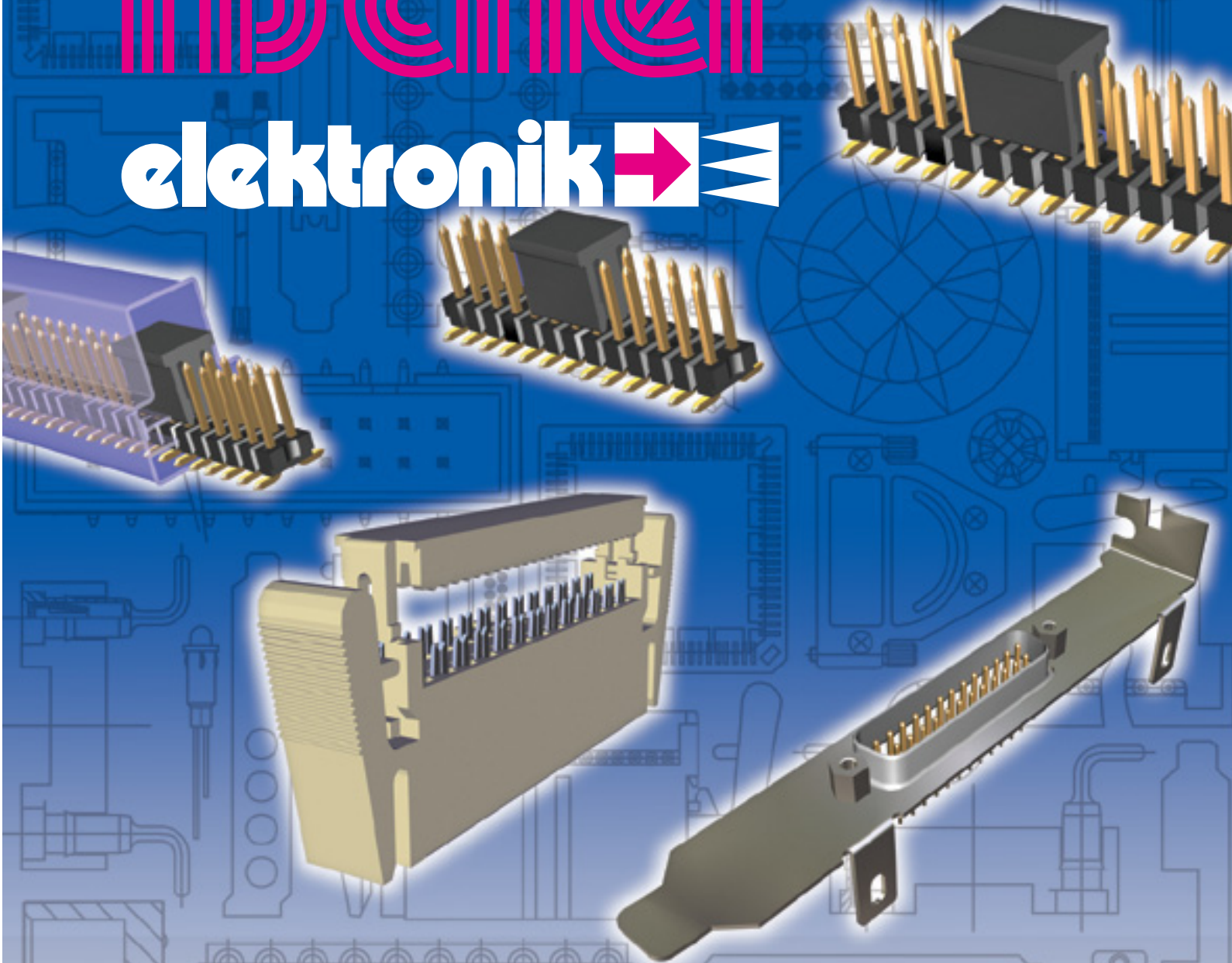


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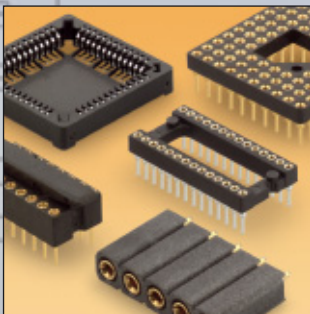
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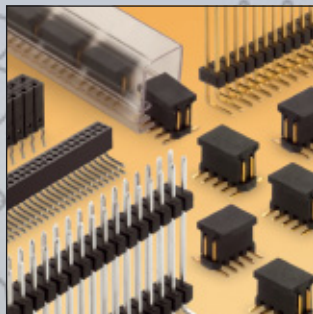
f.con.e

  
**TÜV**  
ISO 14001

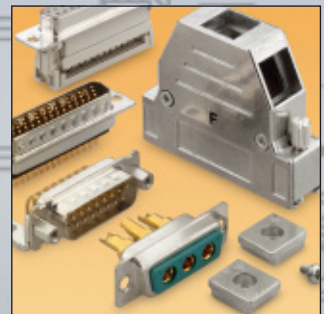
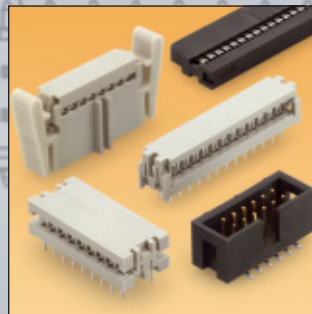
  
**TÜV**  
CERT  
ISO 9001



**Sockets**



**Connectors**



**Brackets**

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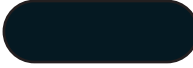
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| art. no. | HEATSINKS & CASES SURFACES |
|----------|----------------------------|
|----------|----------------------------|

|    |                                                                                                                                           |
|----|-------------------------------------------------------------------------------------------------------------------------------------------|
| AL |  raw degreased aluminium                                 |
| BZ |  raw pickled aluminium                                   |
| LP |  outside black lacquered RAL 9005/transparent passivated |
| ME |  clear anodised                                          |
| MI |  solderable surface                                      |
| SA |  black anodised                                          |
| TP |  chrome-free transparent passivated                      |

| art. no. | CONNECTOR CONTACT SURFACE FINISH |
|----------|----------------------------------|
|----------|----------------------------------|

|   |                                                                                                            |
|---|------------------------------------------------------------------------------------------------------------|
| G |  gold-coated            |
| S |  selective gold plating |
| Z |  tinned                 |

| art. no. | RAL | COLOURS | ARTICLES |
|----------|-----|---------|----------|
|----------|-----|---------|----------|

|    |      |                                                                                                      |                                                   |
|----|------|------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| GO | 6026 |  opal green       | 19" system cases RackCase/shell cases             |
| K  | 7032 |  gravel grey      | bench cases                                       |
| LG | 7035 |  light grey       | shell cases                                       |
| NB | 5022 |  night blue       | 19" system cases RackCase/shell cases             |
| S  | 9005 |  deep black       | bench cases/shell cases/19" system cases RackCase |
| TB | 5018 |  turquoise blue   | 19" system cases RackCase/shell cases             |
| UL | 5002 |  ultramarine blue | Plusline/shell cases                              |

## Alphanumeric product list

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| <b>1831 ...</b>             | F 2  | <b>CAB 5 ...</b>               | G 77 | <b>DIL ... O ...</b>               | F 5  | <b>KT SV</b>          | I 23 |
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| <b>BADM ...</b>             | I 27 | <b>KK W</b>                    |      | <b>DIL ... SMD M</b>               | F 16 | <b>LL 30 HRP</b>      | L 9  |
| <b>BADP ...</b>             | I 27 | <b>PV W</b>                    |      | <b>DIL ... SMD PK3</b>             | F 15 | <b>LL 30 HRS</b>      | L 9  |
| <b>BK 01 32</b>             | H 11 | <b>PVY W</b>                   |      | <b>DIL ... SMD SK5</b>             | F 15 | <b>LL 30 PRB ...</b>  | L 11 |
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| <b>D-Sub connectors High Density</b>                                           | I 7, 8                                                          |
| <b>D-Sub cover for flat cable</b>                                              | I 25                                                            |
| <b>D-Sub filter connector</b>                                                  | I 9, 10                                                         |
| <b>D-Sub hoods made of full metal</b>                                          | I 26                                                            |
| <b>D-Sub hoods, compact</b>                                                    | I 24                                                            |
| <b>D-Sub hoods, quick-action locking system</b>                                | I 22                                                            |
| <b>D-Sub hoods, standard</b>                                                   | I 16, 19, 20, 21                                                |
| <b>D-Sub in SMD-mounting</b>                                                   | I 15                                                            |
| <b>D-Sub mixed layout connectors</b>                                           | I 13, 14                                                        |
| <b>D-Sub standard connectors</b>                                               | I 2, 3, 4                                                       |
| <b>D-Sub standard connectors with mounting bracket</b>                         | I 5, 6                                                          |
| <b>Direct female connector</b>                                                 | G 54, 55                                                        |
| <b>Dust protection caps</b>                                                    | I 30                                                            |
| <b>Female connector</b>                                                        | H 3, 4, 5, 10                                                   |
| <b>Female headers in SMD mounting</b>                                          | G 74                                                            |
| <b>Female headers soldering technique</b>                                      | G 27, 28, 29, 30, 70                                            |
| <b>HF-tight caps, HF-seals</b>                                                 | I 29                                                            |
| <b>High precision female header in through-hole-reflow-soldering technique</b> | G 23                                                            |
| <b>High-precision contacts, loose</b>                                          | F 2, 3                                                          |
| <b>High-precision female headers in SMD mounting</b>                           | G 43, 46, 47, 49, 64, 76                                        |
| <b>High-precision female headers soldering technique</b>                       | G 21, 22, 24, 31, 32, 33, 34, 60, 72                            |
| <b>High-precision male headers in SMD mounting</b>                             | G 35, 75                                                        |
| <b>High-precision male headers soldering technique</b>                         | G 3, 4, 5, 6, 7, 71                                             |
| <b>High-precision sockets for DIL-IC</b>                                       | F 4, 6, 7, 9, 11, 12, 13, 14, 15, 16                            |
| <b>High-precision sockets for DIL-IC, closed frame</b>                         | F 8, 9, 10                                                      |
| <b>High-precision sockets for DIL-IC, open frame</b>                           | F 4, 5, 6, 7                                                    |
| <b>IC-mounting tools</b>                                                       | F 14                                                            |
| <b>Jumper links</b>                                                            | F 24, G 20                                                      |
| <b>Jumpers</b>                                                                 | G 77, 78                                                        |
| <b>LED-holders for PCB assembly</b>                                            | L 5, 6, 7, 8                                                    |
| <b>LED-holders for front panel assembly</b>                                    | L 4                                                             |
| <b>Light pipes for SMDs</b>                                                    | L 9, 10, 11                                                     |
| <b>Male connector</b>                                                          | G 2                                                             |
| <b>Male header</b>                                                             | H 6, 7                                                          |
| <b>Male header in through-hole-reflow-soldering technique</b>                  | G 9                                                             |
| <b>Male headers in SMD mounting</b>                                            | G 37, 39, 40, 42, 61, 62, 73                                    |
| <b>Male headers soldering technique</b>                                        | G 8, 10, 11, 12, 13, 14, 15, 17, 18, 56, 57, 58, 66, 67, 68, 69 |
| <b>Printed circuit connector</b>                                               | H 2, 8, 9                                                       |
| <b>Programmable headers</b>                                                    | F 23                                                            |
| <b>Screw-fastening</b>                                                         | I 28                                                            |
| <b>Sockets for IC-PLCC</b>                                                     | F 17, 18                                                        |
| <b>Sockets for TO ... cases</b>                                                | F 19, 20, 21, 22                                                |
| <b>Sockets for crystal oscillators</b>                                         | F 28, 29                                                        |
| <b>Spacers and mounting strips for LED</b>                                     | L 2, 3                                                          |
| <b>Terminal strips soldering technique</b>                                     | G 25, 26                                                        |

High-precision contacts, loose

Female contacts for Ø 0.5 mm

|                                                           |  |                                                      |  |                                                           |  |
|-----------------------------------------------------------|--|------------------------------------------------------|--|-----------------------------------------------------------|--|
| <b>art. no.</b><br><b>1706 ...</b><br><b>... G</b>        |  | <b>art. no.</b><br><b>PEK ...</b><br><b>... G</b>    |  | <b>art. no.</b><br><b>PK 1 ...</b><br><b>... G ... Z</b>  |  |
| <b>art. no.</b><br><b>1831 ...</b><br><b>... Z</b>        |  | <b>art. no.</b><br><b>WWPS 1 ...</b><br><b>... G</b> |  | <b>art. no.</b><br><b>SK 06 ...</b><br><b>... G ... Z</b> |  |
| <b>art. no.</b><br><b>SK 13 X 2 ...</b><br><b>... G</b>   |  | <b>art. no.</b><br><b>TF ...</b><br><b>... G</b>     |  | <b>art. no.</b><br><b>SK 19 ...</b><br><b>... G ... Z</b> |  |
| <b>art. no.</b><br><b>SIL 1 ...</b><br><b>... G ... Z</b> |  |                                                      |  |                                                           |  |

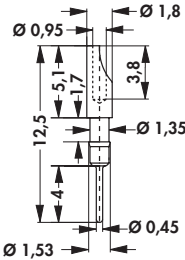
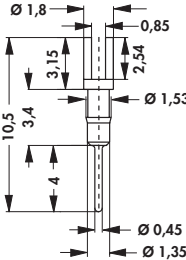
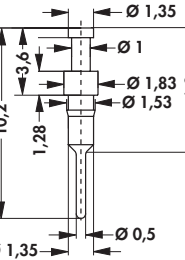
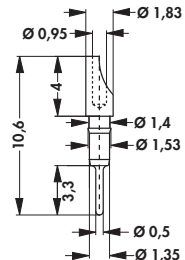
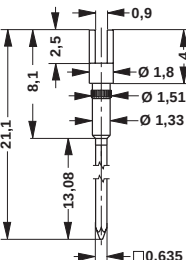
Female contact for 0.64 mm □ and Ø 0.80 mm

|                                                     |  |                                                     |  |  |  |
|-----------------------------------------------------|--|-----------------------------------------------------|--|--|--|
| <b>art. no.</b><br><b>SKB 5 ...</b><br><b>... Z</b> |  | <b>art. no.</b><br><b>SKB 9 ...</b><br><b>... Z</b> |  |  |  |
|-----------------------------------------------------|--|-----------------------------------------------------|--|--|--|

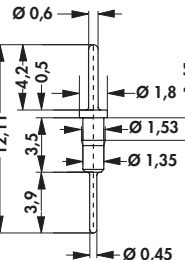
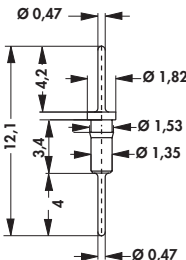
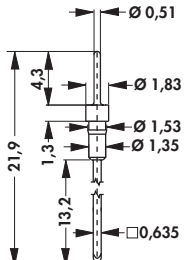
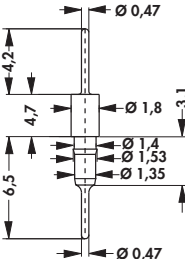
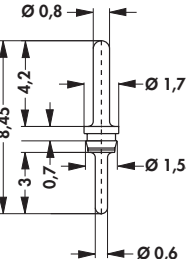
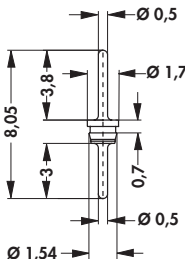
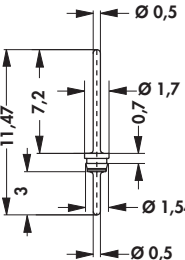
contact shell surface: tin-plated  
contact spring: gold-plated

## High-precision contacts, loose

## Contacts with solder head

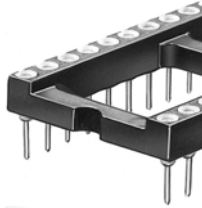
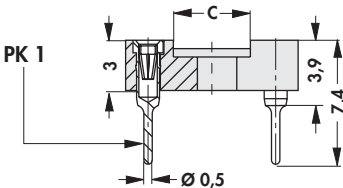
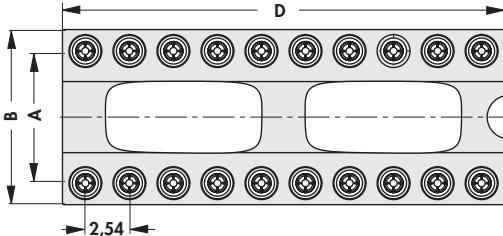
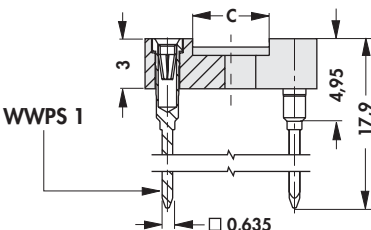
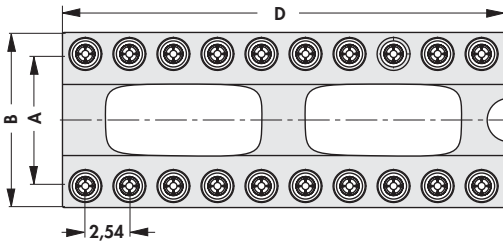
|                                                     |                                                                                   |                                                           |                                                                                    |                                                           |                                                                                     |
|-----------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>art. no.</b><br><b>PK 4 ...</b><br><b>... Z</b>  |  | <b>art. no.</b><br><b>SK 02 ...</b><br><b>... G ... Z</b> |  | <b>art. no.</b><br><b>SK 03 ...</b><br><b>... G ... Z</b> |  |
| <b>art. no.</b><br><b>SK 04 ...</b><br><b>... Z</b> |  | <b>art. no.</b><br><b>SK 08 ...</b><br><b>... G</b>       |  |                                                           |                                                                                     |

## Male contacts

|                                                               |                                                                                     |                                                           |                                                                                      |                                                           |                                                                                       |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>art. no.</b><br><b>PK 3 ...</b><br><b>... G ... Z</b>      |   | <b>art. no.</b><br><b>SK 05 ...</b><br><b>... G ... Z</b> |   | <b>art. no.</b><br><b>SK 11 ...</b><br><b>... G ... Z</b> |   |
| <b>art. no.</b><br><b>SK 14 X 2 ...</b><br><b>... G ... Z</b> |  | <b>art. no.</b><br><b>SK 40 ...</b><br><b>... G</b>       |  | <b>art. no.</b><br><b>SK 41 ...</b><br><b>... G ... Z</b> |  |
| <b>art. no.</b><br><b>SK 42 ...</b><br><b>... G ... Z</b>     |  |                                                           |                                                                                      |                                                           |                                                                                       |

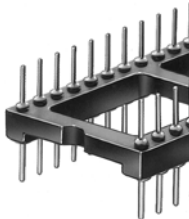
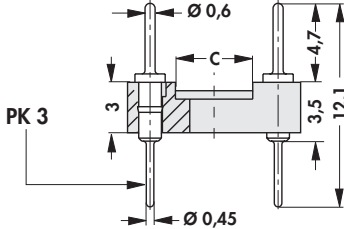
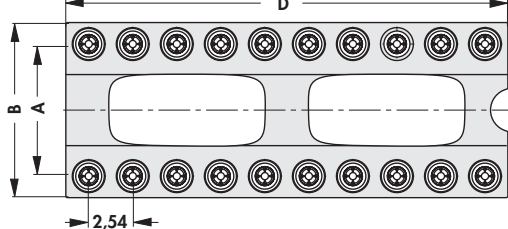
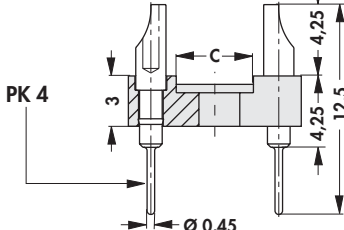
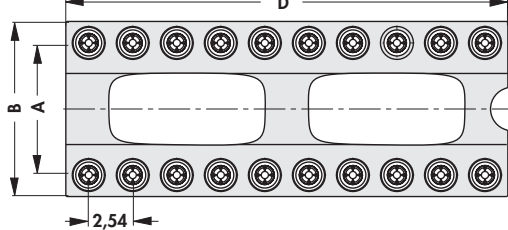


