part #  | PG Part #          | NPT Part # |
| 2 Entries      | 21     | 3/4"    | 10.1090    | 10.1090 NP  | 70.1480            | 70.1480 NP |
| 1 Entry        | 21     | 3/4"    | 10.1070    | 10.1070 NP  | 70.1470            | 70.1470 NP |
| 2 Entries with | 21     | 3/4"    | 70.1462    | 70.1462 NP  | 70.1482            | 70.1482 NP |
| dust cover     | 29     | 1"      | 70.1464    | 70.1464 NP  | 70.1484            | 70.1484 NP |
| 1 Entry with   | 21     | 3/4"    | 70.1452    | 70.1452 NP  | 70.1472            | 70.1472 NP |
| dust cover     | 29     | 1"      | 70.1454    | 70.1454 NP  | 70.1474            | 70.1474 NP |

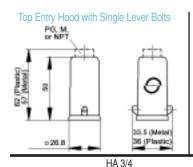
## **DUST COVERS WITH ATTACHMENT STRING**

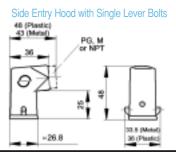


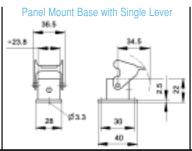
| Material: Thermoplastic Resin   | Temperature:          | -40 | °C to 125°C |
|---|-----------------------|-----|-------------|
|   |                       |     | Part #      |
| Dust cover with single lever for HBE 24   | Hoods                 |     | 10.1186     |
| Dust cover with single lever bolts for HB Surface Mount Base/ Cable Coupler Hoo |                       |     | 10.1187     |
| Dust cover with double levers and gaske   | et for HBE 24 Hoods   |     | 10.1195     |
| Dust cover with double lever bolts for HI Surface Mount Base/ Cable Coupler Hoo |                       |     | 10.1180     |
| Dust cover with double lever bolts and o  | asket for HBE 24 Hood | s   | 10.1181     |

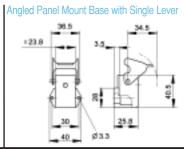
## Rectangular Industrial Connectors: Dimensional Data

#### HA 3/4





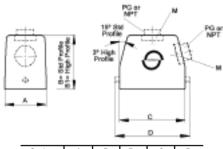




Surface Base with Single Lever

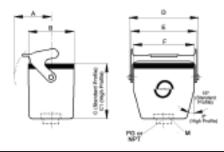
Cable Coupler Hood with Single Lever

Top/ Side Entry Hood with Single Lever Bolts



| Series | Α    | В    | B1   | С    | D    |
|--------|------|------|------|------|------|
| HA 10  | 29.5 | 53.3 | 67.3 | 63   | 73   |
| HA 16  | 29.5 | 58.3 | 72.3 | 79   | 89   |
| HBE 6  | 43   | 52   | 72   | 60   | 74.8 |
| HBE 10 | 43   | 52   | 72   | 73   | 90   |
| HBE 16 | 43   | 61   | 76   | 93.3 | 110  |
| HBE 24 | 43   | 61   | 76   | 120  | 137  |
| HBE 48 | 90   | 105  | -    | 132  | 152  |

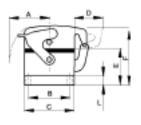
Cable Coupler Hood with Single Lever

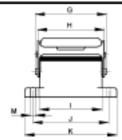


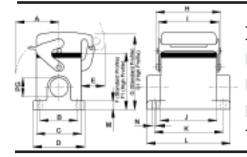
| Series | Α    | В    | С    | C1   | D    | Е     | F    |
|--------|------|------|------|------|------|-------|------|
| HA 10  | 36.5 | 29.5 | 48   | 62   | 74.4 | 71.4  | 63   |
| HA 16  | 36.5 | 29.5 | 53   | 67   | 90.4 | 87.8  | 79   |
| HBE 6  | 44   | 43   | 54.8 | 74.8 | 74.8 | 70    | 60   |
| HBE 10 | 50   | 43   | 54.8 | 74.8 | 91   | 88.5  | 73   |
| HBE 16 | 50   | 43   | 63.5 | 78.8 | 111  | 109.5 | 93.3 |
| HBE 24 | 50   | 43   | 63.8 | 78.8 | 138  | 136.5 | 120  |