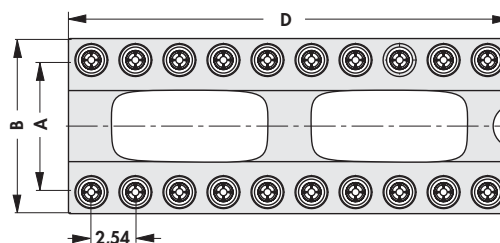
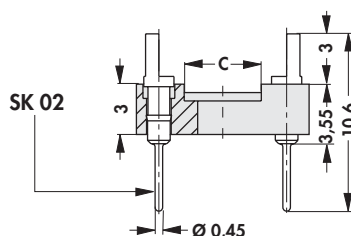
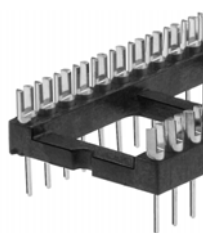
High-precision sockets for DIL-IC, open frame

|   |                 |   |       |      |       |   |                 |           |       |       |       |
|------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------|-------|------|-------|-------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|-------|
| art. no.                                                                           | no. of contacts | dim. [mm]                                                                          |       |      |       | art. no.                                                                            | no. of contacts | dim. [mm] |       |       |       |
|                                                                                    |                 | A                                                                                  | B     | C    | D     |                                                                                     |                 | A         | B     | C     | D     |
| DIL 6 M ...                                                                        | 6               | 7.62                                                                               | 10.10 | 4.10 | 7.60  | DIL 22 03 M Z                                                                       | 22              | 7.62      | 10.10 | 4.10  | 27.90 |
| DIL 8 M ...                                                                        | 8               | 7.62                                                                               | 10.10 | 4.10 | 10.10 | DIL 24 M ...                                                                        | 24              | 15.24     | 17.70 | 11.70 | 30.60 |
| DIL 10 M ...                                                                       | 10              | 7.62                                                                               | 10.10 | 4.10 | 12.70 | DIL 24 03 M ...                                                                     | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| DIL 14 M ...                                                                       | 14              | 7.62                                                                               | 10.10 | 4.10 | 17.70 | DIL 24 04 M G                                                                       | 24              | 10.16     | 12.70 | 6.70  | 30.60 |
| DIL 16 M ...                                                                       | 16              | 7.62                                                                               | 10.10 | 4.10 | 20.40 | DIL 28 M ...                                                                        | 28              | 15.24     | 17.70 | 11.70 | 35.70 |
| DIL 18 M ...                                                                       | 18              | 7.62                                                                               | 10.10 | 4.10 | 23.00 | DIL 28 03 M ...                                                                     | 28              | 7.62      | 10.10 | 4.10  | 35.70 |
| DIL 20 M ...                                                                       | 20              | 7.62                                                                               | 10.10 | 4.10 | 25.50 | DIL 32 M ...                                                                        | 32              | 15.24     | 17.70 | 11.70 | 40.60 |
| DIL 22 M ...                                                                       | 22              | 10.16                                                                              | 12.70 | 6.70 | 27.90 | DIL 36 M G                                                                          | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
|  |                 |  |       |      |       |  |                 |           |       |       |       |
| art. no.                                                                           | no. of contacts | dim. [mm]                                                                          |       |      |       | art. no.                                                                            | no. of contacts | dim. [mm] |       |       |       |
|                                                                                    |                 | A                                                                                  | B     | C    | D     |                                                                                     |                 | A         | B     | C     | D     |
| DIL 6 N ...                                                                        | 6               | 7.62                                                                               | 10.10 | 4.10 | 7.60  | DIL 22 03 N ...                                                                     | 22              | 7.62      | 10.10 | 4.10  | 27.90 |
| DIL 8 N ...                                                                        | 8               | 7.62                                                                               | 10.10 | 4.10 | 10.10 | DIL 24 N ...                                                                        | 24              | 15.24     | 17.70 | 11.70 | 30.60 |
| DIL 10 N ...                                                                       | 10              | 7.62                                                                               | 10.10 | 4.10 | 12.70 | DIL 24 03 N Z                                                                       | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| DIL 14 N ...                                                                       | 14              | 7.62                                                                               | 10.10 | 4.10 | 17.70 | DIL 24 04 N Z                                                                       | 24              | 10.16     | 12.70 | 6.70  | 30.60 |
| DIL 16 N ...                                                                       | 16              | 7.62                                                                               | 10.10 | 4.10 | 20.40 | DIL 28 N G                                                                          | 28              | 15.24     | 17.70 | 11.70 | 35.70 |
| DIL 18 N Z                                                                         | 18              | 7.62                                                                               | 10.10 | 4.10 | 23.00 | DIL 28 03 N Z                                                                       | 28              | 7.62      | 10.10 | 4.10  | 35.70 |
| DIL 20 N Z                                                                         | 20              | 7.62                                                                               | 10.10 | 4.10 | 25.50 | DIL 32 N Z                                                                          | 32              | 15.24     | 17.70 | 11.70 | 40.60 |
| DIL 22 N ...                                                                       | 22              | 10.16                                                                              | 12.70 | 6.70 | 27.90 | DIL 36 N ...                                                                        | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                      |                 |                                                                                    |       |      |       |                                                                                     |                 |           |       |       |       |

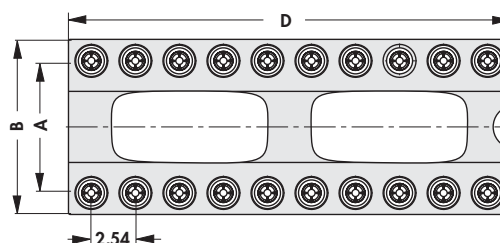
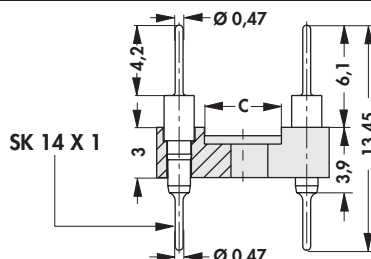
contact spring: gold-plated

## High-precision sockets for DIL-IC, open frame

|   |   |           |       |      |       |   |                 |           |       |       |       |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|------|-------|-------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|-------|
| art. no.                                                                           | no. of contacts                                                                    | dim. [mm] |       |      |       | art. no.                                                                            | no. of contacts | dim. [mm] |       |       |       |
| DIL 6 O ...                                                                        | 6                                                                                  | 7.62      | 10.10 | 4.10 | 7.60  | DIL 22 03 O Z                                                                       | 22              | 7.62      | 10.10 | 4.10  | 27.90 |
| DIL 8 O ...                                                                        | 8                                                                                  | 7.62      | 10.10 | 4.10 | 10.10 | DIL 24 O G                                                                          | 24              | 15.24     | 17.70 | 11.70 | 30.60 |
| DIL 10 O Z                                                                         | 10                                                                                 | 7.62      | 10.10 | 4.10 | 12.70 | DIL 24 03 O ...                                                                     | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| DIL 14 O ...                                                                       | 14                                                                                 | 7.62      | 10.10 | 4.10 | 17.70 | DIL 24 04 O Z                                                                       | 24              | 10.16     | 12.70 | 6.70  | 30.60 |
| DIL 16 O ...                                                                       | 16                                                                                 | 7.62      | 10.10 | 4.10 | 20.40 | DIL 28 O ...                                                                        | 28              | 15.24     | 17.70 | 11.70 | 35.70 |
| DIL 18 O ...                                                                       | 18                                                                                 | 7.62      | 10.10 | 4.10 | 23.00 | DIL 28 03 O Z                                                                       | 28              | 7.62      | 10.10 | 4.10  | 35.70 |
| DIL 20 O ...                                                                       | 20                                                                                 | 7.62      | 10.10 | 4.10 | 25.50 | DIL 32 O ...                                                                        | 32              | 15.24     | 17.70 | 11.70 | 40.60 |
| DIL 22 O ...                                                                       | 22                                                                                 | 10.16     | 12.70 | 6.70 | 27.90 | DIL 36 O Z                                                                          | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
|  |  |           |       |      |       |  |                 |           |       |       |       |
| art. no.                                                                           | no. of contacts                                                                    | dim. [mm] |       |      |       | art. no.                                                                            | no. of contacts | dim. [mm] |       |       |       |
| DIL 6 P Z                                                                          | 6                                                                                  | 7.62      | 10.10 | 4.10 | 7.60  | DIL 22 P G                                                                          | 22              | 10.16     | 12.70 | 6.70  | 27.90 |
| DIL 8 P ...                                                                        | 8                                                                                  | 7.62      | 10.10 | 4.10 | 10.10 | DIL 22 03 P ...                                                                     | 22              | 7.62      | 10.10 | 4.10  | 27.90 |
| DIL 10 P ...                                                                       | 10                                                                                 | 7.62      | 10.10 | 4.10 | 12.70 | DIL 24 P G                                                                          | 24              | 15.24     | 17.70 | 11.70 | 30.60 |
| DIL 14 P ...                                                                       | 14                                                                                 | 7.62      | 10.10 | 4.10 | 17.70 | DIL 24 03 P G                                                                       | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| DIL 16 P ...                                                                       | 16                                                                                 | 7.62      | 10.10 | 4.10 | 20.40 | DIL 24 04 P ...                                                                     | 24              | 10.16     | 12.70 | 6.70  | 30.60 |
| DIL 18 P ...                                                                       | 18                                                                                 | 7.62      | 10.10 | 4.10 | 23.00 | DIL 32 P Z                                                                          | 32              | 15.24     | 17.70 | 11.70 | 40.60 |
| DIL 20 P ...                                                                       | 20                                                                                 | 7.62      | 10.10 | 4.10 | 25.50 | DIL 36 P ...                                                                        | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
| please indicate: ... surface                                                       |                                                                                    |           |       |      |       |                                                                                     |                 |           |       |       |       |
| G=gold-plated                                                                      |                                                                                    |           |       |      |       |                                                                                     |                 |           |       |       |       |
| Z =tin-plated                                                                      |                                                                                    |           |       |      |       |                                                                                     |                 |           |       |       |       |



| art. no.            | no. of contacts | dim. [mm] |       |      |       | art. no.             | no. of contacts | dim. [mm] |       |       |       |
|---------------------|-----------------|-----------|-------|------|-------|----------------------|-----------------|-----------|-------|-------|-------|
|                     |                 | A         | B     | C    | D     |                      |                 | A         | B     | C     | D     |
| <b>DIL 6 Q Z</b>    | 6               | 7.62      | 10.10 | 4.10 | 7.60  | <b>DIL 20 Q Z</b>    | 20              | 7.62      | 10.10 | 4.10  | 25.50 |
| <b>DIL 8 Q ...</b>  | 8               | 7.62      | 10.10 | 4.10 | 10.10 | <b>DIL 24 03 Q G</b> | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| <b>DIL 10 Q Z</b>   | 10              | 7.62      | 10.10 | 4.10 | 12.70 | <b>DIL 28 Q ...</b>  | 28              | 15.24     | 17.70 | 11.70 | 35.70 |
| <b>DIL 14 Q Z</b>   | 14              | 7.62      | 10.10 | 4.10 | 17.70 | <b>DIL 28 03 Q Z</b> | 28              | 7.62      | 10.10 | 4.10  | 35.70 |
| <b>DIL 16 Q ...</b> | 16              | 7.62      | 10.10 | 4.10 | 20.40 | <b>DIL 36 Q ...</b>  | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
| <b>DIL 18 Q ...</b> | 18              | 7.62      | 10.10 | 4.10 | 23.00 |                      |                 |           |       |       |       |



| art. no.            | no. of contacts | dim. [mm] |       |      |       | art. no.               | no. of contacts | dim. [mm] |       |       |       |
|---------------------|-----------------|-----------|-------|------|-------|------------------------|-----------------|-----------|-------|-------|-------|
|                     |                 | A         | B     | C    | D     |                        |                 | A         | B     | C     | D     |
| <b>DIL 6 U ...</b>  | 6               | 7.62      | 10.10 | 4.10 | 7.60  | <b>DIL 22 03 U Z</b>   | 22              | 7.62      | 10.10 | 4.10  | 27.90 |
| <b>DIL 8 U ...</b>  | 8               | 7.62      | 10.10 | 4.10 | 10.10 | <b>DIL 24 U ...</b>    | 24              | 15.24     | 17.70 | 11.70 | 30.60 |
| <b>DIL 10 U Z</b>   | 10              | 7.62      | 10.10 | 4.10 | 12.70 | <b>DIL 24 03 U ...</b> | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| <b>DIL 14 U ...</b> | 14              | 7.62      | 10.10 | 4.10 | 17.70 | <b>DIL 24 04 U Z</b>   | 24              | 10.16     | 12.70 | 6.70  | 30.60 |
| <b>DIL 16 U ...</b> | 16              | 7.62      | 10.10 | 4.10 | 20.40 | <b>DIL 28 U ...</b>    | 28              | 15.24     | 17.70 | 11.70 | 35.70 |
| <b>DIL 18 U Z</b>   | 18              | 7.62      | 10.10 | 4.10 | 23.00 | <b>DIL 32 U G</b>      | 32              | 15.24     | 17.70 | 11.70 | 40.60 |
| <b>DIL 20 U Z</b>   | 20              | 7.62      | 10.10 | 4.10 | 25.50 | <b>DIL 36 U ...</b>    | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
| <b>DIL 22 U ...</b> | 22              | 10.16     | 12.70 | 6.70 | 27.90 |                        |                 |           |       |       |       |

**please indicate:**

... surface

**G= gold-plated**

**Z = tin-plated**

**Mounting tool for DIL/PLCC**  
**Programmable headers**  
**Technical data**  
**Single precision contacts**

- F 14
- F 23
- F 31 - 34
- F 2 - 3

**High-prec. male headers 2.54 solder** → **G 21 - 24**  
**Sockets for LED** → **F 11 - 12**  
**Fem. head. 2.54 solder, put through** → **G 29**  
**Peel-off terminal strips** → **G 25**

**F 6**

A

**B**

C

D

E

**F**

**G**

H



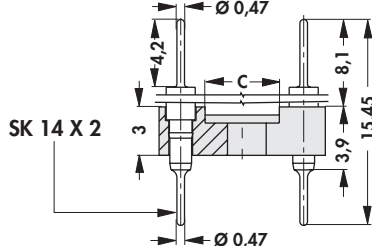
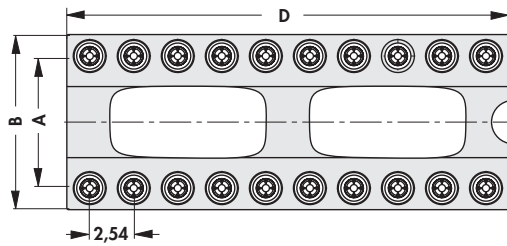
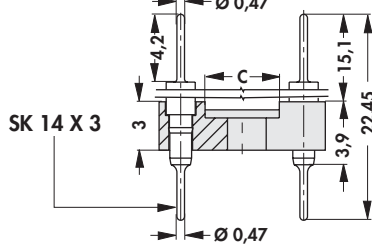
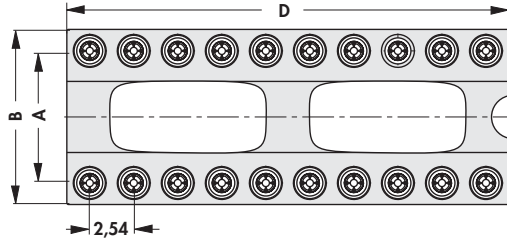
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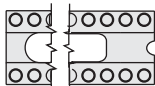
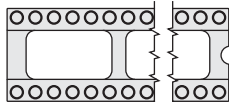
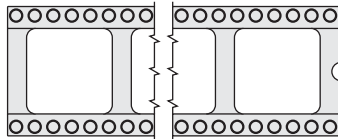
M

N

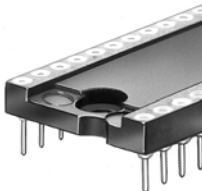
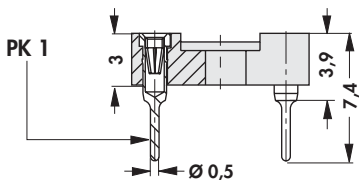
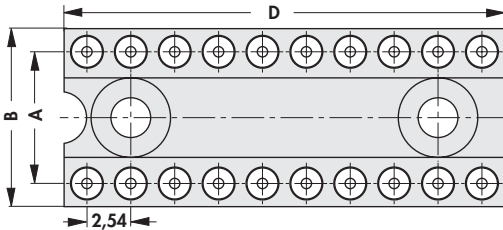
High-precision sockets for DIL-IC, open frame

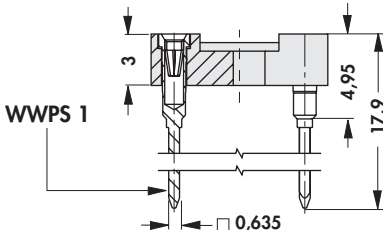
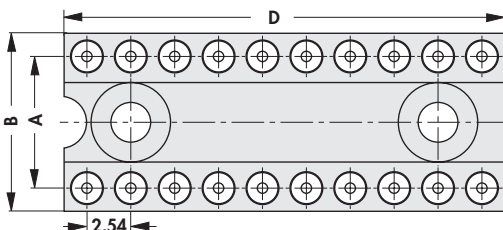
|   |   |           |       |      |       |   |                 |           |       |       |       |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|------|-------|-------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|-------|
| art. no.                                                                           | no. of contacts                                                                    | dim. [mm] |       |      |       | art. no.                                                                            | no. of contacts | dim. [mm] |       |       |       |
|                                                                                    |                                                                                    | A         | B     | C    | D     |                                                                                     |                 | A         | B     | C     | D     |
| DIL 6 V ...                                                                        | 6                                                                                  | 7.62      | 10.10 | 4.10 | 7.60  | DIL 22 V G                                                                          | 22              | 10.16     | 12.70 | 6.70  | 27.90 |
| DIL 8 V ...                                                                        | 8                                                                                  | 7.62      | 10.10 | 4.10 | 10.10 | DIL 22 03 V Z                                                                       | 22              | 7.62      | 10.10 | 4.10  | 27.90 |
| DIL 10 V Z                                                                         | 10                                                                                 | 7.62      | 10.10 | 4.10 | 12.70 | DIL 24 03 V ...                                                                     | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| DIL 14 V ...                                                                       | 14                                                                                 | 7.62      | 10.10 | 4.10 | 17.70 | DIL 24 04 V ...                                                                     | 24              | 10.16     | 12.70 | 6.70  | 30.60 |
| DIL 16 V ...                                                                       | 16                                                                                 | 7.62      | 10.10 | 4.10 | 20.40 | DIL 28 V ...                                                                        | 28              | 15.24     | 17.70 | 11.70 | 35.70 |
| DIL 18 V ...                                                                       | 18                                                                                 | 7.62      | 10.10 | 4.10 | 23.00 | DIL 28 03 V Z                                                                       | 28              | 7.62      | 10.10 | 4.10  | 35.70 |
| DIL 20 V Z                                                                         | 20                                                                                 | 7.62      | 10.10 | 4.10 | 25.50 | DIL 36 V ...                                                                        | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
|  |  |           |       |      |       |  |                 |           |       |       |       |
| art. no.                                                                           | no. of contacts                                                                    | dim. [mm] |       |      |       | art. no.                                                                            | no. of contacts | dim. [mm] |       |       |       |
|                                                                                    |                                                                                    | A         | B     | C    | D     |                                                                                     |                 | A         | B     | C     | D     |
| DIL 6 W Z                                                                          | 6                                                                                  | 7.62      | 10.10 | 4.10 | 7.60  | DIL 22 W Z                                                                          | 22              | 10.16     | 12.70 | 6.70  | 27.90 |
| DIL 8 W ...                                                                        | 8                                                                                  | 7.62      | 10.10 | 4.10 | 10.10 | DIL 22 03 W ...                                                                     | 22              | 7.62      | 10.10 | 4.10  | 27.90 |
| DIL 10 W ...                                                                       | 10                                                                                 | 7.62      | 10.10 | 4.10 | 12.70 | DIL 24 03 W Z                                                                       | 24              | 7.62      | 10.10 | 4.10  | 30.60 |
| DIL 14 W ...                                                                       | 14                                                                                 | 7.62      | 10.10 | 4.10 | 17.70 | DIL 24 04 W ...                                                                     | 24              | 10.16     | 12.70 | 6.70  | 30.60 |
| DIL 16 W G                                                                         | 16                                                                                 | 7.62      | 10.10 | 4.10 | 20.40 | DIL 32 W ...                                                                        | 32              | 15.24     | 17.70 | 11.70 | 40.60 |
| DIL 18 W ...                                                                       | 18                                                                                 | 7.62      | 10.10 | 4.10 | 23.00 | DIL 36 W ...                                                                        | 36              | 15.24     | 17.70 | 11.70 | 45.60 |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                      |                                                                                    |           |       |      |       |                                                                                     |                 |           |       |       |       |

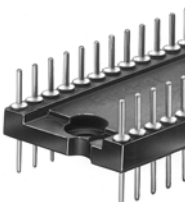
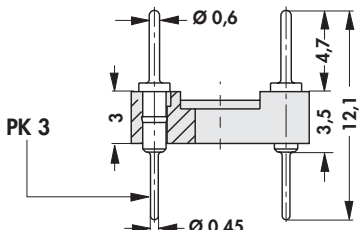
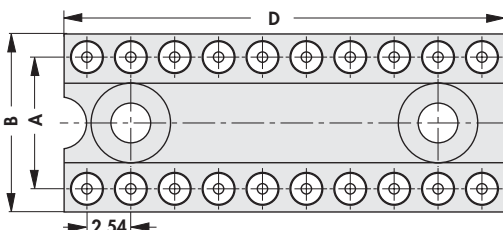
Socket layout of various numbers of contacts for DIL-IC, open frame

|                                                                                     |                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 6-16 pol.                                                                           | 18-32 pol.                                                                          | 36-48 pol.                                                                            |
|  |  |  |

High-precision sockets for DIL-IC, closed frame

|  |  |  |       |       |              |                 |           |       |       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------|-------|--------------|-----------------|-----------|-------|-------|
| art. no.                                                                          | no. of contacts                                                                   | dim. [mm]                                                                          |       |       | art. no.     | no. of contacts | dim. [mm] |       |       |
|                                                                                   |                                                                                   | A                                                                                  | B     | D     |              |                 | A         | B     | D     |
| DIL 6 E ...                                                                       | 6                                                                                 | 7.62                                                                               | 10.30 | 7.60  | DIL 20 E ... | 20              | 7.62      | 10.30 | 25.50 |
| DIL 8 E ...                                                                       | 8                                                                                 | 7.62                                                                               | 10.30 | 10.10 | DIL 28 E ... | 28              | 15.24     | 17.70 | 35.50 |
| DIL 14 E ...                                                                      | 14                                                                                | 7.62                                                                               | 10.30 | 17.70 | DIL 32 E ... | 32              | 15.24     | 17.70 | 40.60 |
| DIL 16 E ...                                                                      | 16                                                                                | 7.62                                                                               | 10.30 | 20.40 | DIL 40 E ... | 40              | 15.24     | 17.70 | 50.80 |
| DIL 18 E ...                                                                      | 18                                                                                | 7.62                                                                               | 10.30 | 23.00 |              |                 |           |       |       |

|  |  |  |       |       |              |                 |           |       |       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------|-------|--------------|-----------------|-----------|-------|-------|
| art. no.                                                                          | no. of contacts                                                                   | dim. [mm]                                                                          |       |       | art. no.     | no. of contacts | dim. [mm] |       |       |
|                                                                                   |                                                                                   | A                                                                                  | B     | D     |              |                 | A         | B     | D     |
| DIL 6 H ...                                                                       | 6                                                                                 | 7.62                                                                               | 10.30 | 7.60  | DIL 22 H ... | 22              | 10.16     | 12.70 | 27.90 |
| DIL 8 H Z                                                                         | 8                                                                                 | 7.62                                                                               | 10.30 | 10.10 | DIL 28 H Z   | 28              | 15.24     | 17.70 | 35.50 |
| DIL 14 H Z                                                                        | 14                                                                                | 7.62                                                                               | 10.30 | 17.70 | DIL 32 H ... | 32              | 15.24     | 17.70 | 40.60 |
| DIL 16 H Z                                                                        | 16                                                                                | 7.62                                                                               | 10.30 | 20.40 | DIL 36 H Z   | 36              | 15.24     | 17.70 | 45.60 |
| DIL 18 H Z                                                                        | 18                                                                                | 7.62                                                                               | 10.30 | 23.00 | DIL 40 H ... | 40              | 15.24     | 17.70 | 50.80 |
| DIL 20 H ...                                                                      | 20                                                                                | 7.62                                                                               | 10.30 | 25.50 | DIL 48 H Z   | 48              | 15.24     | 17.70 | 61.30 |

|  |  |  |       |       |              |                 |           |       |       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------|-------|--------------|-----------------|-----------|-------|-------|
| art. no.                                                                            | no. of contacts                                                                     | dim. [mm]                                                                            |       |       | art. no.     | no. of contacts | dim. [mm] |       |       |
|                                                                                     |                                                                                     | A                                                                                    | B     | D     |              |                 | A         | B     | D     |
| DIL 6 A G                                                                           | 6                                                                                   | 7.62                                                                                 | 10.30 | 7.60  | DIL 18 A ... | 18              | 7.62      | 10.30 | 23.00 |
| DIL 8 A ...                                                                         | 8                                                                                   | 7.62                                                                                 | 10.30 | 10.10 | DIL 36 A Z   | 36              | 15.24     | 17.70 | 45.60 |
| DIL 14 A ...                                                                        | 14                                                                                  | 7.62                                                                                 | 10.30 | 17.70 | DIL 40 A Z   | 40              | 15.24     | 17.70 | 50.80 |
| DIL 16 A G                                                                          | 16                                                                                  | 7.62                                                                                 | 10.30 | 20.40 | DIL 48 A Z   | 48              | 15.24     | 17.70 | 61.30 |

please indicate:

... surface

G=gold-plated

Z=tin-plated

contact spring: gold-plated

SMD sockets for PLCC  
Programmable headers  
Technical data  
High-prec. male headers 2.54 solder

→ F 18  
→ F 23  
→ F 31 - 34  
→ G 21 - 24

Single precision contacts  
Sockets for LED  
Fem. head. 2.54 solder, put through  
Peel-off terminal strips

→ F 2 - 3  
→ F 11 - 12  
→ G 29  
→ G 25

A


**High-precision sockets for DIL-IC, closed frame**

B

C

D

E

F

G

H

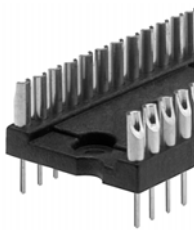
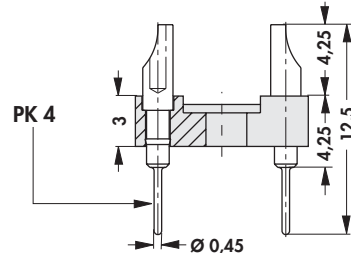
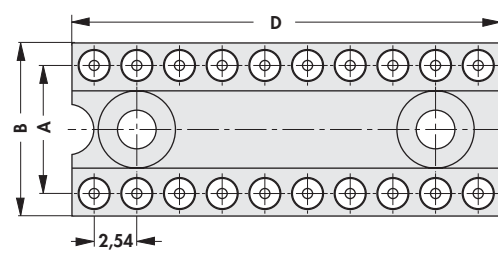
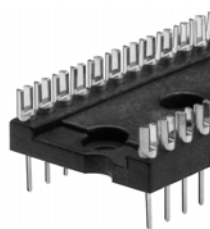
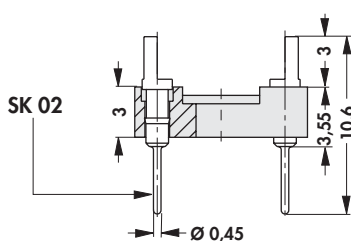
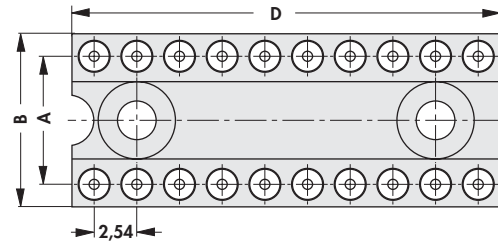
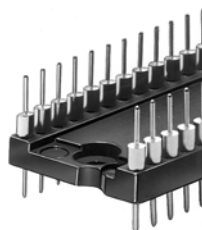
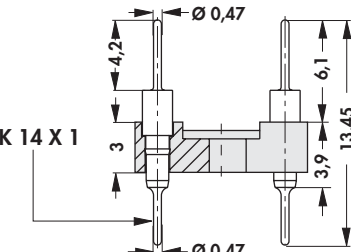
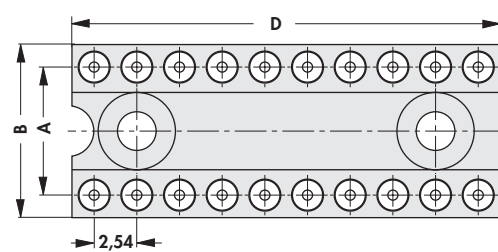
I

K

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M

N

|                                                                                     |                                                                                     |           |       |       |                                                                                      |                 |           |       |       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|-------|-------|--------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|
|    |    |           |       |       |    |                 |           |       |       |
| <b>art. no.</b>                                                                     | no. of contacts                                                                     | dim. [mm] |       |       | <b>art. no.</b>                                                                      | no. of contacts | dim. [mm] |       |       |
|                                                                                     |                                                                                     | A         | B     | D     |                                                                                      |                 | A         | B     | D     |
| <b>DIL 6 B ...</b>                                                                  | 6                                                                                   | 7.62      | 10.30 | 7.60  | <b>DIL 28 B Z</b>                                                                    | 28              | 15.24     | 17.70 | 35.50 |
| <b>DIL 8 B G</b>                                                                    | 8                                                                                   | 7.62      | 10.30 | 10.10 | <b>DIL 32 B Z</b>                                                                    | 32              | 15.24     | 17.70 | 40.60 |
| <b>DIL 14 B ...</b>                                                                 | 14                                                                                  | 7.62      | 10.30 | 17.70 | <b>DIL 36 B ...</b>                                                                  | 36              | 15.24     | 17.70 | 45.60 |
| <b>DIL 16 B ...</b>                                                                 | 16                                                                                  | 7.62      | 10.30 | 20.40 | <b>DIL 40 B G</b>                                                                    | 40              | 15.24     | 17.70 | 50.80 |
| <b>DIL 18 B ...</b>                                                                 | 18                                                                                  | 7.62      | 10.30 | 23.00 | <b>DIL 48 B ...</b>                                                                  | 48              | 15.24     | 17.70 | 61.30 |
| <b>DIL 20 B ...</b>                                                                 | 20                                                                                  | 7.62      | 10.30 | 25.50 |                                                                                      |                 |           |       |       |
|   |   |           |       |       |   |                 |           |       |       |
| <b>art. no.</b>                                                                     | no. of contacts                                                                     | dim. [mm] |       |       | <b>art. no.</b>                                                                      | no. of contacts | dim. [mm] |       |       |
|                                                                                     |                                                                                     | A         | B     | D     |                                                                                      |                 | A         | B     | D     |
| <b>DIL 6 D ...</b>                                                                  | 6                                                                                   | 7.62      | 10.30 | 7.60  | <b>DIL 20 D ...</b>                                                                  | 20              | 7.62      | 10.30 | 25.50 |
| <b>DIL 8 D ...</b>                                                                  | 8                                                                                   | 7.62      | 10.30 | 10.10 | <b>DIL 32 D G</b>                                                                    | 32              | 15.24     | 17.70 | 40.60 |
| <b>DIL 14 D Z</b>                                                                   | 14                                                                                  | 7.62      | 10.30 | 17.70 | <b>DIL 36 D ...</b>                                                                  | 36              | 15.24     | 17.70 | 45.60 |
| <b>DIL 16 D ...</b>                                                                 | 16                                                                                  | 7.62      | 10.30 | 20.40 | <b>DIL 48 D ...</b>                                                                  | 48              | 15.24     | 17.70 | 61.30 |
| <b>DIL 18 D ...</b>                                                                 | 18                                                                                  | 7.62      | 10.30 | 23.00 |                                                                                      |                 |           |       |       |
|  |  |           |       |       |  |                 |           |       |       |
| <b>art. no.</b>                                                                     | no. of contacts                                                                     | dim. [mm] |       |       | <b>art. no.</b>                                                                      | no. of contacts | dim. [mm] |       |       |
|                                                                                     |                                                                                     | A         | B     | D     |                                                                                      |                 | A         | B     | D     |
| <b>DIL 6 X ...</b>                                                                  | 6                                                                                   | 7.62      | 10.30 | 7.60  | <b>DIL 28 X Z</b>                                                                    | 28              | 15.24     | 17.70 | 35.50 |
| <b>DIL 8 X G</b>                                                                    | 8                                                                                   | 7.62      | 10.30 | 10.10 | <b>DIL 32 X ...</b>                                                                  | 32              | 15.24     | 17.70 | 40.60 |
| <b>DIL 14 X G</b>                                                                   | 14                                                                                  | 7.62      | 10.30 | 17.70 | <b>DIL 36 X ...</b>                                                                  | 36              | 15.24     | 17.70 | 45.60 |
| <b>DIL 16 X ...</b>                                                                 | 16                                                                                  | 7.62      | 10.30 | 20.40 | <b>DIL 40 X ...</b>                                                                  | 40              | 15.24     | 17.70 | 50.80 |
| <b>DIL 18 X ...</b>                                                                 | 18                                                                                  | 7.62      | 10.30 | 23.00 | <b>DIL 48 X ...</b>                                                                  | 48              | 15.24     | 17.70 | 61.30 |
| <b>DIL 22 X ...</b>                                                                 | 22                                                                                  | 10.16     | 12.70 | 27.90 |                                                                                      |                 |           |       |       |
| please indicate:                                                                    |                                                                                     |           |       |       |                                                                                      |                 |           |       |       |

**F 9**

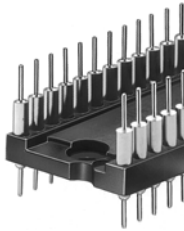
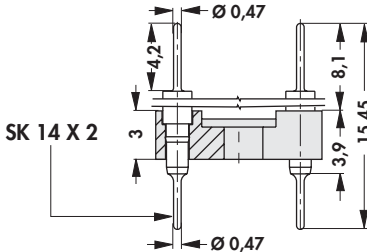
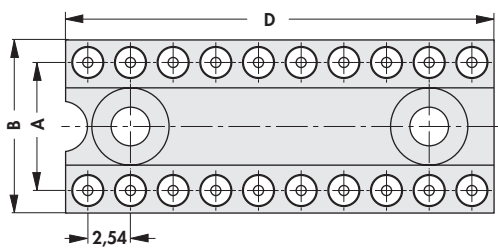
SMD sockets for PLCC  
 Programmable headers  
 Technical data  
 Sockets for LED

→ F 18  
 → F 23  
 → F 31 - 34  
 → F 11 - 12

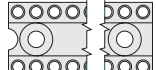
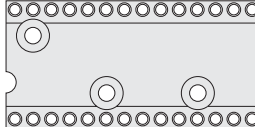
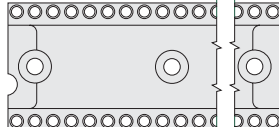
Single precision contacts → F 2 - 3  
 High-prec. male headers 2.54 solder → G 21 - 24  
 Fem. head. 2.54 solder, put through → G 29  
 Mounting tool for DIL/PLCC → F 14



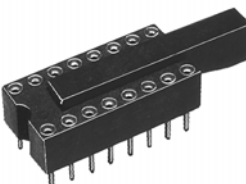
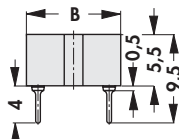
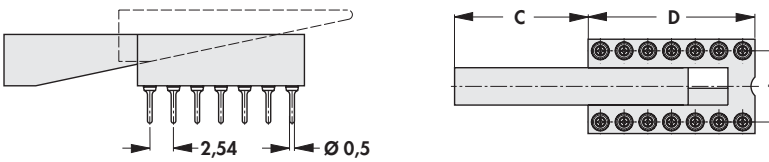
High-precision sockets for DIL-IC, closed frame

|    |                 |           |       |       |              |                 |           |       |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|--------------|-----------------|-----------|-------|-------|
| art. no.                                                                                                                                                                                                                                               | no. of contacts | dim. [mm] |       |       | art. no.     | no. of contacts | dim. [mm] |       |       |
|                                                                                                                                                                                                                                                        |                 | A         | B     | D     |              |                 | A         | B     | D     |
| DIL 6 Y ...                                                                                                                                                                                                                                            | 6               | 7.62      | 10.30 | 7.60  | DIL 22 Y G   | 22              | 10.16     | 12.70 | 27.90 |
| DIL 8 Y ...                                                                                                                                                                                                                                            | 8               | 7.62      | 10.30 | 10.10 | DIL 28 Y ... | 28              | 15.24     | 17.70 | 35.50 |
| DIL 14 Y Z                                                                                                                                                                                                                                             | 14              | 7.62      | 10.30 | 17.70 | DIL 36 Y ... | 36              | 15.24     | 17.70 | 45.60 |
| DIL 16 Y ...                                                                                                                                                                                                                                           | 16              | 7.62      | 10.30 | 20.40 | DIL 40 Y ... | 40              | 15.24     | 17.70 | 50.80 |
| DIL 18 Y ...                                                                                                                                                                                                                                           | 18              | 7.62      | 10.30 | 23.00 | DIL 48 Y ... | 48              | 15.24     | 17.70 | 61.30 |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                                                                                                                                                                                          |                 |           |       |       |              |                 |           |       |       |

Socket layout of various numbers of contacts for DIL-IC, closed frame

|                                                                                             |                                                                                                 |                                                                                                  |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 6 pol.   | 8 pol.       | 14-22 pol.  |
| 28 pol.  | 36-48 pol.  |                                                                                                  |

DIL-IC-sockets with extractor

|    |                 |           |       |       |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|-------|
| art. no.                                                                                                                                                                                                                                                     | no. of contacts | dim. [mm] |       |       |       |
|                                                                                                                                                                                                                                                              |                 | A         | B     | C     | D     |
| DIL 14 PEK                                                                                                                                                                                                                                                   | 14              | 7.62      | 10.10 | 12.00 | 17.00 |
| DIL 16 PEK                                                                                                                                                                                                                                                   | 16              | 7.62      | 10.10 | 12.00 | 20.30 |

contact shell surface: gold-plated  
contact spring: gold-plated

A

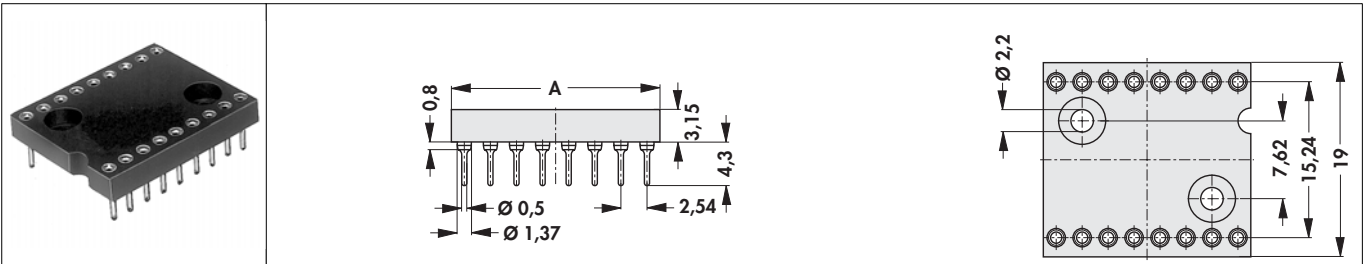


High-precision sockets for DIL-IC

B

LED display sockets of 0.6" pitch

C



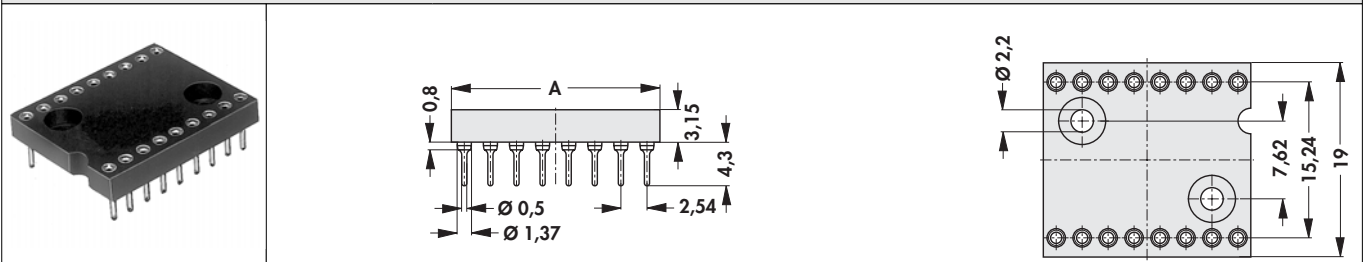
D

| art. no.      | no. of contacts | dim. [mm]<br>A | art. no.        | no. of contacts | dim. [mm]<br>A |
|---------------|-----------------|----------------|-----------------|-----------------|----------------|
| DIL 16 06 E Z | 16              | 20.30          | DIL 18 06 E ... | 18              | 22.80          |

please indicate: ... surface  
G=gold-plated  
Z=tin-plated

E

F



| art. no.      | no. of contacts | dim. [mm]<br>A | art. no.      | no. of contacts | dim. [mm]<br>A |
|---------------|-----------------|----------------|---------------|-----------------|----------------|
| DIL 16 06 H Z | 16              | 20.30          | DIL 18 06 H Z | 18              | 22.80          |

contact spring: gold-plated

H

I

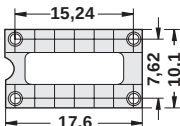
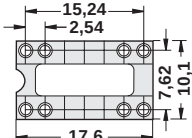
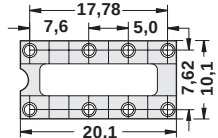
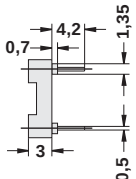
K

L

M

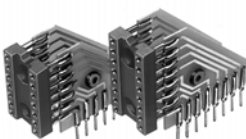
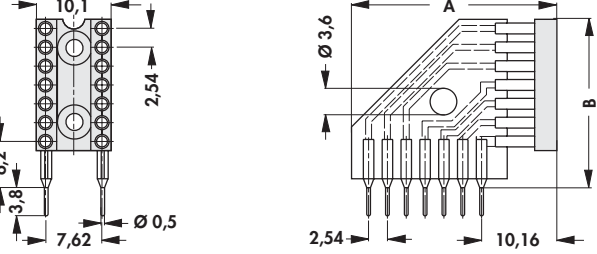
N

IC-sockets partially equipped, e.g. for oscillators and relays

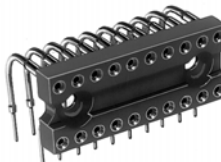
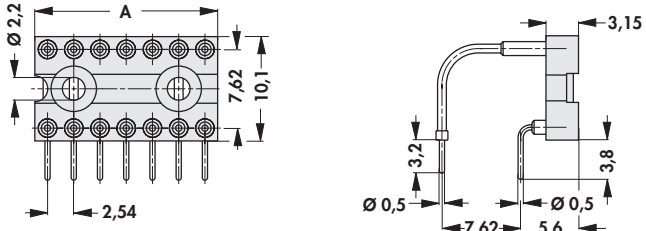
|                                                                                   |                                                                                   |                |                |                                                                                   |                                                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|----------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |                |                |  |  |  |
|                                                                                   | DIL 4 OR ...                                                                      | DIL 8 1 OR ... | DIL 8 2 OR ... |                                                                                   |                                                                                    |                                                                                     |
| art. no.                                                                          | no. of contacts                                                                   |                | art. no.       | no. of contacts                                                                   |                                                                                    |                                                                                     |
| DIL 4 OR ...                                                                      | 4                                                                                 |                | DIL 8 2 OR ... | 8                                                                                 |                                                                                    |                                                                                     |
| DIL 8 1 OR Z                                                                      | 8                                                                                 |                |                |                                                                                   |                                                                                    |                                                                                     |
| please indicate:                                                                  |                                                                                   |                |                |                                                                                   |                                                                                    |                                                                                     |
| ... surface                                                                       |                                                                                   |                |                |                                                                                   |                                                                                    |                                                                                     |
| G=gold-plated                                                                     |                                                                                   |                |                |                                                                                   |                                                                                    |                                                                                     |
| Z=tin-plated                                                                      |                                                                                   |                |                |                                                                                   |                                                                                    |                                                                                     |

contact spring: gold-plated

LED display sockets in vertical construction

|                                                                                    |                 |                       |       |                                                                                     |                 |                       |       |
|------------------------------------------------------------------------------------|-----------------|-----------------------|-------|-------------------------------------------------------------------------------------|-----------------|-----------------------|-------|
|  |                 |                       |       |  |                 |                       |       |
| art. no.                                                                           | no. of contacts | dim. [mm]<br>A      B |       | art. no.                                                                            | no. of contacts | dim. [mm]<br>A      B |       |
| DIL 14 W 90                                                                        | 14              | 27.70                 | 22.70 | DIL 16 W 90                                                                         | 16              | 30.30                 | 25.30 |

contact shell surface: tin-plated; contact spring: gold-plated

|                                                                                     |                                                                                      |                |                     |                 |                |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------|---------------------|-----------------|----------------|
|  |  |                |                     |                 |                |
| <b>art. no.</b>                                                                     | no. of contacts                                                                      | dim. [mm]<br>A | <b>art. no.</b>     | no. of contacts | dim. [mm]<br>A |
| <b>DIL 8 G ...</b>                                                                  | 8                                                                                    | 10.10          | <b>DIL 16 G ...</b> | 16              | 20.30          |
| <b>DIL 10 G ...</b>                                                                 | 10                                                                                   | 12.70          | <b>DIL 20 G ...</b> | 20              | 25.40          |
| <b>DIL 14 G ...</b>                                                                 | 14                                                                                   | 17.70          |                     |                 |                |
| please indicate:                                                                    |                                                                                      |                |                     |                 |                |

contact spring: gold-plated

Mounting tool for DIL/PLCC

→ F 14

Single contacts metal strip

→ G 26

Jump. links 2.00 & 2.54 solder  
Sockets for DIL-IC

→ G 20  
→ F 4 - 10

Jumpers  
Male con./fem. con. 6.00 solder

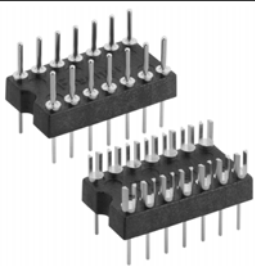
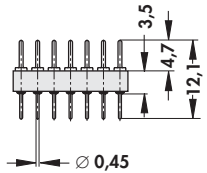
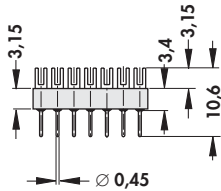
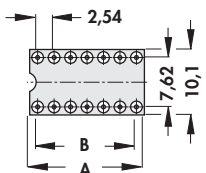
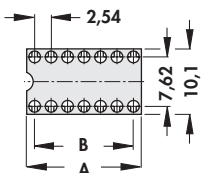
→ G 77 - 78  
→ G 2