| Panel Mo | บเทt Ras | e with ! | Sinale | ever |
|----------|----------|----------|--------|------|

| Series | Α    | В    | С    | D  | Е    | F    | G    | Н     |      | J   | K   | L   | М   |
|--------|------|------|------|----|------|------|------|-------|------|-----|-----|-----|-----|
| HA 10  | 36.5 | 17.5 | 29.5 | 25 | 25   | 42   | 74.4 | 71.4  | 63   | 70  | 81  | 3.5 | 3.6 |
| HA 16  | 36.5 | 17.5 | 29.5 | 25 | 25   | 42   | 90.4 | 87.5  | 79   | 86  | 96  | 3.5 | 3.6 |
| HBE 6  | 44   | 32   | 43   | 25 | 27.8 | 44.8 | 74.8 | 70    | 60   | 70  | 80  | 4   | 4.3 |
| HBE 10 | 50   | 32   | 43   | 25 | 27.8 | 44.8 | 91   | 88.5  | 73   | 83  | 93  | 4   | 4.3 |
| HBE 16 | 50   | 32   | 43   | 25 | 27.8 | 44.8 | 111  | 109.5 | 93.3 | 103 | 113 | 4   | 4.3 |
| HBE 24 | 50   | 32   | 43   | 25 | 27.8 | 44.8 | 138  | 136.5 | 120  | 130 | 140 | 4   | 4.3 |
| HBE 48 | 105  | 70   | 90   | 30 | 39.5 | 56.5 | 152  | 139.5 | 132  | 148 | 165 | 10  | 7   |







| Series | Α    | В   | С    | D   | Е  | F   | F1 | G   | G1  | Н    |       | J   | K   | L   | М     | N   |
|--------|------|-----|------|-----|----|-----|----|-----|-----|------|-------|-----|-----|-----|-------|-----|
| HA 10  | 36.5 | 40  | 29.5 | 50  | 25 | 57  | -  | 74  | -   | 74.4 | 71.4  | 63  | 48  | 80  | 3.5   | 4.5 |
| HA 16  | 36.5 | 40  | 29.5 | 50  | 25 | 57  | -  | 74  | -   | 90.4 | 87.8  | 79  | 64  | 96  | 3.5   | 4.5 |
| HBE 6  | 44   | 40  | 43   | 52  | 25 | 54  | 74 | 71  | 91  | 74.8 | 70    | 60  | 70  | 84  | 4.5/6 | 5.5 |
| HBE 10 | 50   | 40  | 43   | 52  | 25 | 57  | 74 | 74  | 91  | 91   | 88.5  | 73  | 82  | 94  | 4.5/6 | 5.5 |
| HBE 16 | 50   | 45  | 43   | 57  | 25 | 64  | 84 | 81  | 101 | 111  | 109.5 | 93  | 105 | 117 | 4.5/6 | 5.5 |
| HBE 24 | 50   | 45  | 43   | 57  | 25 | 64  | 84 | 81  | 101 | 138  | 136.5 | 120 | 132 | 144 | 4.5/6 | 5.5 |
| HBE 48 | 105  | 106 | 90   | 120 | 30 | 100 | -  | 117 | -   | 152  | 139.5 | 132 | 111 | 132 | 12    | 6.5 |
|        |      |     |      |     |    |     |    |     |     |      | *** * |     |     |     |       |     |

Surface Base with Single Lever

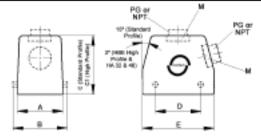
\*M dimension (standard profile/high profile)

#### Notes:

- 1. All dimensions are in mm.
- 2. HA 64 & HBE 48 dimensions are the same.