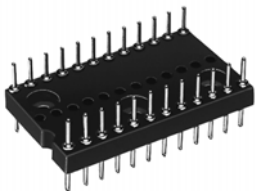
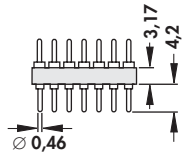
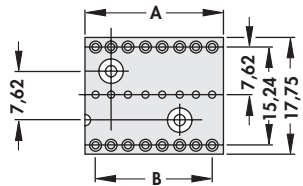
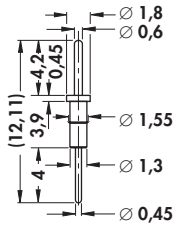
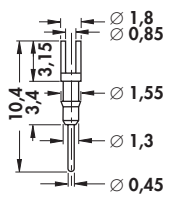
A



## High-precision sockets for DIL-IC

### DIL adaptor plugs

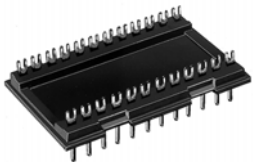
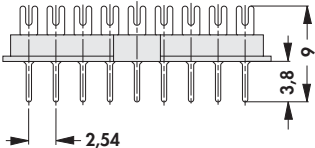
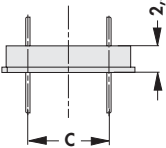
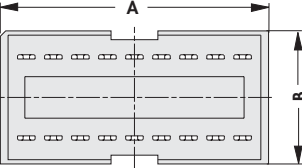
|                                                                                   |                                                                                   |           |                                                                                   |              |                                                                                     |           |                                                                                     |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------|--|
|  | PK 3                                                                              |           | SK 02 (≙ PK 5)                                                                    |              | PK 3                                                                                |           | SK 02 (≙ PK 5)                                                                      |  |
|                                                                                   |  |           |  |              |  |           |  |  |
| art. no.                                                                          | no. of contacts                                                                   | dim. [mm] |                                                                                   | art. no.     | no. of contacts                                                                     | dim. [mm] |                                                                                     |  |
|                                                                                   |                                                                                   | A         | B                                                                                 |              |                                                                                     | A         | B                                                                                   |  |
| DILS 04 PK 5                                                                      | 4                                                                                 | 5.00      | 2.54                                                                              | DILS 16 PK 3 | 16                                                                                  | 20.30     | 17.78                                                                               |  |
| DILS 06 PK 3                                                                      | 6                                                                                 | 7.60      | 5.08                                                                              | DILS 16 PK 5 | 16                                                                                  | 20.30     | 17.78                                                                               |  |
| DILS 08 PK 3                                                                      | 8                                                                                 | 10.10     | 7.62                                                                              | DILS 18 PK 5 | 18                                                                                  | 23.00     | 20.32                                                                               |  |
| DILS 14 PK 3                                                                      | 14                                                                                | 17.70     | 15.24                                                                             |              |                                                                                     |           |                                                                                     |  |

|                                                                                   |                                                                                   |           |                                                                                    |                |                                                                                      |           |                                                                                      |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|--|
|  | PK 3                                                                              |           | SK 02 (≙ PK 5)                                                                     |                | PK 3                                                                                 |           | SK 02 (≙ PK 5)                                                                       |  |
|                                                                                   |  |           |  |                |  |           |  |  |
| art. no.                                                                          | no. of contacts                                                                   | dim. [mm] |                                                                                    | art. no.       | no. of contacts                                                                      | dim. [mm] |                                                                                      |  |
|                                                                                   |                                                                                   | A         | B                                                                                  |                |                                                                                      | A         | B                                                                                    |  |
| DILS 16 6 PK 3                                                                    | 16                                                                                | 20.30     | 17.78                                                                              | DILS 28 6 PK 3 | 28                                                                                   | 35.50     | 33.02                                                                                |  |
| DILS 24 6 PK 5                                                                    | 24                                                                                | 30.50     | 27.94                                                                              | DILS 40 6 PK 3 | 40                                                                                   | 50.80     | 48.26                                                                                |  |

contact surface finish: gold-plated

### DIL platforms

suitable for **DIL-cases** DILS ... GA LO

|  |  |           |       |      |  |                 |  |       |       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|-------|------|--------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|-------|-------|
| art. no.                                                                            | no. of contacts                                                                     | dim. [mm] |       |      | art. no.                                                                             | no. of contacts | dim. [mm]                                                                             |       |       |
|                                                                                     |                                                                                     | A         | B     | C    |                                                                                      |                 | A                                                                                     | B     | C     |
| <b>DILS 08 GO</b>                                                                   | 8                                                                                   | 12.40     | 12.50 | 7.62 | <b>DILS 24 GO</b>                                                                    | 24              | 32.80                                                                                 | 20.10 | 15.24 |
| <b>DILS 14 GO</b>                                                                   | 14                                                                                  | 20.00     | 12.50 | 7.62 | <b>DILS 28 GO</b>                                                                    | 28              | 37.80                                                                                 | 20.10 | 15.24 |
| <b>DILS 16 GO</b>                                                                   | 16                                                                                  | 22.60     | 12.50 | 7.62 | <b>DILS 40 GO</b>                                                                    | 40              | 53.10                                                                                 | 20.10 | 15.24 |
| <b>DILS 18 GO</b>                                                                   | 18                                                                                  | 25.20     | 12.50 | 7.62 |                                                                                      |                 |                                                                                       |       |       |

contact surface finish: gold-plated

**F 13**

High-prec. male headers 2.54 solder → G 21 - 24  
 Peel-off terminal strips → G 25  
 High-prec. male head. in SMD mount. → G 35  
 Technical data → F 31 - 34

Single precision contacts  
 Connector-sleeves  
 Programmable headers

→ F 2 - 3  
 → F 25 - 27  
 → F 23

N



DIL cases - grid spacing 2.54 mm

suitable for platforms DIL DILS ... GO

| art. no.      | dim. [mm] |       |       | art. no.      | dim. [mm] |       |       |
|---------------|-----------|-------|-------|---------------|-----------|-------|-------|
|               | B         | H     | L     |               | B         | H     | L     |
| DILS 08 GA LO | 12.50     | 6.70  | 12.40 | DILS 14 GB LO | 12.50     | 11.70 | 20.00 |
| DILS 14 GA LO | 12.50     | 6.70  | 20.00 | DILS 16 GB LO | 12.50     | 11.70 | 22.60 |
| DILS 16 GA LO | 12.50     | 6.70  | 22.60 | DILS 18 GB LO | 12.50     | 11.70 | 25.20 |
| DILS 18 GA LO | 12.50     | 6.70  | 25.20 | DILS 24 GB LO | 20.10     | 11.70 | 32.80 |
| DILS 24 GA LO | 20.10     | 6.70  | 32.80 | DILS 28 GB LO | 20.10     | 11.70 | 37.80 |
| DILS 40 GA LO | 20.10     | 6.70  | 53.10 | DILS 40 GB LO | 20.10     | 11.70 | 53.10 |
| DILS 08 GB LO | 12.50     | 11.70 | 12.40 |               |           |       |       |

contact spring: gold-plated

IC-mounting tools - Design DIL

| art. no. | spacing of contact rows |  |
|----------|-------------------------|--|
| MIC 03   | 7.62                    |  |
| MIC 06   | 15.24                   |  |

material: polyacetal, non-conductive; flammability: UL 94:HB

High-precision sockets for DIL-IC

SMD-plug for DIL

with PK 3-contacts

|                                                                                     |                    |                 |           |       |       |
|-------------------------------------------------------------------------------------|--------------------|-----------------|-----------|-------|-------|
|                                                                                     |                    |                 |           |       |       |
|                                                                                     | art. no.           | no. of contacts | dim. [mm] |       |       |
|                                                                                     |                    |                 | A         | B     | C     |
|                                                                                     | DIL 08 SMD PK3 Z   | 8               | 7.62      | 10.10 | 3.50  |
|                                                                                     | DIL 16 SMD PK3 ... | 16              | 7.62      | 10.10 | 3.50  |
| <p>please indicate:</p> <p>... surface</p> <p>G=gold-plated</p> <p>Z=tin-plated</p> | DIL 20 SMD PK3 ... | 20              | 7.62      | 10.10 | 3.50  |
|                                                                                     | DIL 24 SMD PK3 ... | 24              | 15.24     | 17.60 | 11.70 |
|                                                                                     |                    |                 | D         |       |       |
|                                                                                     |                    |                 |           |       |       |
|                                                                                     |                    |                 |           |       |       |

with SK5-contacts

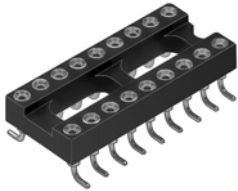
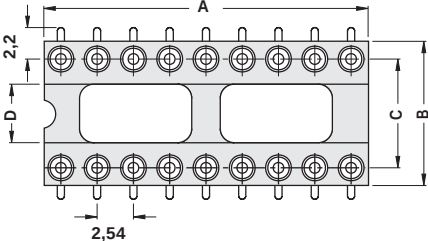
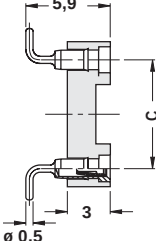
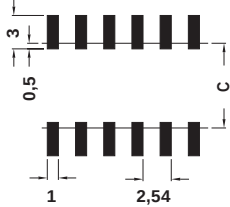
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|-------------------------------------------------------------------------------------|--------------------|-----------------|-----------|-------|-------|
|                                                                                     |                    |                 |           |       |       |
|                                                                                     | art. no.           | no. of contacts | dim. [mm] |       |       |
|                                                                                     |                    |                 | A         | B     | C     |
|                                                                                     | DIL 08 SMD SK5 ... | 8               | 7.62      | 10.10 | 3.50  |
|                                                                                     | DIL 16 SMD SK5 ... | 16              | 7.62      | 10.10 | 3.50  |
| <p>please indicate:</p> <p>... surface</p> <p>G=gold-plated</p> <p>Z=tin-plated</p> | DIL 20 SMD SK5 ... | 20              | 7.62      | 10.10 | 3.50  |
|                                                                                     | DIL 24 SMD SK5 ... | 24              | 15.24     | 17.60 | 11.70 |
|                                                                                     |                    |                 | D         |       |       |
|                                                                                     |                    |                 |           |       |       |
|                                                                                     |                    |                 |           |       |       |

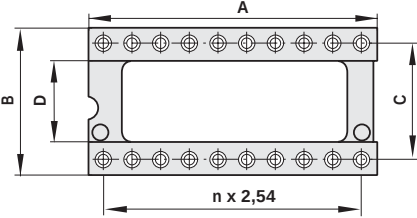
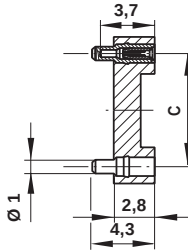
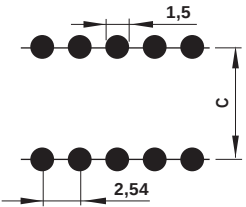


High-precision sockets for DIL-IC

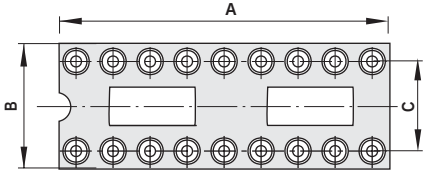
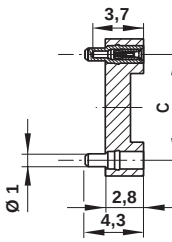
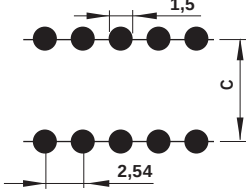
SMD-socket for DIL IC

Contacts, especially integrated into the insulating part, will adjust to the solder paste which possibly is not equally distributed.

|  |    |           |       |       |       |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-------|-------|
| art. no.                                                                          | no. of contacts                                                                                                                                                                                                                                          | dim. [mm] |       |       |       |
|                                                                                   |                                                                                                                                                                                                                                                          | A         | B     | C     | D     |
| DIL 16 SMD M                                                                      | 16                                                                                                                                                                                                                                                       | 20.10     | 10.10 | 7.62  | 3.50  |
| DIL 20 SMD M                                                                      | 20                                                                                                                                                                                                                                                       | 25.20     | 10.10 | 7.62  | 3.50  |
| DIL 24 03 SMD M                                                                   | 24                                                                                                                                                                                                                                                       | 30.30     | 10.10 | 7.62  | 3.50  |
| DIL 28 SMD M                                                                      | 28                                                                                                                                                                                                                                                       | 35.40     | 17.60 | 15.24 | 11.20 |

|  |    |           |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-------|-------|
| art. no.                                                                           | no. of contacts                                                                                                                                                                                                                                             | dim. [mm] |       |       |       |
|                                                                                    |                                                                                                                                                                                                                                                             | A         | B     | C     | D     |
| DIL SMD 08 Z                                                                       | 8                                                                                                                                                                                                                                                           | 10.08     | 10.08 | 7.62  | 4.80  |
| DIL SMD 10 Z                                                                       | 10                                                                                                                                                                                                                                                          | 12.62     | 10.08 | 7.62  | 4.80  |
| DIL SMD 16 Z                                                                       | 16                                                                                                                                                                                                                                                          | 20.24     | 10.08 | 7.62  | 4.80  |
| DIL SMD 22 03 Z                                                                    | 22                                                                                                                                                                                                                                                          | 27.86     | 10.08 | 7.62  | 4.80  |
| DIL SMD 22 04 Z                                                                    | 22                                                                                                                                                                                                                                                          | 27.86     | 12.62 | 10.16 | 6.50  |
| DIL SMD 28 06 Z                                                                    | 28                                                                                                                                                                                                                                                          | 35.48     | 17.70 | 15.24 | 10.60 |
| DIL SMD 32 Z                                                                       | 32                                                                                                                                                                                                                                                          | 40.56     | 17.70 | 15.24 | 10.60 |
| DIL SMD 40 Z                                                                       | 40                                                                                                                                                                                                                                                          | 50.72     | 17.70 | 15.24 | 10.60 |

with centre bar for vacuum-mounting

|  |    |           |       |       |  |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-------|--|
| art. no.                                                                            | no. of contacts                                                                                                                                                                                                                                                | dim. [mm] |       |       |  |
|                                                                                     |                                                                                                                                                                                                                                                                | A         | B     | C     |  |
| DIL SMD M 14 Z                                                                      | 14                                                                                                                                                                                                                                                             | 17.70     | 10.08 | 7.62  |  |
| DIL SMD M 28 06 Z                                                                   | 28                                                                                                                                                                                                                                                             | 35.48     | 17.70 | 15.24 |  |
| DIL SMD M 32 Z                                                                      | 32                                                                                                                                                                                                                                                             | 40.56     | 17.70 | 15.24 |  |

contact shell surface: tin-plated; contact spring: gold-plated (DIL ... SMD M; DIL SMD ...; DIL SMD M ...)

A



Sockets for IC-PLCC

B

C

D

E

F

G

H

I

K

L

M

N

| art. no. | no. of contacts | VPE | dim. [mm] |       |       |       |       |       |       |
|----------|-----------------|-----|-----------|-------|-------|-------|-------|-------|-------|
|          |                 |     | A1        | A2    | B1    | B2    | C     | D1    | D2    |
| PLCC 20  | 20              | 39  | 5.08      | 5.08  | 15.55 | 15.55 | 16.70 | 10.16 | 10.16 |
| PLCC 28  | 28              | 33  | 7.62      | 7.62  | 18.10 | 18.10 | 20.30 | 12.70 | 12.70 |
| PLCC 32  | 32              | 29  | 7.62      | 10.16 | 18.10 | 20.70 | 22.20 | 12.70 | 15.24 |
| PLCC 44  | 44              | 25  | 12.70     | 12.70 | 23.20 | 23.20 | 27.50 | 17.78 | 17.78 |
| PLCC 52  | 52              | 23  | 15.24     | 15.24 | 25.70 | 25.70 | 31.00 | 20.32 | 20.32 |
| PLCC 68  | 68              | 19  | 20.32     | 20.32 | 30.80 | 30.80 | 37.30 | 25.40 | 25.40 |
| PLCC 84  | 84              | 16  | 25.40     | 25.40 | 36.00 | 36.00 | 44.50 | 30.48 | 30.48 |

contact surface finish: tin-plated; VPE = packing unit (pieces/tube)

Data sheet for pin configuration of PLCC sockets available on request.  
These sockets conform to EIA/JEDEC "A" package requirements for leaded plastic chip carriers.  
Drain holes for easier inside cleaning.  
Test probe holes are moulded next to each contact, providing easy access.  
Insulating material as per UL 94 V-0.

colour: black

F 17

- Mounting tool for DIL/PLCC  
SMD sockets for PLCC  
Connector-sleeves  
Technical data
- F 14  
→ F 18  
→ F 25 - 27  
→ F 31 - 34
- Teflon sockets/TO 5 & TO 18  
Fem. head. 2.54 solder, put through  
PGA sockets
- F 21 - 22  
→ G 29  
→ F 21

Sockets for IC-PLCC

SMD sockets for PLCC - low profile housing

These sockets conform to EIA/JEDEC "A" package requirements for leaded plastic chip carriers.

| art. no.    | no. of contacts | VPE | dim. [mm] |       |       |       |       |
|-------------|-----------------|-----|-----------|-------|-------|-------|-------|
|             |                 |     | A         | B     | C     | D     | Q     |
| PLCC 20 SMD | 20              | 39  | 15.58     | 15.58 | 5.08  | 5.08  | 16.00 |
| PLCC 28 SMD | 28              | 32  | 18.12     | 18.12 | 7.62  | 7.62  | 20.60 |
| PLCC 32 SMD | 32              | 29  | 18.12     | 20.66 | 7.62  | 10.16 | 22.50 |
| PLCC 44 SMD | 44              | 26  | 23.40     | 23.40 | 12.70 | 12.70 | 27.50 |
| PLCC 52 SMD | 52              | 23  | 25.74     | 25.74 | 15.24 | 15.24 | 31.10 |
| PLCC 68 SMD | 68              | 19  | 30.82     | 30.82 | 20.32 | 20.32 | 38.80 |
| PLCC 84 SMD | 84              | 15  | 35.90     | 35.90 | 25.40 | 25.40 | 44.80 |

VPE = packing unit (pieces/tube)\*dimensions ± 0.2 mm  
Tin-plated phosphorbronze socket contacts.

colour: black

packing: bar magazine

- Dual polarisation indicators guarantee the correct alignment of the device.
- Drain holes for easier inside cleaning.
- Test probe holes are moulded next to each contact, providing easy access.
- Efficient heat dissipation.

Insulating material (PBT) UL 94 V-0 rated.

SMD-sockets for PLCC - low profile housing

| art. no.           | no. of contacts                                                                 |  |  |  |  |  |  |
|--------------------|---------------------------------------------------------------------------------|--|--|--|--|--|--|
| PLCC 32 LP SMD ... | 32                                                                              |  |  |  |  |  |  |
| please indicate:   | ... packing (option)<br>SM = tube magazine<br>TR = tape and reel (500 pcs/reel) |  |  |  |  |  |  |

A

**Sockets for TO ... cases**

B

C

D

E

F

G

H

I

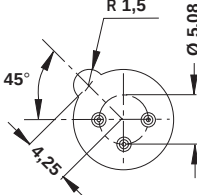
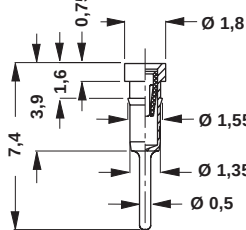
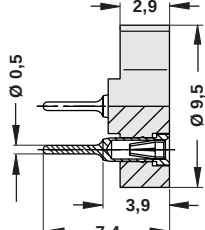
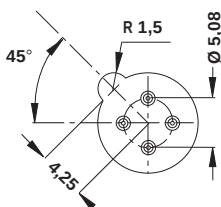
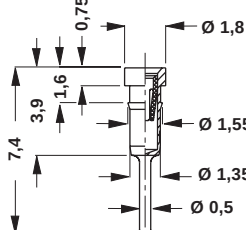
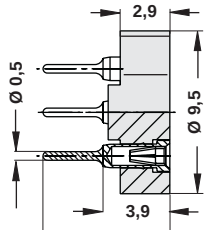
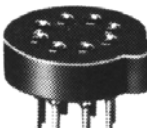
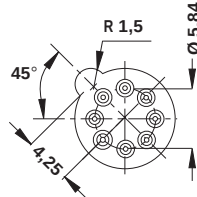
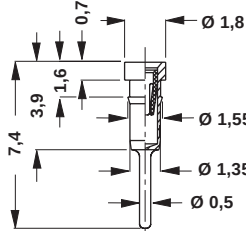
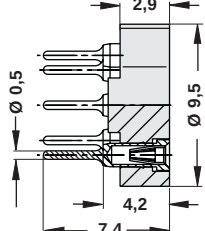
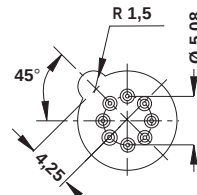
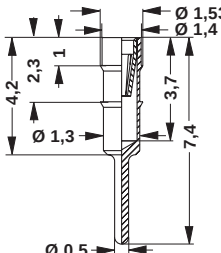
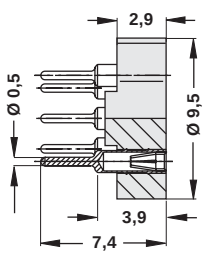
K

L

M

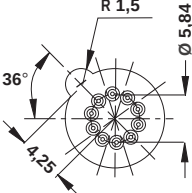
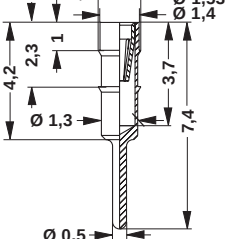
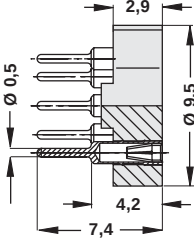
N

**Sockets for TO 5**

|                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |
| art. no.                                                                            | no. of contacts                                                                     |                                                                                      |                                                                                       |
| PF 53 ...                                                                           | 3                                                                                   |                                                                                      |                                                                                       |
|    |    |    |    |
| art. no.                                                                            | no. of contacts                                                                     |                                                                                      |                                                                                       |
| PF 54 ...                                                                           | 4                                                                                   |                                                                                      |                                                                                       |
|  |   |   |   |
| art. no.                                                                            | no. of contacts                                                                     |                                                                                      |                                                                                       |
| PF 58 23 ...                                                                        | 8                                                                                   |                                                                                      |                                                                                       |
|  |  |  |  |
| art. no.                                                                            | no. of contacts                                                                     |                                                                                      |                                                                                       |
| PF 58 2 ...                                                                         | 8                                                                                   |                                                                                      |                                                                                       |
| please indicate:                                                                    | ... surface<br>G = gold-plated<br>Z = tin-plated                                    |                                                                                      |                                                                                       |

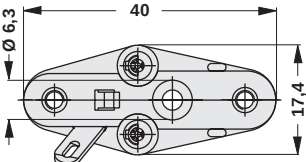
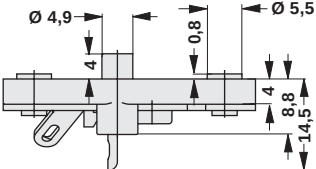
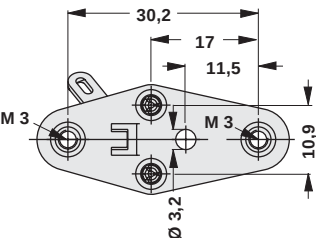
**contact spring:** gold-plated

Sockets for TO 5

|                                                                                   |                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |    |
| art. no.                                                                          | no. of contacts                                                                                                                                                                                                                                          |
| PF 510 ...                                                                        | 10                                                                                                                                                                                                                                                       |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                     |                                                                                                                                                                                                                                                          |

contact spring: gold-plated

Sockets for power transistors TO 3

|                                                                                    |                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |    |
| art. no.                                                                           | no. of contacts                                                                                                                                                                                                                                             |
| TF 3 2                                                                             | 3                                                                                                                                                                                                                                                           |

insulator: PCT, glassfibre filled

contact: beryllium copper; 4 ... 6 µm Sn

Technical data:

current rating: 15 A max.

capacitance: 1 pF

contact resistance: <10 mΩ

insulation resistance: >10<sup>10</sup> Ω/cm

temperature range: -65 °C ... +290 °C

test voltage: 1650 V

A

B

C

D

E

F

G

H

I

K

L

M

N

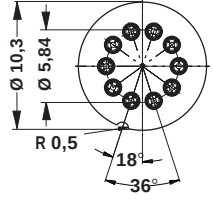
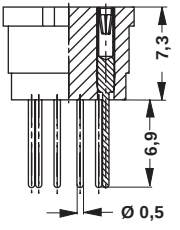
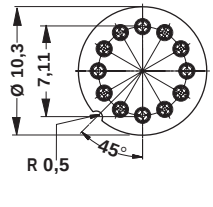
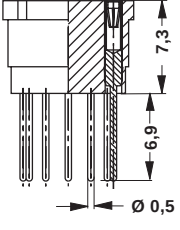
**Transistor sockets - teflon sockets for TO 5**

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| <b>art. no.</b>                                                                     | no. of contacts                                                                      |
| <b>TF 53</b>                                                                        | 3                                                                                    |
|    |    |
| <b>art. no.</b>                                                                     | no. of contacts                                                                      |
| <b>TF 54</b>                                                                        | 4                                                                                    |
|   |  |
| <b>art. no.</b>                                                                     | no. of contacts                                                                      |
| <b>TF 56</b>                                                                        | 6                                                                                    |
|  |  |
| <b>art. no.</b>                                                                     | no. of contacts                                                                      |
| <b>TF 58</b>                                                                        | 8                                                                                    |

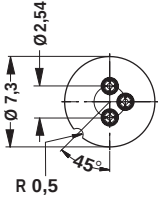
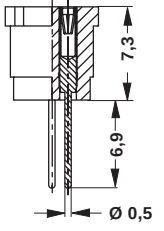
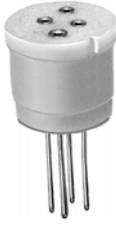
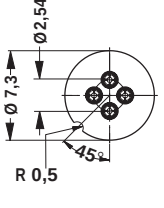
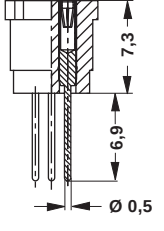
**contact shell and contact spring:** gold-plated



Transistor sockets - teflon sockets for TO 5

|                                                                                   |                                                                                                                                                                       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |   |
| art. no.                                                                          | no. of contacts                                                                                                                                                       |
| TF 510                                                                            | 10                                                                                                                                                                    |
|  |   |
| art. no.                                                                          | no. of contacts                                                                                                                                                       |
| TF 512                                                                            | 12                                                                                                                                                                    |

Transistor sockets - teflon sockets for TO 18

|                                                                                     |                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |   |
| art. no.                                                                            | no. of contacts                                                                                                                                                           |
| TF 183                                                                              | 3                                                                                                                                                                         |
|  |   |
| art. no.                                                                            | no. of contacts                                                                                                                                                           |
| TF 184                                                                              | 4                                                                                                                                                                         |

contact shell and contact spring: gold-plated

Programmable headers

Version for soldering technique

|               |          |                 |                  |
|---------------|----------|-----------------|------------------|
|               |          |                 |                  |
|               | art. no. | no. of contacts | dim. [mm]<br>A B |
| CAB 3 02 03 Z | 2        | 2.22            | -                |
| CAB 3 04 03 Z | 4        | 4.76            | 2.54             |
| CAB 3 06 03 Z | 6        | 7.30            | 5.08             |
| CAB 3 08 03 Z | 8        | 9.84            | 7.62             |
| CAB 3 10 03 Z | 10       | 12.38           | 10.16            |
| CAB 3 12 03 Z | 12       | 14.92           | 12.70            |
| CAB 3 14 03 Z | 14       | 17.46           | 15.24            |
| CAB 3 16 03 Z | 16       | 20.00           | 17.78            |

contacts: brass

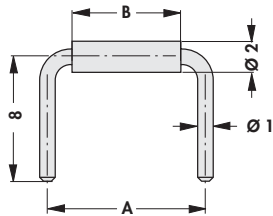
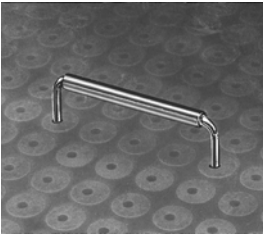
The contacts have a preformed dividing groove and can easily be separated with a screwdriver blade.

Version for SMD technology

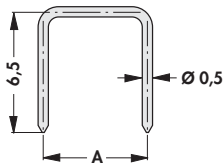
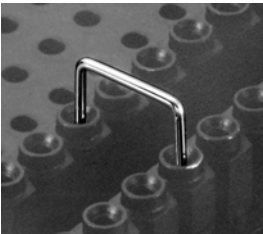
|                |          |                 |                  |
|----------------|----------|-----------------|------------------|
|                |          |                 |                  |
|                | art. no. | no. of contacts | dim. [mm]<br>A B |
| CAB 3 SMD 04 Z | 4        | 4.76            | 2.54             |
| CAB 3 SMD 08 Z | 8        | 9.84            | 7.62             |
| CAB 3 SMD 10 Z | 10       | 12.38           | 10.16            |
| CAB 3 SMD 12 Z | 12       | 14.92           | 12.70            |
| CAB 3 SMD 14 Z | 14       | 17.46           | 15.24            |
| CAB 3 SMD 16 Z | 16       | 20.00           | 17.78            |

contacts: brass

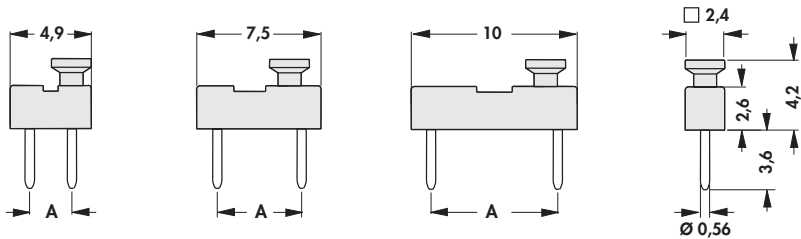
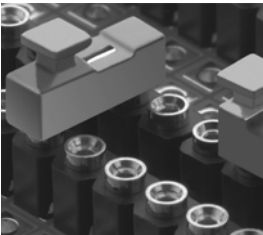
The contacts have a preformed dividing groove and can easily be separated with a screwdriver blade.



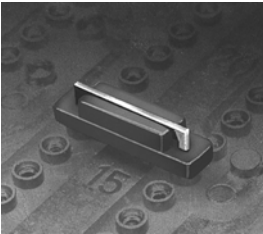
| art. no. | dim. [mm] |       |
|----------|-----------|-------|
|          | A         | B     |
| LB 02 G  | 5.08      | 2.00  |
| LB 03 G  | 7.62      | 4.50  |
| LB 04 G  | 10.16     | 7.00  |
| LB 06 G  | 15.24     | 12.00 |



| art. no.                                                       | dim. [mm] |
|----------------------------------------------------------------|-----------|
|                                                                | A         |
| CB 1 ...                                                       | 2.54      |
| CB 3 ...                                                       | 5.08      |
| CB 6 ...                                                       | 7.62      |
| please indicate: ... surface<br>G=gold-plated<br>Z =tin-plated |           |



| art. no. | dim. [mm] |  |
|----------|-----------|--|
|          | A         |  |
| LEB 01 G | 2.54      |  |
| LEB 02 G | 5.08      |  |
| LEB 03 G | 7.62      |  |



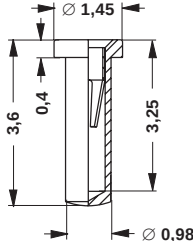
| art. no. |
|----------|
| PSB 03 G |

A

Connector-sleeves

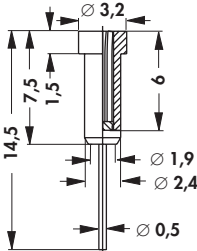
B

for 0.4 mm with BeCu spring 3 µm Ni, 1 µm Au

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          |                                                                                    |
| SB 1                                                                              |                                                                                    |

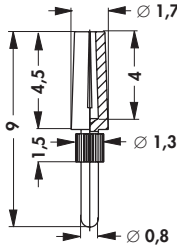
D

for 0.4 mm with bronze spring, teflon insulated

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          |                                                                                    |
| SB 2                                                                              |                                                                                    |

F

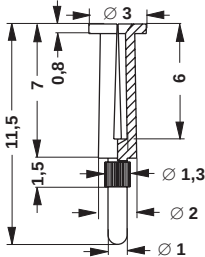
for 0.8 mm, slotted

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            |                                                                                      |
| SB 3                                                                                |                                                                                      |

G

H

for 1 mm, slotted

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            |                                                                                      |
| SB 4                                                                                |                                                                                      |

K

L

material: brass 2 µm Ni, 0.25 µm Au (unless otherwise stated)

M

N

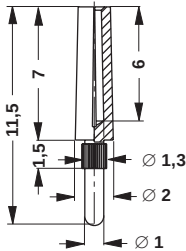
F 25

High-prec. male headers 2.54 solder → G 21 - 24  
Teflon sockets/TO 5 & TO 18 → F 21 - 22  
High-precision female headers → G 3 - 5  
Jumper links → F 24

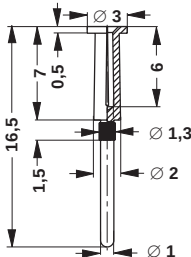
Sockets für PLCC  
Single precision contacts

→ F 17  
→ F 2 - 3

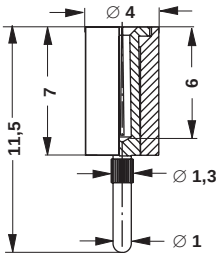
for 1 mm, slotted

|                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          |                                                                                   |
| SB 5                                                                              |                                                                                   |

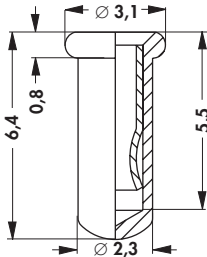
for 1 mm, slotted

|                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          |                                                                                   |
| SB 6                                                                              |                                                                                   |

for 1 mm, slotted, plastic insulated

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            |                                                                                      |
| SB 9                                                                                |                                                                                      |

for 1 mm, with BeCu spring 3 µm Ni, 1 µm Au

|                                                                                     |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            |                                                                                     |
| SB 12                                                                               |                                                                                     |

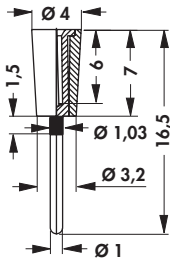
material: brass 2 µm Ni, 0.25 µm Au (unless otherwise stated)

A

Connector-sleeves

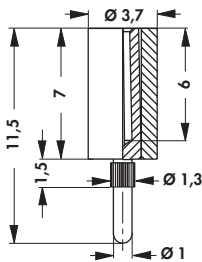
B

for 1 mm, slotted, plastic insulated

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          |                                                                                    |
| SB 16                                                                             |                                                                                    |

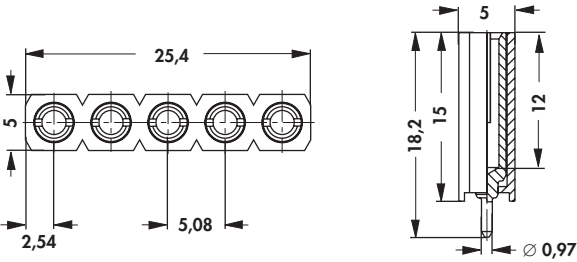
D

for 2 mm, slotted, plastic insulated

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          |                                                                                    |
| SB 13 ...                                                                         |                                                                                    |
| please indicate: ... case colour<br>B = blue<br>R = red<br>S = black              |                                                                                    |

G

for 2 mm, slotted, plastic insulated, separable

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            |                                                                                      |
| SB 15                                                                               |                                                                                      |

K

material: brass 2 µm Ni, 0.25 µm Au (unless otherwise stated)

L

M

N

F 27

Teflon sockets/TO 5 & TO 18  
Sockets für PLCC  
High-precision female headers  
Jumper links

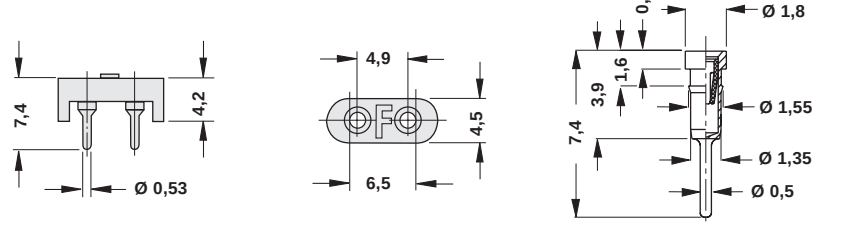
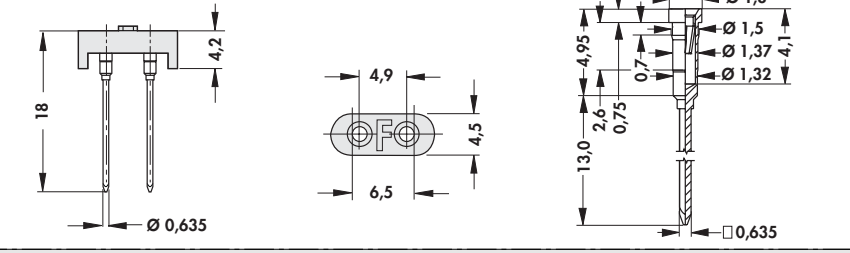
→ F 21 - 22  
→ F 17  
→ G 3 - 5  
→ F 24

Single precision contacts → F 2 - 3  
High-prec. male headers 2.54 solder → G 21 - 24  
Sockets für PLCC → F 17

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          |                                                                                    |
| QS 25 GS                                                                          |                                                                                    |

contact surface finish: silver-plated

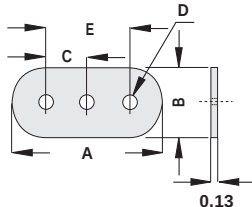
Precision sockets for crystal oscillators in case HC 18

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| art. no.                                                                            |                                                                                      |
| PQ 18 ...                                                                           |                                                                                      |
| please indicate:                                                                    | ... surface<br>G=gold-plated<br>Z=tin-plated                                         |
|  |  |
| art. no.                                                                            |                                                                                      |
| PQ 18 W ...                                                                         |                                                                                      |
| please indicate:                                                                    | ... surface<br>G=gold-plated<br>Z=tin-plated                                         |

contact spring: gold-plated



Insulators for crystal mounts

|                                                                                   |                                                                                                                                                                                                        |           |      |      |      |          |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|------|------|----------|
|  | <div><div>*</div><div></div></div> |           |      |      |      |          |
| art. no.                                                                          | case design                                                                                                                                                                                            | dim. [mm] |      |      |      |          |
|                                                                                   |                                                                                                                                                                                                        | A         | B    | C    | D    | E (max.) |
| ISQ 01                                                                            | HC-80/U                                                                                                                                                                                                | 8.30      | 3.70 | -    | 0.71 | 3.80     |
| ISQ 02                                                                            | HC-80/U                                                                                                                                                                                                | 8.30      | 3.70 | -    | *    | 3.80     |
| ISQ 03                                                                            | HC-80/U                                                                                                                                                                                                | 8.30      | 3.70 | 1.90 | 0.71 | 3.80     |
| ISQ 04                                                                            | HC-18/U, HC-43/U, HC-49/U                                                                                                                                                                              | 11.80     | 5.60 | -    | 0.71 | 4.90     |
| ISQ 05                                                                            | HC-18/U, HC-43/U, HC-49/U                                                                                                                                                                              | 11.80     | 5.60 | -    | *    | 4.90     |
| ISQ 06                                                                            | HC-18/U, HC-43/U, HC-49/U                                                                                                                                                                              | 11.80     | 5.60 | 2.40 | 0.71 | 4.90     |
| ISQ 07                                                                            | HC-18/U, HC-43/U, HC-49/U                                                                                                                                                                              | 11.80     | 5.60 | 2.40 | *    | 4.90     |
| ISQ 08                                                                            | HC-25/U, HC-42/U, HC-50/U                                                                                                                                                                              | 11.80     | 5.60 | -    | 1.30 | 4.90     |

\* = self retaining

Technical data:

foil: MYLAR

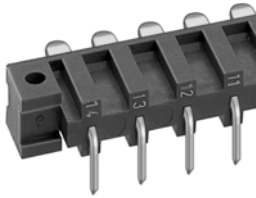
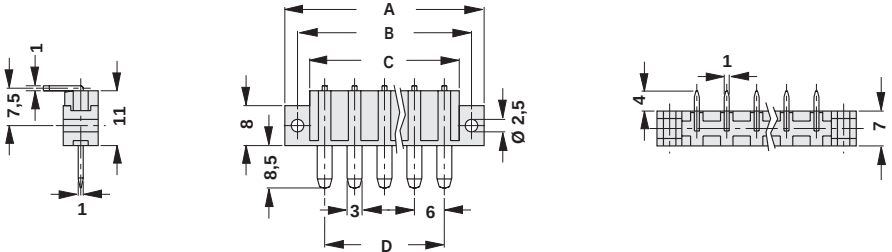
thickness: 0.127 mm

heat resistance: 250 °C

dielectric strength: 9 KV

Male connector

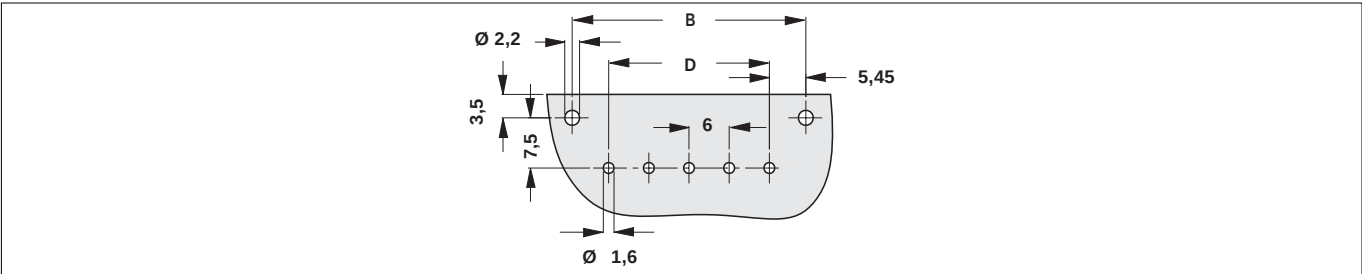
one row, angled

|  |  |           |       |       |       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|-------|-------|
| art. no.                                                                          | no. of contacts                                                                    | dim. [mm] |       |       |       |
|                                                                                   |                                                                                    | A         | B     | C     | D     |
| MELA 05                                                                           | 5                                                                                  | 40.00     | 34.90 | 30.00 | 24.00 |
| MELA 07                                                                           | 7                                                                                  | 52.00     | 46.90 | 42.00 | 36.00 |

surface: silver-plated

As per DIN 41622.