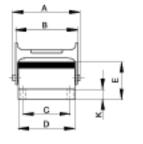
#### Top/ Side Entry Hood with Double Lever Bolts

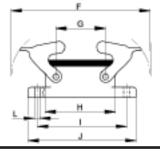
| Series | Α  | В    | С  | C1 | D    | Е    |
|--------|----|------|----|----|------|------|
| HA 32  | 56 | 67.8 | 75 | -  | 49.6 | 82   |
| HA 48  | 79 | 89.5 | 95 | -  | 64.5 | 93.5 |
| HBE 10 | 43 | 55   | 52 | 72 | 27   | 73   |
| HBE 16 | 43 | 55   | 61 | 76 | 47.5 | 93.3 |
| HBE 24 | 43 | 55   | 61 | 76 | 74   | 120  |
| HBE 32 | 79 | 89.5 | 95 | -  | 64.5 | 93.5 |





## Rectangular Industrial Connectors: Dimensional Data





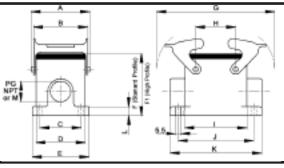
#### Panel Mount Base with Double Levers

| Series | Α    | В    | С  | D  | Е    | F     | G    | Н    |     | J   | K | L   |
|--------|------|------|----|----|------|-------|------|------|-----|-----|---|-----|
| HA 32  | 67.8 | 66   | 42 | 56 | 25.4 | 124.5 | 49.6 | 82   | 92  | 102 | 4 | 4.3 |
| HA 48  | 93.8 | 87.8 | 65 | 79 | 30.3 | 136.5 | 64.5 | 93.5 | 110 | 124 | 5 | 5.5 |
| HBE 10 | 55   | 53   | 32 | 43 | 27.8 | 116   | 27   | 73   | 83  | 93  | 4 | 4.3 |
| HBE 16 | 55   | 53   | 32 | 43 | 27.8 | 136.5 | 47.5 | 93.3 | 103 | 113 | 4 | 4.3 |
| HBE 24 | 55   | 53   | 32 | 43 | 27.8 | 163   | 74   | 120  | 130 | 140 | 4 | 4.3 |
| HBE 32 | 93.8 | 87.8 | 65 | 79 | 30.3 | 136.5 | 64.5 | 93.5 | 110 | 124 | 5 | 5.5 |

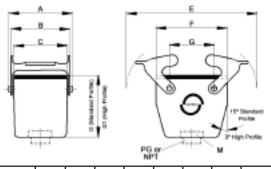
#### Surface Mount Base with Double Levers

| Series | Α    | В    | С  | D  | Е  | F  | F1 | G     | Н    |      | J   | K     | L     |
|--------|------|------|----|----|----|----|----|-------|------|------|-----|-------|-------|
| HA 32  | 67.8 | 66   | 46 | 56 | 57 | 75 | -  | 124.5 | 49.6 | 82   | 94  | 106   | 4     |
| HA 48  | 93.8 | 87.8 | 67 | 79 | 81 | 72 | -  | 136.5 | 64.5 | 82   | 94  | 106   | 5     |
| HBE 10 | 55   | 53   | 40 | 43 | 54 | 57 | 74 | 116   | 27   | 73   | 82  | 94    | 4.5/6 |
| HBE 16 | 55   | 53   | 45 | 43 | 57 | 64 | 84 | 136.5 | 47.5 | 93   | 105 | 117   | 4.5/6 |
| HBE 24 | 55   | 53   | 45 | 43 | 57 | 64 | 84 | 163   | 74   | 120  | 132 | 144   | 4.5/6 |
| HBE 32 | 93.8 | 87.8 | 67 | 79 | 81 | 72 | -  | 136.5 | 64.5 | 93.5 | 112 | 124.5 | 5     |

\*L dimension (standard profile/high profile)