PCB perforation



A

# High-precision male headers soldering technique

Solder and plug pins, Ø 0.5 mm

|                                                                         |  |                                                              |                                                                          |                                                                     |  |
|-------------------------------------------------------------------------|--|--------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------|--|
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 05 ...</b> |  |                                                              | <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 205 ...</b> |                                                                     |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 03 ...</b> |  |                                                              | <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 203 ...</b> |                                                                     |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 04 ...</b> |  |                                                              | <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 204 ...</b> |                                                                     |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 02 ...</b> |  |                                                              | <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 202 ...</b> |                                                                     |  |
| <b>please indicate:</b>                                                 |  | <b>... no. of contacts</b><br>one row 1-50<br>two rows 2-100 |                                                                          | <b>... surface</b><br><b>G</b> =gold-plated<br><b>Z</b> =tin-plated |  |

Also available as single contact, SK ...

## version:

MK 05 / MK 205: contact pin on both sides  
MK 03 / MK 203: with solder button  
MK 04 / MK 204: with diagonal solder bucket  
MK 02 / MK 202: with solder fork

I

K

L

M

N

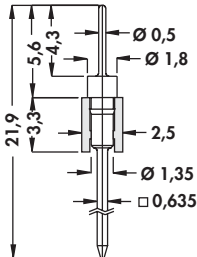
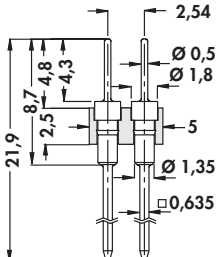
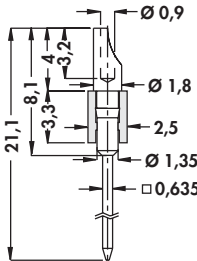
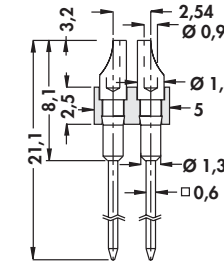
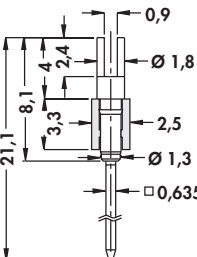
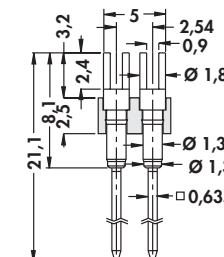
**G 3**

High-prec. fem. headers 1.27 solder → G 72  
Special male & female headers → G 19  
Technical data → G 75 - 80  
High-prec. male headers 2.54 solder → G 21 - 24

High-prec. fem. headers 2.54 sold. → G 31 - 34  
Male headers 2.54 solder → G 8  
Male headers 2.54 SMD → G 37 - 42  
Single precision contacts → F 2 - 3

## High-precision male headers soldering technique

**Wire wrap pin, □ 0,635 mm**

|                  |                                                                                    |                                                                                    |                                              |                                                                                      |                                                                                      |
|------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| art. no.         |                                                                                    |                                                                                    | art. no.                                     |                                                                                      |                                                                                      |
| MK 11 ...        |   |   | MK 211 ...                                   |   |   |
| art. no.         |                                                                                    |                                                                                    | art. no.                                     |                                                                                      |                                                                                      |
| MK 10 ...        |   |   | MK 210 ...                                   |   |   |
| art. no.         |                                                                                    |                                                                                    | art. no.                                     |                                                                                      |                                                                                      |
| MK 08 ...        |  |  | MK 208 ...                                   |  |  |
| please indicate: |                                                                                    | ... no. of contacts<br>one row 1-50<br>two rows 2-100                              | ... surface<br>G=gold-plated<br>Z=tin-plated |                                                                                      |                                                                                      |

**version:**

MK 11 / MK 211: solder and plug pin, Ø 0.5 mm

MK 10 / MK 210: with diagonal solder bucket

MK 08 / MK 208: with solder fork

A

High-precision male headers soldering technique

Solder and plug pins, Ø 0,5 mm

|                     |      |      |                |      |      |      |
|---------------------|------|------|----------------|------|------|------|
| art. no.            |      |      | art. no.       |      |      |      |
| MK 51 ...           |      |      | MK 251 ...     |      |      |      |
|                     |      |      |                |      |      |      |
| art. no.            |      |      |                |      |      |      |
| MK 15 ...           |      |      |                |      |      |      |
|                     |      |      |                |      |      |      |
|                     |      |      |                |      |      |      |
|                     |      |      |                |      |      |      |
| art. no.            | A    | X    | art. no.       | A    | B    | X    |
| MK 14 X 1 ...       | 13.4 | 2.7  | MK 214 X 1 ... | 13.4 | 1.9  | 2.7  |
| MK 14 X 2 ...       | 15.4 | 4.7  | MK 214 X 2 ... | 15.4 | 3.9  | 4.7  |
| MK 14 X 3 ...       | 22.2 | 11.7 | MK 214 X 3 ... | 22.2 | 10.9 | 11.7 |
| please indicate:    |      |      |                |      |      |      |
| ... no. of contacts |      |      | ... surface    |      |      |      |
| one row 1-50        |      |      | G=gold-plated  |      |      |      |
| two rows 2-100      |      |      | Z=tin-plated   |      |      |      |

version:

MK 51 ... / MK 251 ... / MK 15 ...: 90° PCB connection  
MK 14 X ... / MK 214 X ...: parallel PCB connection

I

K

L

M

N

High-precision male headers soldering technique

Low profile

|                                                                                            |  |  |               |  |  |
|--------------------------------------------------------------------------------------------|--|--|---------------|--|--|
| art. no.                                                                                   |  |  | art. no.      |  |  |
| MK LP 40 ...                                                                               |  |  | MK LP 240 ... |  |  |
| art. no.                                                                                   |  |  | art. no.      |  |  |
| MK LP 41 ...                                                                               |  |  | MK LP 241 ... |  |  |
| art. no.                                                                                   |  |  | art. no.      |  |  |
| MK LP 42 ...                                                                               |  |  | MK LP 242 ... |  |  |
| art. no.                                                                                   |  |  |               |  |  |
| MK LP 43 ...                                                                               |  |  |               |  |  |
| please indicate:                      ... no. of contacts                      ... surface |  |  |               |  |  |
| one row 1 - 50                      G = gold-plated                                        |  |  |               |  |  |
| two rows 4 - 100                      Z = tin-plated                                       |  |  |               |  |  |

Also available as single contact, SK ...

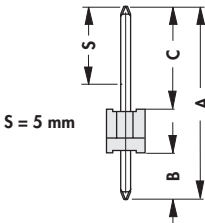
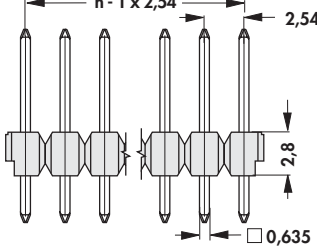
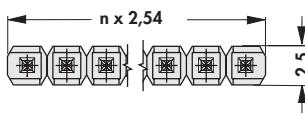
High-precision male headers soldering technique

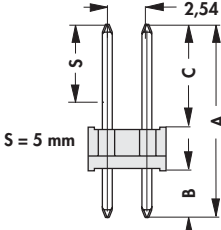
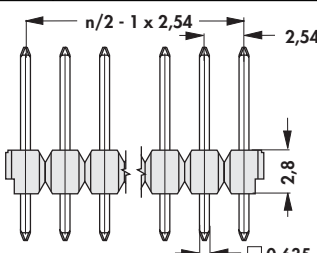
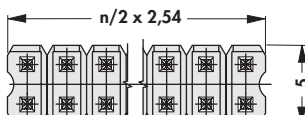
Low profile

one row

|                                                                                                                     |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| art. no.                                                                                                            |  |  |  |  |
| SL 7 ...                                                                                                            |  |  |  |  |
| art. no.                                                                                                            |  |  |  |  |
| SL 8 ...                                                                                                            |  |  |  |  |
| art. no.                                                                                                            |  |  |  |  |
| SL 9 ...                                                                                                            |  |  |  |  |
| please indicate:      ... no. of contacts      ... surface<br>one row 1 - 20      G = gold-plated<br>Z = tin-plated |  |  |  |  |

0.635 mm, standard

|                                                                                   |                                                                                   |      |       |                                                                                    |           |      |                                                                                     |  |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-------|------------------------------------------------------------------------------------|-----------|------|-------------------------------------------------------------------------------------|--|--|
|  |  |      |       |  |           |      |  |  |  |
| <b>art. no.</b>                                                                   | dim. [mm]                                                                         |      |       | <b>art. no.</b>                                                                    | dim. [mm] |      |                                                                                     |  |  |
|                                                                                   | A                                                                                 | B    | C     |                                                                                    | A         | B    | C                                                                                   |  |  |
| <b>SL 11 097...</b>                                                               | 9.70                                                                              | 3.00 | 3.90  | <b>SL 1 025 ...</b>                                                                | 11.20     | 2.60 | 5.80                                                                                |  |  |
| <b>SL 11 112 ...</b>                                                              | 11.20                                                                             | 3.00 | 5.40  | <b>SL 1 053 ...</b>                                                                | 13.90     | 5.80 | 5.30                                                                                |  |  |
| <b>SL 11 124 ...</b>                                                              | 12.40                                                                             | 3.00 | 6.60  | <b>SL 1 078 ...</b>                                                                | 16.40     | 5.80 | 7.80                                                                                |  |  |
| <b>SL 11 139 ...</b>                                                              | 13.90                                                                             | 3.00 | 8.10  | <b>SL 1 104 ...</b>                                                                | 19.00     | 5.80 | 10.40                                                                               |  |  |
| <b>SL 11 164 ...</b>                                                              | 16.40                                                                             | 3.00 | 10.60 | <b>SL 1 128 ...</b>                                                                | 21.40     | 5.80 | 12.80                                                                               |  |  |
| <b>SL 11 190 ...</b>                                                              | 19.00                                                                             | 3.00 | 13.20 | <b>SL 1 154 ...</b>                                                                | 24.00     | 5.80 | 15.40                                                                               |  |  |
| <b>SL 11 214 ...</b>                                                              | 21.40                                                                             | 3.00 | 15.60 | <b>SL 1 179 ...</b>                                                                | 26.50     | 5.80 | 17.90                                                                               |  |  |
| <b>SL 11 240 ...</b>                                                              | 24.00                                                                             | 3.00 | 18.20 | <b>SL 1 230 ...</b>                                                                | 31.60     | 5.80 | 23.00                                                                               |  |  |
| <b>SL 11 265 ...</b>                                                              | 26.50                                                                             | 3.00 | 20.70 |                                                                                    | -         | -    | -                                                                                   |  |  |
| <b>SL 11 316 ...</b>                                                              | 31.60                                                                             | 3.00 | 25.80 |                                                                                    |           |      |                                                                                     |  |  |

|                                                                                     |                                                                                     |      |       |                                                                                     |           |      |                                                                                       |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|-------|-------------------------------------------------------------------------------------|-----------|------|---------------------------------------------------------------------------------------|--|--|
|  |  |      |       |  |           |      |  |  |  |
| <b>art. no.</b>                                                                     | dim. [mm]                                                                           |      |       | <b>art. no.</b>                                                                     | dim. [mm] |      |                                                                                       |  |  |
|                                                                                     | A                                                                                   | B    | C     |                                                                                     | A         | B    | C                                                                                     |  |  |
| <b>SL 22 097 ...</b>                                                                | 9.70                                                                                | 3.00 | 3.90  | <b>SL 2 025 ...</b>                                                                 | 11.20     | 2.60 | 5.80                                                                                  |  |  |
| <b>SL 22 112 ...</b>                                                                | 11.20                                                                               | 3.00 | 5.40  | <b>SL 2 053 ...</b>                                                                 | 13.90     | 5.80 | 5.30                                                                                  |  |  |
| <b>SL 22 124 ...</b>                                                                | 12.40                                                                               | 3.00 | 6.60  | <b>SL 2 078 ...</b>                                                                 | 16.40     | 5.80 | 7.80                                                                                  |  |  |
| <b>SL 22 139 ...</b>                                                                | 13.90                                                                               | 3.00 | 8.10  | <b>SL 2 104 ...</b>                                                                 | 19.00     | 5.80 | 10.40                                                                                 |  |  |
| <b>SL 22 164 ...</b>                                                                | 16.40                                                                               | 3.00 | 10.60 | <b>SL 2 128 ...</b>                                                                 | 21.40     | 5.80 | 12.80                                                                                 |  |  |
| <b>SL 22 190 ...</b>                                                                | 19.00                                                                               | 3.00 | 13.20 | <b>SL 2 154 ...</b>                                                                 | 24.00     | 5.80 | 15.40                                                                                 |  |  |
| <b>SL 22 214 ...</b>                                                                | 21.40                                                                               | 3.00 | 15.60 | <b>SL 2 179 ...</b>                                                                 | 26.50     | 5.80 | 17.90                                                                                 |  |  |
| <b>SL 22 240 ...</b>                                                                | 24.00                                                                               | 3.00 | 18.20 | <b>SL 2 230 ...</b>                                                                 | 31.60     | 5.80 | 23.00                                                                                 |  |  |
| <b>SL 22 265 ...</b>                                                                | 26.50                                                                               | 3.00 | 20.70 |                                                                                     | -         | -    | -                                                                                     |  |  |
| <b>SL 22 316 ...</b>                                                                | 31.60                                                                               | 3.00 | 25.80 |                                                                                     |           |      |                                                                                       |  |  |

please indicate:

... no. of contacts

one row 1-36

two rows 2-72

... surface

S =selective gold-plated

G=gold-plated

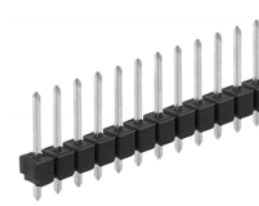
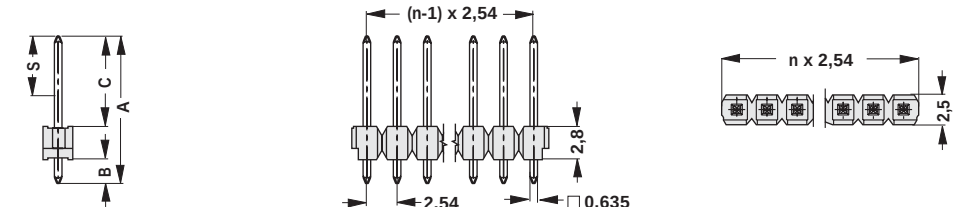
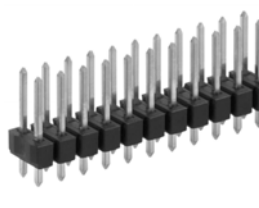
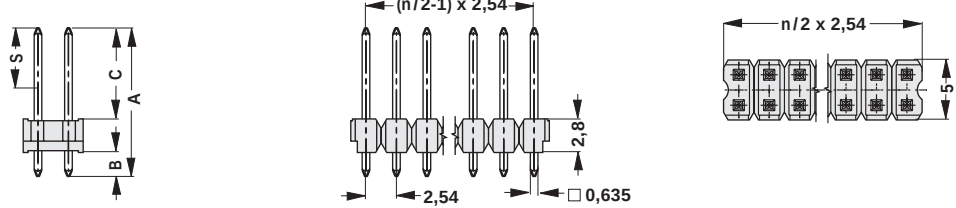
Z =tin-plated

Every pin length is available on request.



Male header in through-hole-reflow-soldering technique

0.635 mm, THR soldering technique

|                                                                                    |                                                                                     |      |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|-------|
|   |   |      |       |
| art. no.                                                                           | dim. [mm]                                                                           |      |       |
|                                                                                    | A                                                                                   | B    | C     |
| SL 20 THR 097 ...                                                                  | 9.70                                                                                | 2.00 | 4.90  |
| SL 20 THR 112 ...                                                                  | 11.20                                                                               | 2.00 | 6.40  |
| SL 20 THR 124 ...                                                                  | 12.40                                                                               | 2.00 | 7.60  |
| SL 20 THR 139 ...                                                                  | 13.90                                                                               | 2.00 | 9.10  |
| SL 20 THR 164 ...                                                                  | 16.40                                                                               | 2.00 | 11.60 |
| please indicate:                                                                   | ... no. of contacts<br>one row 1-36                                                 |      |       |
|                                                                                    | ... surface<br>S = selective gold-plated<br>G = gold-plated<br>Z = tin-plated       |      |       |
|  |  |      |       |
| art. no.                                                                           | dim. [mm]                                                                           |      |       |
|                                                                                    | A                                                                                   | B    | C     |
| SL 21 THR 097 ...                                                                  | 9.70                                                                                | 2.00 | 4.90  |
| SL 21 THR 112 ...                                                                  | 11.20                                                                               | 2.00 | 6.40  |
| SL 21 THR 124 ...                                                                  | 12.40                                                                               | 2.00 | 7.60  |
| SL 21 THR 139 ...                                                                  | 13.90                                                                               | 2.00 | 9.10  |
| SL 21 THR 164 ...                                                                  | 16.40                                                                               | 2.00 | 11.60 |
| please indicate:                                                                   | ... no. of contacts<br>two rows 2-72                                                |      |       |
|                                                                                    | ... surface<br>S = selective gold-plated<br>G = gold-plated<br>Z = tin-plated       |      |       |

Every pin length is available on request.

"dimensions A + B" changeable

one row, □ 0.635 mm

| art. no.                            | dim. [mm] |       |      | art. no.                                                                  | dim. [mm] |       |      |
|-------------------------------------|-----------|-------|------|---------------------------------------------------------------------------|-----------|-------|------|
|                                     | A         | B     | C    |                                                                           | A         | B     | C    |
| SLK 3 025 ...                       | 4.50      | 3.00  | 3.00 | SL 3 131 ...                                                              | 14.60     | 13.10 | 5.80 |
| SL 3 025 ...                        | 4.50      | 3.00  | 5.80 | SL 3 152 ...                                                              | 16.70     | 15.20 | 5.80 |
| SL 3 053 ...                        | 6.90      | 5.40  | 5.80 | SL 3 182 ...                                                              | 19.70     | 18.20 | 5.80 |
| SL 3 080 ...                        | 9.50      | 8.00  | 5.80 | SL 3 207 ...                                                              | 22.20     | 20.70 | 5.80 |
| SL 3 101 ...                        | 11.60     | 10.10 | 5.80 |                                                                           |           |       |      |
| please indicate:                    |           |       |      |                                                                           |           |       |      |
| ... no. of contacts<br>one row 1-36 |           |       |      | ... surface<br>S =selective gold-plated<br>G=gold-plated<br>Z =tin-plated |           |       |      |

The surface of dimension "C" of following articles is selective gold-plated: SLK 3 025 ... S, SL 3 025 ... S.

two rows, □ 0.635 mm

| art. no.                             | dim. [mm] |      |      | art. no.                                                                  | dim. [mm] |       |      |  |  |
|--------------------------------------|-----------|------|------|---------------------------------------------------------------------------|-----------|-------|------|--|--|
|                                      | A         | B    | C    |                                                                           | A         | B     | C    |  |  |
| SLK 4 025 ...                        | 4.50      | 3.00 | 3.00 | SL 4 101 ...                                                              | 11.60     | 10.10 | 5.80 |  |  |
| SL 4 025 ...                         | 4.50      | 3.00 | 5.80 | SL 4 152 ...                                                              | 16.70     | 15.20 | 5.80 |  |  |
| please indicate:                     |           |      |      |                                                                           |           |       |      |  |  |
| ... no. of contacts<br>two rows 2-72 |           |      |      | ... surface<br>S =selective gold-plated<br>G=gold-plated<br>Z =tin-plated |           |       |      |  |  |

The surface of dimension "C" of following articles is selective gold-plated: SLK 4 025 ... S, SL 4 025 ... S.

V-notches permit breaking! Therefore any required number of contacts is available.  
Every pin length is available on request.

Male headers soldering technique

Insertion side "dimension C" changeable

one row, □ 0.635 mm

|                  |                                     |                                                                               |  |
|------------------|-------------------------------------|-------------------------------------------------------------------------------|--|
|                  |                                     |                                                                               |  |
| art. no.         | dim. [mm]<br>C                      |                                                                               |  |
| SL 18 042 ...    | 4.20                                |                                                                               |  |
| SL 18 082 ...    | 8.20                                |                                                                               |  |
| SL 18 108 ...    | 10.80                               |                                                                               |  |
| SL 18 132 ...    | 13.20                               |                                                                               |  |
| SL 18 159 ... S  | 15.90                               |                                                                               |  |
| please indicate: | ... no. of contacts<br>one row 1-36 | ... surface<br>S = selective gold-plated<br>G = gold-plated<br>Z = tin-plated |  |

two rows, □ 0.635 mm

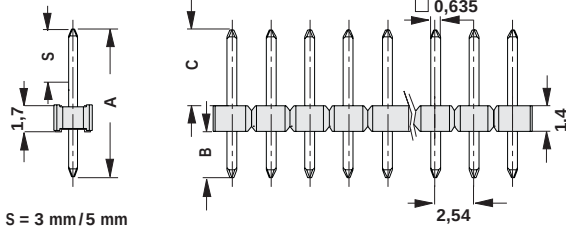
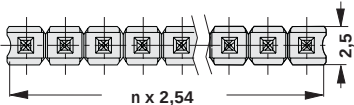
|                  |                                      |                                                                               |  |
|------------------|--------------------------------------|-------------------------------------------------------------------------------|--|
|                  |                                      |                                                                               |  |
| art. no.         | dim. [mm]<br>C                       |                                                                               |  |
| SL 19 082 ...    | 8.20                                 |                                                                               |  |
| SL 19 108 ...    | 10.80                                |                                                                               |  |
| SL 19 132 ...    | 13.20                                |                                                                               |  |
| SL 19 159 ... S  | 15.90                                |                                                                               |  |
| please indicate: | ... no. of contacts<br>two rows 2-72 | ... surface<br>S = selective gold-plated<br>G = gold-plated<br>Z = tin-plated |  |

V-notches permit breaking! Therefore any required number of contacts is available.  
Every pin length is available on request.

Male headers soldering technique

Low profile, straight

one row, □ 0.635 mm

|                                                                                   |                                                                                                     |      |      |                                                                                     |           |      |       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|-----------|------|-------|
|  | <br>S = 3 mm/5 mm |      |      |  |           |      |       |
| art. no.                                                                          | dim. [mm]                                                                                           |      |      | art. no.                                                                            | dim. [mm] |      |       |
|                                                                                   | A                                                                                                   | B    | C    |                                                                                     | A         | B    | C     |
| SL LP 1 082 ...                                                                   | 8.20                                                                                                | 3.00 | 3.50 | SL LP 1 139 ...                                                                     | 13.90     | 3.00 | 9.20  |
| SL LP 1 097 ...                                                                   | 9.70                                                                                                | 3.00 | 5.00 | SL LP 1 164 ...                                                                     | 16.40     | 3.00 | 11.70 |
| SL LP 1 112 ...                                                                   | 11.20                                                                                               | 3.00 | 6.50 | SL LP 1 190 ...                                                                     | 19.00     | 3.00 | 14.30 |
| please indicate:                                                                  |                                                                                                     |      |      |                                                                                     |           |      |       |
| ... no. of contacts<br>one row 1-36                                               |                                                                                                     |      |      | ... surface<br>S =selective gold-plated<br>G=gold-plated<br>Z =tin-plated           |           |      |       |

two rows, □ 0.635 mm

|                                      |           |      |      |                                                                           |           |      |       |
|--------------------------------------|-----------|------|------|---------------------------------------------------------------------------|-----------|------|-------|
|                                      |           |      |      |                                                                           |           |      |       |
| art. no.                             | dim. [mm] |      |      | art. no.                                                                  | dim. [mm] |      |       |
|                                      | A         | B    | C    |                                                                           | A         | B    | C     |
| SL LP 2 082 ...                      | 8.20      | 3.00 | 3.50 | SL LP 2 139 ...                                                           | 13.90     | 3.00 | 9.20  |
| SL LP 2 097 ...                      | 9.70      | 3.00 | 5.00 | SL LP 2 164 ...                                                           | 16.40     | 3.00 | 11.70 |
| SL LP 2 112 ...                      | 11.20     | 3.00 | 6.50 | SL LP 2 190 ...                                                           | 19.00     | 3.00 | 14.30 |
| please indicate:                     |           |      |      |                                                                           |           |      |       |
| ... no. of contacts<br>two rows 2-72 |           |      |      | ... surface<br>S =selective gold-plated<br>G=gold-plated<br>Z =tin-plated |           |      |       |

Every pin length is available on request.

A

Male headers soldering technique

B

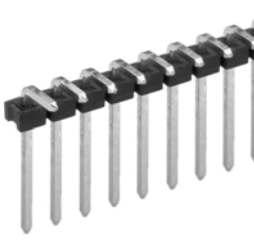
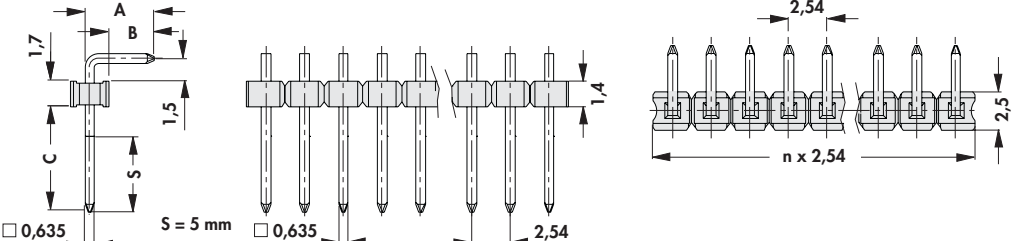
Low profile, angled

one row, □ 0.635 mm

C

D

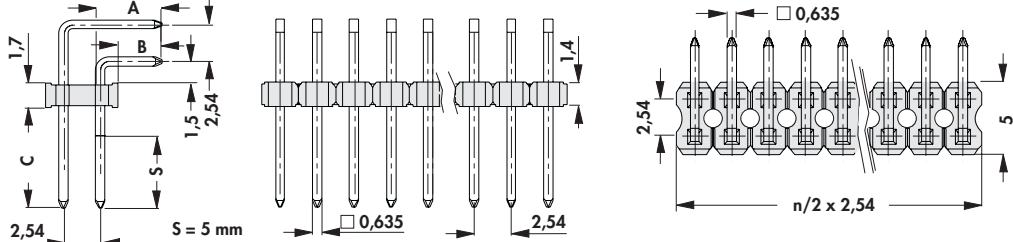
E

|                                                                                                                        |           |      |      |                 |           |      |      |
|------------------------------------------------------------------------------------------------------------------------|-----------|------|------|-----------------|-----------|------|------|
|                                       |           |      |      |                 |           |      |      |
|                                      |           |      |      |                 |           |      |      |
| art. no.                                                                                                               | dim. [mm] |      |      | art. no.        | dim. [mm] |      |      |
|                                                                                                                        | A         | B    | C    |                 | A         | B    | C    |
| SL LP 3 041 ...                                                                                                        | 4.50      | 3.00 | 4.10 | SL LP 3 069 ... | 4.50      | 3.00 | 6.90 |
| please indicate: ... no. of contacts one row 1-36 ... surface S = selective gold-plated G = gold-plated Z = tin-plated |           |      |      |                 |           |      |      |

F

two rows, □ 0.635 mm

G

|                                                                                                                         |           |      |      |                 |           |      |      |
|-------------------------------------------------------------------------------------------------------------------------|-----------|------|------|-----------------|-----------|------|------|
|                                       |           |      |      |                 |           |      |      |
|                                      |           |      |      |                 |           |      |      |
| art. no.                                                                                                                | dim. [mm] |      |      | art. no.        | dim. [mm] |      |      |
|                                                                                                                         | A         | B    | C    |                 | A         | B    | C    |
| SL LP 4 041 ...                                                                                                         | 4.50      | 3.00 | 4.10 | SL LP 4 069 ... | 4.50      | 3.00 | 6.90 |
| please indicate: ... no. of contacts two rows 2-72 ... surface S = selective gold-plated G = gold-plated Z = tin-plated |           |      |      |                 |           |      |      |

H

I

Every pin length is available on request.

K

L

M

N

0.635 mm, Sandwich

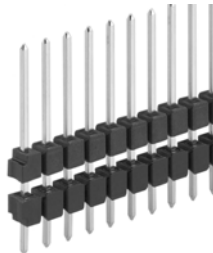
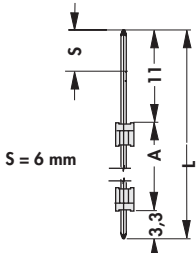
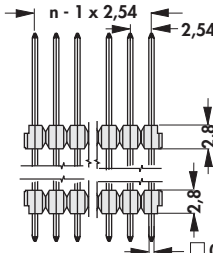
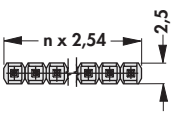
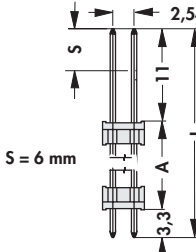
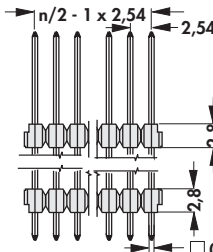
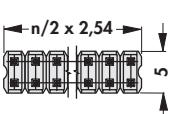
|                         |                            |       |                                 |                  |       |
|-------------------------|----------------------------|-------|---------------------------------|------------------|-------|
|                         |                            |       |                                 |                  |       |
| <b>art. no.</b>         | <b>dim. [mm]</b>           |       | <b>art. no.</b>                 | <b>dim. [mm]</b> |       |
|                         | A                          | L     |                                 | A                | L     |
| <b>SL 5 071 ...</b>     | 7.10                       | 16.40 | <b>SL 5 223 ...</b>             | 22.30            | 31.60 |
| <b>SL 5 097 ...</b>     | 9.70                       | 19.00 | <b>SL 5 237 ...</b>             | 23.70            | 33.00 |
| <b>SL 5 121 ...</b>     | 12.10                      | 21.40 | <b>SL 5 285 ...</b>             | 28.50            | 37.80 |
| <b>SL 5 147 ...</b>     | 14.70                      | 24.00 | <b>SL 5 315 ...</b>             | 31.50            | 40.80 |
| <b>SL 5 156 ...</b>     | 15.60                      | 24.90 | <b>SL 5 360 ...</b>             | 36.00            | 45.30 |
| <b>SL 5 172 ...</b>     | 17.20                      | 26.50 | <b>SL 5 415 ...</b>             | 41.50            | 50.80 |
| <b>SL 5 197 ...</b>     | 19.70                      | 29.00 | <b>SL 5 525 ...</b>             | 52.20            | 61.50 |
|                         |                            |       |                                 |                  |       |
| <b>art. no.</b>         | <b>dim. [mm]</b>           |       | <b>art. no.</b>                 | <b>dim. [mm]</b> |       |
|                         | A                          | L     |                                 | A                | L     |
| <b>SL 6 071 ...</b>     | 7.10                       | 16.40 | <b>SL 6 223 ...</b>             | 22.30            | 31.60 |
| <b>SL 6 097 ...</b>     | 9.70                       | 19.00 | <b>SL 6 237 ...</b>             | 23.70            | 33.00 |
| <b>SL 6 121 ...</b>     | 12.10                      | 21.40 | <b>SL 6 285 ...</b>             | 28.50            | 37.80 |
| <b>SL 6 147 ...</b>     | 14.70                      | 24.00 | <b>SL 6 315 ...</b>             | 31.50            | 40.80 |
| <b>SL 6 156 ...</b>     | 15.60                      | 24.90 | <b>SL 6 360 ...</b>             | 36.00            | 45.30 |
| <b>SL 6 172 ...</b>     | 17.20                      | 26.50 | <b>SL 6 415 ...</b>             | 41.50            | 50.80 |
| <b>SL 6 197 ...</b>     | 19.70                      | 29.00 | <b>SL 6 525 ...</b>             | 52.20            | 61.50 |
| <b>please indicate:</b> | <b>... no. of contacts</b> |       | <b>... surface</b>              |                  |       |
|                         | <b>one row 1-36</b>        |       | <b>S =selective gold-plated</b> |                  |       |
|                         | <b>two rows 2-72</b>       |       | <b>G=gold-plated</b>            |                  |       |
|                         |                            |       | <b>Z =tin-plated</b>            |                  |       |

"S" selective gold-plated to 33.0 mm pin length

For interconnections of stacked PCBs. Within the total length the insulator position can be changed as required. ... Design specification. V-notches permit breaking! Therefore any required number of contacts is available.

## Male headers soldering technique

## □ 0,635 mm, Sandwich

|                                                                                    |                                                                                    |                          |                                                                                     |           |                                                                                     |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------|
|   |   |                          |   |           |  |
| art. no.                                                                           | dim. [mm]                                                                          |                          | art. no.                                                                            | dim. [mm] |                                                                                     |
|                                                                                    | A                                                                                  | L                        |                                                                                     | A         | L                                                                                   |
| SL 13 071 ...                                                                      | 7.10                                                                               | 21.40                    | SL 13 235 ...                                                                       | 23.50     | 37.80                                                                               |
| SL 13 097 ...                                                                      | 9.70                                                                               | 24.00                    | SL 13 265 ...                                                                       | 26.50     | 40.80                                                                               |
| SL 13 122 ...                                                                      | 12.20                                                                              | 26.50                    | SL 13 310 ...                                                                       | 31.00     | 45.30                                                                               |
| SL 13 147 ...                                                                      | 14.70                                                                              | 29.00                    | SL 13 365 ...                                                                       | 36.50     | 50.80                                                                               |
| SL 13 187 ...                                                                      | 18.70                                                                              | 33.00                    |                                                                                     |           |                                                                                     |
|  |  |                          |  |           |  |
| art. no.                                                                           | dim. [mm]                                                                          |                          | art. no.                                                                            | dim. [mm] |                                                                                     |
|                                                                                    | A                                                                                  | L                        |                                                                                     | A         | L                                                                                   |
| SL 14 071 ...                                                                      | 7.10                                                                               | 21.40                    | SL 14 235 ...                                                                       | 23.50     | 37.80                                                                               |
| SL 14 097 ...                                                                      | 9.70                                                                               | 24.00                    | SL 14 265 ...                                                                       | 26.50     | 40.80                                                                               |
| SL 14 122 ...                                                                      | 12.20                                                                              | 26.50                    | SL 14 310 ...                                                                       | 31.00     | 45.30                                                                               |
| SL 14 147 ...                                                                      | 14.70                                                                              | 29.00                    | SL 14 365 ...                                                                       | 36.50     | 50.80                                                                               |
| SL 14 187 ...                                                                      | 18.70                                                                              | 33.00                    |                                                                                     |           |                                                                                     |
| please indicate:                                                                   |                                                                                    |                          |                                                                                     |           |                                                                                     |
| ... no. of contacts                                                                |                                                                                    | ... surface              |                                                                                     |           |                                                                                     |
| one row 1-36                                                                       |                                                                                    | S =selective gold-plated |                                                                                     |           |                                                                                     |
| two rows 2-72                                                                      |                                                                                    | G=gold-plated            |                                                                                     |           |                                                                                     |
|                                                                                    |                                                                                    | Z =tin-plated            |                                                                                     |           |                                                                                     |

## "S" selective gold-plated to 33.0 mm pin length

For interconnections of stacked PCBs. The male headers SL 13 and SL 14 are used to connect BL 11 (SL 13 ...) and BL 12 (SL 14 ...). Suitable for PCBs 1.5 mm - 3.0 mm thick.

V-notches permit breaking! Therefore any required number of contacts is available. Every pin length is available on request.



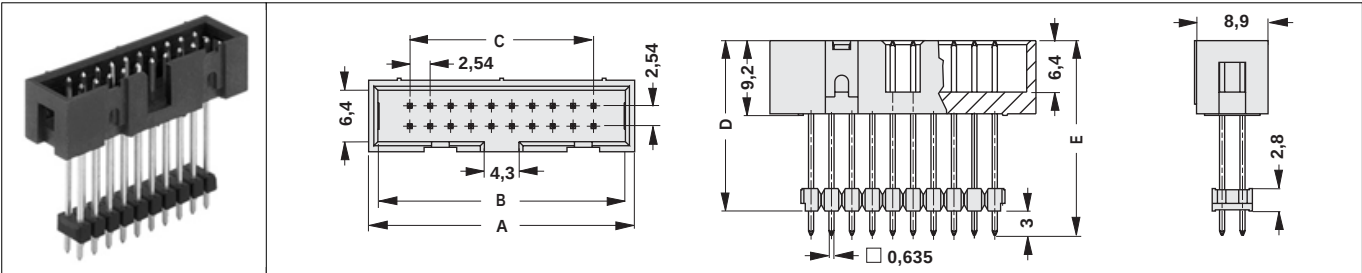
Empty page



Male headers soldering technique

Shroud male header, with coding, boltable

suitable for many flat cable connectors in 2.54 mm pitch



| art. no.   | no. of contacts | dim. [mm] |       |       |
|------------|-----------------|-----------|-------|-------|
|            |                 | A         | B     | C     |
| SLU 10 ... | 10              | 20.40     | 17.80 | 10.16 |
| SLU 16 ... | 16              | 28.00     | 25.40 | 17.78 |
| SLU 20 ... | 20              | 33.10     | 30.50 | 22.86 |
| SLU 26 ... | 26              | 40.70     | 38.10 | 30.48 |
| SLU 40 ... | 40              | 58.50     | 55.90 | 48.26 |
| SLU 50 ... | 50              | 71.20     | 68.60 | 60.96 |

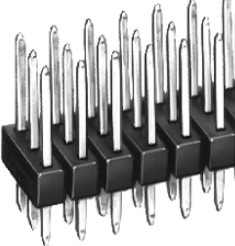
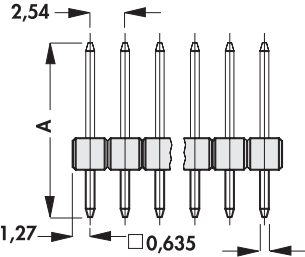
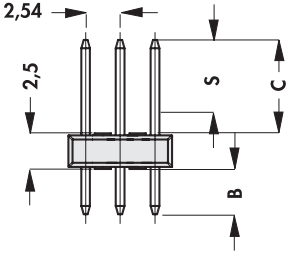
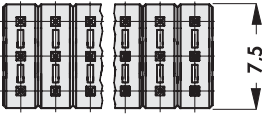
|                  |                           |                |
|------------------|---------------------------|----------------|
| please indicate: | ... surface               | ... height "E" |
|                  | S = selective gold-plated | 165            |
|                  | Z = tin-plated            | 191            |
|                  |                           | 241            |
|                  |                           | 266            |

| height "E" | dim. [mm] |          |
|------------|-----------|----------|
|            | D         | E (max.) |
| 165        | 13.50     | 16.50    |
| 191        | 16.10     | 19.10    |
| 241        | 21.10     | 24.10    |
| 266        | 23.60     | 26.60    |

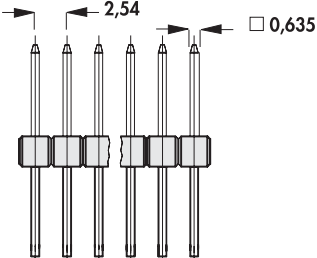
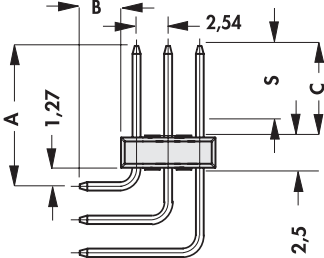
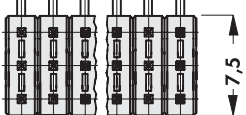
Male headers soldering technique

Three rows, 0.635 mm - standard

straight

|                                                                                                                                                                                                                                                                                                                                            |           |      |      |                 |           |      |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|------|-----------------|-----------|------|------|
|     |           |      |      |                 |           |      |      |
| art. no.                                                                                                                                                                                                                                                                                                                                   | dim. [mm] |      |      | art. no.        | dim. [mm] |      |      |
|                                                                                                                                                                                                                                                                                                                                            | A         | B    | C    |                 | A         | B    | C    |
| SL KG 3 113 ...                                                                                                                                                                                                                                                                                                                            | 11.30     | 3.30 | 5.50 | SL KG 3 147 ... | 14.70     | 3.30 | 8.90 |
| SL KG 3 126 ...                                                                                                                                                                                                                                                                                                                            | 12.60     | 3.30 | 6.80 |                 |           |      |      |
| please indicate: ... no. of contacts<br>three rows 3-150 ... surface<br>G=gold-plated<br>Z=tin-plated                                                                                                                                                                                                                                      |           |      |      |                 |           |      |      |

angled

|                                                                                                                                                                                                                                                                                                                                                 |           |      |      |                 |           |      |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|------|-----------------|-----------|------|------|
|     |           |      |      |                 |           |      |      |
| art. no.                                                                                                                                                                                                                                                                                                                                        | dim. [mm] |      |      | art. no.        | dim. [mm] |      |      |
|                                                                                                                                                                                                                                                                                                                                                 | A         | B    | C    |                 | A         | B    | C    |
| SL KA 3 072 ...                                                                                                                                                                                                                                                                                                                                 | 7.20      | 3.30 | 3.40 | SL KA 3 108 ... | 10.80     | 3.30 | 7.00 |
| SL KA 3 085 ...                                                                                                                                                                                                                                                                                                                                 | 8.50      | 3.30 | 4.70 |                 |           |      |      |
| please indicate: ... no. of contacts<br>three rows 3-150 ... surface<br>G=gold-plated<br>Z=tin-plated                                                                                                                                                                                                                                           |           |      |      |                 |           |      |      |

A



Male headers soldering technique

B

Empty page

C

D

E

F

G

H

I

K

L

M

N

Jumper links

Grid spacing 2.54 mm, □ 0.635 mm

|                                                               |           |      |  |
|---------------------------------------------------------------|-----------|------|--|
|                                                               |           |      |  |
| art. no.                                                      | dim. [mm] |      |  |
|                                                               | A         | C    |  |
| LB SL 0508 ...                                                | 5.08      | 6.10 |  |
| LB SL 0762 ...                                                | 7.62      | 6.10 |  |
| LB SL 1016 ...                                                | 10.16     | 6.10 |  |
| LB SL 1524 ...                                                | 15.24     | 6.10 |  |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated |           |      |  |

Grid spacing 2.00 mm, □ 0.5 mm

|                  |                                               |      |  |
|------------------|-----------------------------------------------|------|--|
|                  |                                               |      |  |
| art. no.         | dim. [mm]                                     |      |  |
|                  | A                                             | C    |  |
| LB SLY 06 ...    | 6.00                                          | 4.50 |  |
| please indicate: | ... surface<br>G=gold-plated<br>Z =tin-plated |      |  |

Dimension "A" available in 4 versions. Dimension "C" variable (on request).  
Jumper links are also available in grid spacing 1.27 mm.

V-notches permit breaking! Therefore any required number of contacts is available.