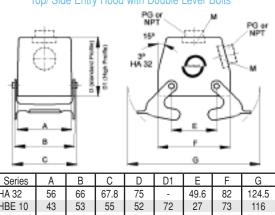


#### Cable Coupler Hood with Double Levers

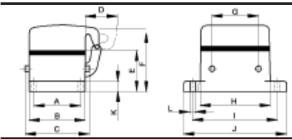


| Series | Α    | В    | С  | D    | D1   | Е     | F    | G    |
|--------|------|------|----|------|------|-------|------|------|
| HA 32  | 67.8 | 66   | 56 | 76.5 | -    | 124.5 | 82   | 49.6 |
| HBE 10 | 55   | 53   | 43 | 54.8 | 74.8 | 116   | 73   | 27   |
| HBE 16 | 55   | 53   | 43 | 63.6 | 78.8 | 136.5 | 93.3 | 47.5 |
| HBE 24 | 55   | 53   | 43 | 63.8 | 78.8 | 163   | 120  | 74   |
| HBE 32 | 93.8 | 87.8 | 79 | 97   | -    | 136.5 | 93.5 | 64.5 |

Top/ Side Entry Hood with Double Lever Bolts



| Series | Α  | В    | С    | D  | D1 | Е    | F    | G     |
|--------|----|------|------|----|----|------|------|-------|
| HA 32  | 56 | 66   | 67.8 | 75 | -  | 49.6 | 82   | 124.5 |
| HBE 10 | 43 | 53   | 55   | 52 | 72 | 27   | 73   | 116   |
| HBE 16 | 43 | 53   | 55   | 61 | 76 | 47.5 | 93.3 | 136.5 |
| HBE 24 | 43 | 53   | 55   | 61 | 76 | 74   | 120  | 163   |
| HBE 32 | 79 | 87.8 | 93.8 | 95 | -  | 64.5 | 93.5 | 136.5 |



| Panel I | Mount | Base w | ith Do | uble | Lever | <b>Bolts</b> |
|---------|-------|--------|--------|------|-------|--------------|
|---------|-------|--------|--------|------|-------|--------------|

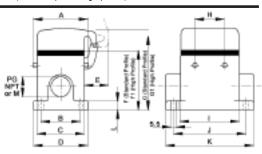
| Series | Α  | В  | С    | D  | Е    | F    | G    | Н    |     | J   | K     | L   |
|--------|----|----|------|----|------|------|------|------|-----|-----|-------|-----|
| HA 32  | 42 | 56 | 70.8 | 29 | 25.4 | 42.4 | 49.6 | 82   | 92  | 102 | 4     | 4.3 |
| HBE 10 | 32 | 43 | 55   | 25 | 27.8 | 44.8 | 27   | 73   | 83  | 93  | 4     | 4.3 |
| HBE 16 | 32 | 43 | 55   | 25 | 27.8 | 44.8 | 47.5 | 93.3 | 103 | 113 | 4.5/6 | 5.5 |
| HBE 24 | 32 | 43 | 55   | 25 | 27.8 | 44.8 | 74   | 120  | 130 | 140 | 4     | 4.3 |
| HBE 32 | 65 | 79 | 89.5 | -  | 30.3 | -    | 64.5 | 93.5 | 110 | 124 | 5     | 4.3 |

\*K dimension (standard profile/high profile)

#### Surface Mount Base with Double Lever Bolts

| Series | Α    | В  | С  | D  | Е  | F  | F1 | G  | G1  | Н    |      | J   | K     | L     |
|--------|------|----|----|----|----|----|----|----|-----|------|------|-----|-------|-------|
| HA 32  | 70.8 | 46 | 56 | 57 | 29 | 75 | -  | 92 | -   | 49.6 | 82   | 94  | 106   | 4     |
| HBE 10 | 55   | 43 | 40 | 54 | 25 | 57 | 74 | 74 | 91  | 27   | 73   | 82  | 94    | 4.5/6 |
| HBE 16 | 55   | 45 | 43 | 57 | 25 | 64 | 84 | 81 | 101 | 47.5 | 93*  | 105 | 117   | 4.5/6 |
| HBE 24 | 55   | 45 | 43 | 57 | 25 | 64 | 84 | 81 | 101 | 74   | 120  | 132 | 144   | 4.5/6 |
| HBE 32 | 89.5 | 67 | 79 | 81 | -  | 72 | -  | -  | -   | 64.5 | 93.5 | 112 | 124.5 | 5     |

<sup>\*</sup>L dimension (standard profile/high profile)





<sup>\*\*</sup> I dimension for HBE 24 High Profile is 93.3.