A

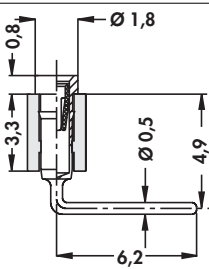
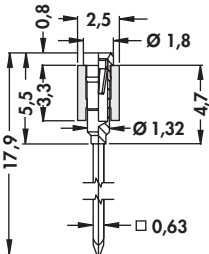
# High-precision female headers soldering technique

for Ø 0.5 mm

|                     |  |               |                |
|---------------------|--|---------------|----------------|
| art. no.            |  | art. no.      |                |
| MK 01 ...           |  |               | MK 201 ...     |
|                     |  |               |                |
| art. no.            |  | art. no.      |                |
| MK 17 ...           |  |               | MK 217 ...     |
|                     |  |               |                |
| art. no.            |  | art. no.      |                |
| MK 12 X 2 ...       |  |               | MK 212 X 2 ... |
|                     |  |               |                |
| art. no.            |  | art. no.      |                |
| MK 13 X 1 ...       |  |               | MK 213 X 1 ... |
|                     |  |               |                |
| art. no.            |  | art. no.      |                |
| MK 13 X 2 ...       |  |               | MK 213 X 2 ... |
|                     |  |               |                |
| please indicate:    |  |               |                |
| ... no. of contacts |  | ... surface   |                |
| one row 1-50        |  | G=gold-plated |                |
| two rows 2-100      |  | Z=tin-plated  |                |

High-precision female headers soldering technique

for Ø 0.5 mm

|                  |                                                                                   |                                                                                   |                                              |                                                                                     |
|------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------|
| art. no.         |                                                                                   |                                                                                   |                                              |                                                                                     |
| MK 06 ...        |  |  |                                              |                                                                                     |
| art. no.         |                                                                                   |                                                                                   | art. no.                                     |                                                                                     |
| MK 07 ...        |  |  | MK 207 ...                                   |  |
| please indicate: | ... no. of contacts<br>one row 1-50<br>two rows 2-100                             |                                                                                   | ... surface<br>G=gold-plated<br>Z=tin-plated |                                                                                     |

contact spring: gold-plated

A

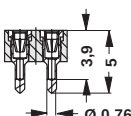
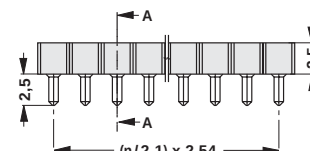
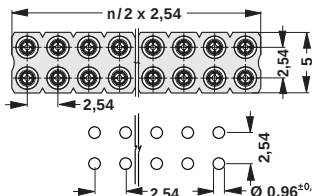
High precision female header in through-hole-reflow-soldering technique

B

High-precision female headers THR soldering technique for Ø 0.5 mm

THR: Through-Hole-Reflow-soldering technique, connector to be soldered with modified insert technique in Reflow-soldering method)

C

|                  |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| art. no.         |  |  |  |  |
| MK 228 THR ...   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| please indicate: | ... no. of contacts<br>two rows 2-40                                              |                                                                                   | ... surface<br>G=gold-plated<br>Z=tin-plated                                       |                                                                                     |

D

contact spring: gold-plated

E

F

G

H

I

K

L

M

N

High-precision female headers soldering technique

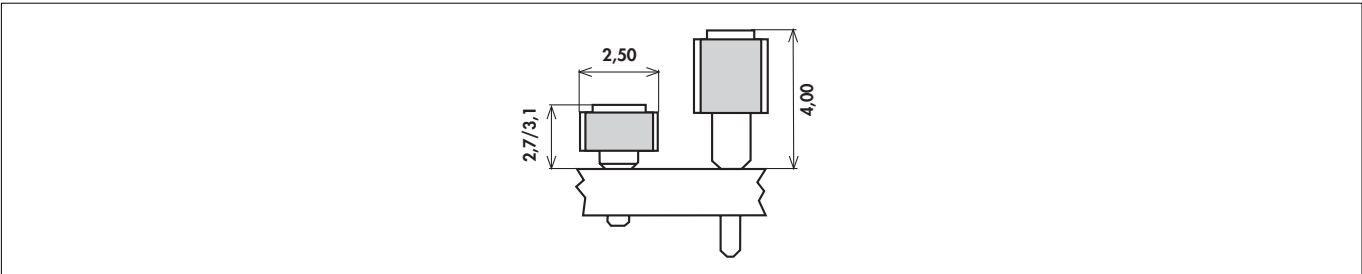
Low profile, less than 2.7/3.1 mm above P.C.B. - with contact spring for Ø 0.5 mm pins

solder and plug pin Ø 0.76 mm

| art. no.                                                                                   |  |  | art. no.      |  |  |
|--------------------------------------------------------------------------------------------|--|--|---------------|--|--|
| MK LP 18 ...                                                                               |  |  | MK LP 218 ... |  |  |
| MK LP 19 ...                                                                               |  |  | MK LP 219 ... |  |  |
| please indicate:                      ... no. of contacts                      ... surface |  |  |               |  |  |
| one row   1 - 50                      G = gold-plated                                      |  |  |               |  |  |
| two rows   4 - 100                      Z = tin-plated                                     |  |  |               |  |  |

contact spring: gold-plated

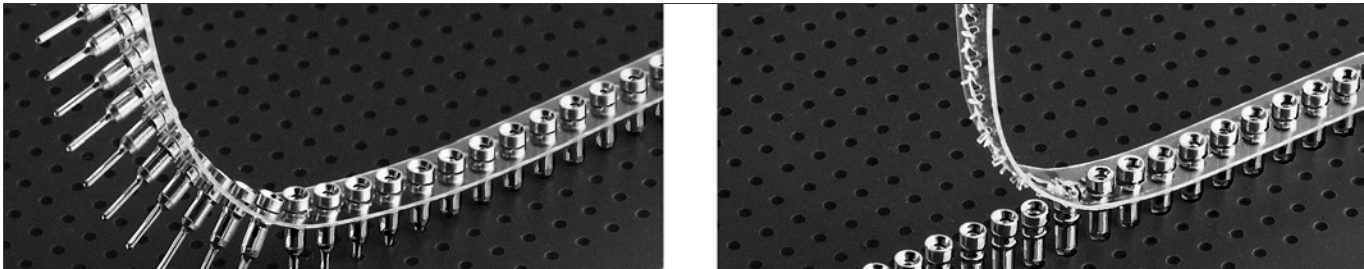
Low profile: 2.7/3.1 mm above P.C.B.; standard profile: 4 mm





Terminal strips soldering technique

Peel-off



High-precision contacts are mounted into a temperature resistant carrier strip, which will be peeled off after soldering. Specially equipped on request.

Technical data of carrier foil:

max. tensile strength (MD): 193 N/mm<sup>2</sup>  
max. thermal expansion - longitudinal direction: 1.7 x 10<sup>-5</sup> mm/°C  
melting point: 250 °C

|                  |                                           |                                                  |
|------------------|-------------------------------------------|--------------------------------------------------|
| art. no.         |                                           |                                                  |
| PO A ...         |                                           |                                                  |
| art. no.         |                                           |                                                  |
| PO B ...         |                                           |                                                  |
| please indicate: | ... no. of contacts<br>customer's request | ... surface<br>G = gold-plated<br>Z = tin-plated |

contact spring: gold-plated

number of contacts: from 2 pins to endless

Single in-line carrier

|                  |                                        |  |                                              |
|------------------|----------------------------------------|--|----------------------------------------------|
| art. no.         |                                        |  |                                              |
| SIL 1 ...        |                                        |  |                                              |
| art. no.         |                                        |  |                                              |
| SIL 2 ...        |                                        |  |                                              |
| art. no.         |                                        |  |                                              |
| SIL 3 ...        |                                        |  |                                              |
| please indicate: | ... no. of contacts<br>one row 2 - 100 |  | ... surface<br>G=gold-plated<br>Z=tin-plated |

contact spring: gold-plated



Female headers soldering technique

Low profile, fork contact

for 0.635 mm, straight

|                  |                                                      |  |                                                            |
|------------------|------------------------------------------------------|--|------------------------------------------------------------|
| art. no.         |                                                      |  |                                                            |
| BL LP 1 ...      |                                                      |  |                                                            |
| art. no.         |                                                      |  |                                                            |
| BL LP 2 ...      |                                                      |  |                                                            |
| art. no.         |                                                      |  |                                                            |
| BL LP 3 ...      |                                                      |  |                                                            |
| art. no.         |                                                      |  |                                                            |
| BL LP 4 ...      |                                                      |  |                                                            |
| please indicate: | ... no. of contacts<br>one row 1-36<br>two rows 2-72 |  | ... surface<br>S = selective gold-plated<br>Z = tin-plated |

V-notches permit breaking! Therefore any required number of contacts is available.

BL LP 4 ...: packing (option) bar magazine (min. 6 contacts)

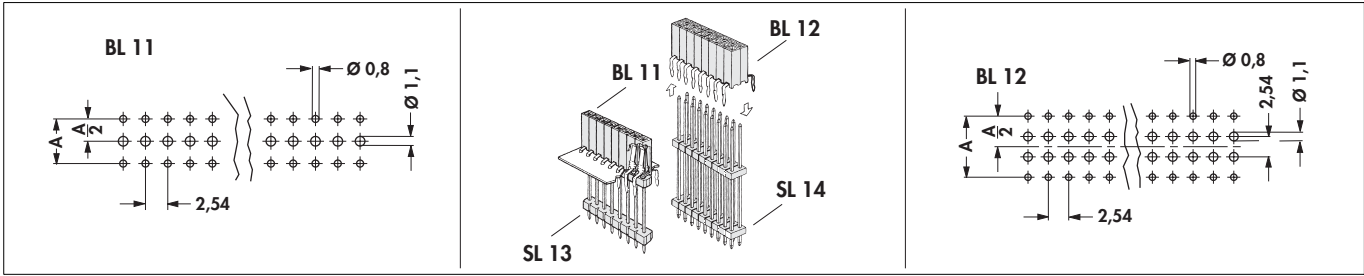
A



Female headers soldering technique

B

C



for ☐ 0.635 mm, can be put through from above or below / 260 °C Reflow

D

E

F

|                  |                                     |                                                            |  |
|------------------|-------------------------------------|------------------------------------------------------------|--|
|                  |                                     |                                                            |  |
| art. no.         | dim. [mm]                           |                                                            |  |
| BL 11 254 ...    | A                                   |                                                            |  |
| BL 11 508 ...    | 2.54                                |                                                            |  |
| BL 11 508 ...    | 5.08                                |                                                            |  |
| please indicate: | ... no. of contacts<br>one row 1-45 | ... surface<br>S = selective gold-plated<br>Z = tin-plated |  |

G

**packed:** bar magazine  
Stamped contact spring.  
Can be cut! Every desired number of contacts can be delivered.

H

for ☐ 0,635 mm, can be put through from above or below

I

K

|                  |                                      |                                                            |  |
|------------------|--------------------------------------|------------------------------------------------------------|--|
|                  |                                      |                                                            |  |
| art. no.         | dim. [mm]                            |                                                            |  |
| BL 12 650 ...    | A                                    |                                                            |  |
| BL 12 762 ...    | 6.50                                 |                                                            |  |
| BL 12 762 ...    | 7.62                                 |                                                            |  |
| please indicate: | ... no. of contacts<br>two rows 2-90 | ... surface<br>S = selective gold-plated<br>Z = tin-plated |  |

L

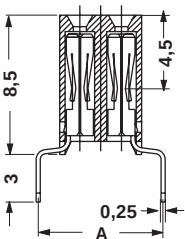
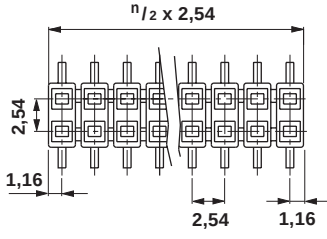
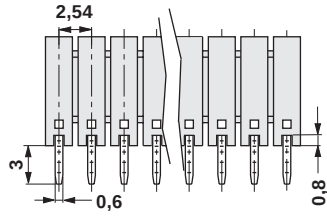
M

**packed:** bar magazine  
Stamped contact spring.  
Can be cut! Every desired number of contacts can be delivered.

N

Female headers soldering technique

for 0,635 mm, can be put through from above

|                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |
| art. no.                                                                          | dim. [mm]                                                                         |                                                                                    |                                                                                     |
| BL 21 650 ...                                                                     | A                                                                                 |                                                                                    |                                                                                     |
| BL 21 762 ...                                                                     | 6.50                                                                              |                                                                                    |                                                                                     |
| BL 21 762 ...                                                                     | 7.62                                                                              |                                                                                    |                                                                                     |
| please indicate:                                                                  | ... no. of contacts<br>two rows 2-64                                              | ... surface<br>S = selective gold-plated<br>Z = tin-plated                         |                                                                                     |

**packed:** bar magazine  
Stamped contact spring.  
Can be cut! Every desired number of contacts can be delivered.

A

# High-precision female headers soldering technique

for  $\square$  0.635 mm and up to 0.85 mm  $\varnothing$

|                                                                                                                                                                    |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>BL 5 ...</b>                                                                                             |  |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>BL 6 ...</b>                                                                                             |  |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>BL KG 3 ...</b>                                                                                          |  |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>BL 7 ...</b>                                                                                             |  |  |  |
| <p><b>please indicate:</b> ... <b>no. of contacts</b><br/> <b>one row</b>    <b>1-36</b><br/> <b>two rows</b>   <b>2-72</b><br/> <b>three rows</b> <b>9-96</b></p> |  |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>BL 8 ...</b>                                                                                             |  |  |  |
| <p><b>please indicate:</b> ... <b>no. of contacts</b><br/> <b>two rows</b> <b>4-72</b></p>                                                                         |  |  |  |

**contact shell surface:** tin-plated

**contact spring:** gold-plated

**BL 8 ...:** packing (option) bar magazine (min. 6 contacts)

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

**G 31**

Female headers 2.00 solder  
 Female headers 2.00 SMD  
 Technical data  
 High-precision female headers

→ G 60  
 → G 64  
 → G 75 - 80  
 → G 3 - 5

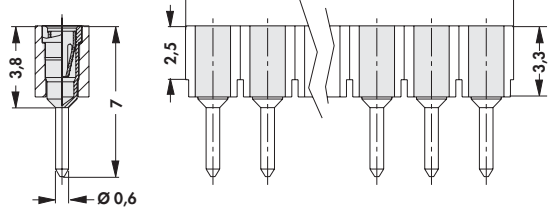
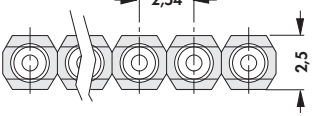
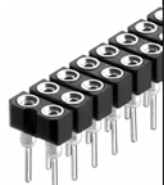
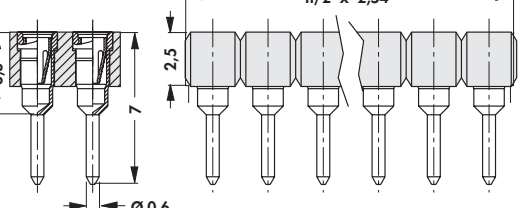
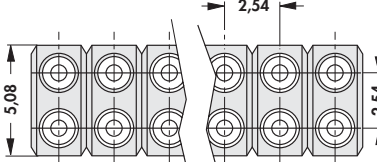
Male headers 2.00 solder  
 Male headers 2.54 solder  
 Male headers 2.54 SMD

→ G 56 - 58  
 → G 8  
 → G 37 - 42

N

High-precision female headers soldering technique

for 0.635 mm and up to 0.85 mm Ø

|                                                                               |                                                                                   |                                                                                    |                                                                                     |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| art. no.                                                                      |  |  |  |
| art. no.                                                                      |  |  |  |
| please indicate:<br>... no. of contacts<br>one row 1 - 50<br>two rows 2 - 100 |                                                                                   |                                                                                    |                                                                                     |

contact shell surface: tin-plated  
contact spring: gold-plated

No capillary action when soldering due to protected contact insert.  
V-notches permit breaking! Therefore any required number of contacts is available.



High-precision female headers soldering technique

for  $\square$  0.635 mm and up to 0.85 mm  $\varnothing$

with aligned contact pin

|                                                                       |  |  |  |
|-----------------------------------------------------------------------|--|--|--|
| art. no.                                                              |  |  |  |
| BL 9 ...                                                              |  |  |  |
| art. no.                                                              |  |  |  |
| BL 10 ...                                                             |  |  |  |
| please indicate: ... no. of contacts<br>one row 1-36<br>two rows 2-72 |  |  |  |

contact shell surface: tin-plated

contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

for PC 104 modules

|                                                                       |  |  |  |
|-----------------------------------------------------------------------|--|--|--|
| art. no.                                                              |  |  |  |
| BL 13 ...                                                             |  |  |  |
| art. no.                                                              |  |  |  |
| BL 14 ...                                                             |  |  |  |
| please indicate: ... no. of contacts<br>one row 1-36<br>two rows 2-72 |  |  |  |

contact shell surface: gold-plated

contact spring: gold-plated

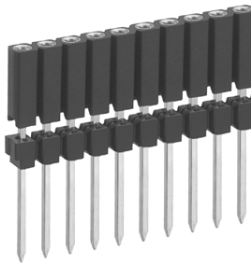
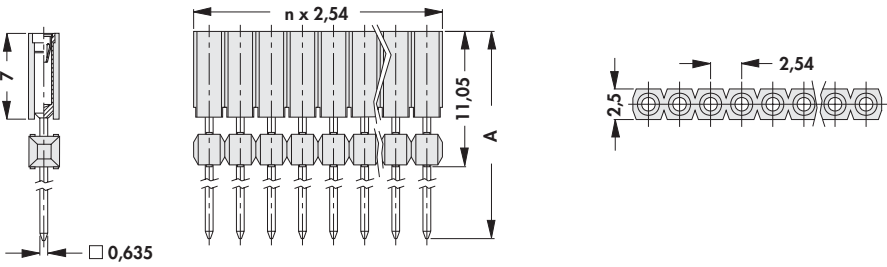
No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

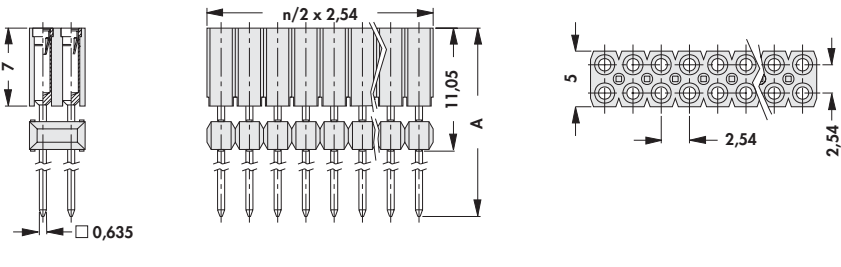
High-precision female headers soldering technique

for □ 0.635 mm and up to 0.85 mm Ø - for PC 104 modules

one row, 1-36 contacts

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          | dim. [mm]<br>A                                                                     |
| BL 18 141 ...                                                                     | 14.10                                                                              |
| BL 18 219 ...                                                                     | 21.90                                                                              |
| please indicate: ... no. of contacts<br>one row 1-36                              |                                                                                    |

two rows, 2-72 contacts

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                           | dim. [mm]<br>A                                                                      |
| BL 19 141 ...                                                                      | 14.10                                                                               |
| BL 19 219 ...                                                                      | 21.90                                                                               |
| please indicate: ... no. of contacts<br>two rows 2-72                              |                                                                                     |

contact shell surface and contact spring: gold-plated

No capillary action when soldering due to protected contact insert.  
V-notches permit breaking! Therefore any required number of contacts is available.

A

# High-precision male headers in SMD mounting

B

C

D

E

F

G

H

I

K

L

M

N

|                                                                                                                                                                                                                             |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 26 SMD ...</b>                                                                                                                                                 |  |  |
| <p>please indicate: ... no. of contacts one row 4-20</p> <p>... surface<br/>G = gold-plated<br/>Z = tin-plated</p> <p>... packing (option)<br/>SM = bar magazine<br/>B SM = pick and place pad and bar magazine</p>         |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 226 SMD ...</b>                                                                                                                                                |  |  |
| <p>please indicate: ... no. of contacts two rows 4-40</p> <p>... surface<br/>G = gold-plated<br/>Z = tin-plated</p> <p>... packing (option)<br/>SM = bar magazine 6 pol.<br/>B SM = pick and place pad and bar magazine</p> |  |  |

... packing (option) - additions: MK 226 SMD ... SM and ... B SM: 6-40 contacts

For further informations please see "for automatic assembly" following this series!

|                                                                                                                    |  |  |
|--------------------------------------------------------------------------------------------------------------------|--|--|
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 27 SMD ...</b>                                        |  |  |
| <p>please indicate: ... no. of contacts one row 2-20</p> <p>... surface<br/>G = gold-plated<br/>Z = tin-plated</p> |  |  |

**G 35**

Female headers 2.54 solder  
Female headers 2.54 SMD  
Female headers 2.54 press-fit  
Female headers 1.27 SMD

→ G 27  
→ G 46 - 49  
→ G 53  
→ G 74

Female headers 2.00 SMD  
High-precision female headers

→ G 64  
→ G 3 - 5



High-precision male headers in SMD mounting

Empty page

## Male headers in SMD mounting

□ 0.635 mm

|                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |  |  |
| art. no.                                                                                                                                                                                                                                                                                                                                                                                                                                      | dim. [mm]<br>C |  |  |
| SL 10 SMD 040 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 4.00           |  |  |
| SL 10 SMD 052 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.50           |  |  |
| SL 10 SMD 062 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.70           |  |  |
| SL 10 SMD 078 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 8.20           |  |  |
| SL 10 SMD 104 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 10.80          |  |  |
| SL 10 SMD 130 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 13.40          |  |  |
| please indicate:    ... no. of contacts                      ... surface                      ... packing (option)<br>one row 4-20                      S = sel. gold-plated                      SM    = bar magazine<br>G = gold-plated                      B SM = pick and place pad and bar<br>Z = tin-plated                                              magazine<br>B TR = pick and place pad and<br>tape and reel (250<br>pcs/reel)  |                |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |  |  |
| art. no.                                                                                                                                                                                                                                                                                                                                                                                                                                      | dim. [mm]<br>C |  |  |
| SL 11 SMD 040 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 4.00           |  |  |
| SL 11 SMD 052 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.50           |  |  |
| SL 11 SMD 062 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.70           |  |  |
| SL 11 SMD 078 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 8.20           |  |  |
| SL 11 SMD 104 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 10.80          |  |  |
| SL 11 SMD 130 ...                                                                                                                                                                                                                                                                                                                                                                                                                             | 13.40          |  |  |
| please indicate:    ... no. of contacts                      ... surface                      ... packing (option)<br>two rows 4-40                      S = sel. gold-plated                      SM    = bar magazine<br>G = gold-plated                      B SM = pick and place pad and bar<br>Z = tin-plated                                              magazine<br>B TR = pick and place pad and<br>tape and reel (250<br>pcs/reel) |                |  |  |

... packing (option) - additions:

SL 10 SMD 052-104 ...: ... SM; ... B SM, 4-20 contacts

SL 10 SMD 052-078 ...: ... B TR, 4-12 contacts

SL 11 SMD 052-104 ...: ... SM; ... B SM, 6-40 contacts

Male headers in SMD mounting

SL 11 SMD 052-078 ...: ... B TR, 6-24 contacts

For further informations please see "for automatic assembly" following this series!

Male headers 2.54 solder  
Male headers 2.00 SMD  
Single contacts metal strip  
Technical data

→ G 8  
→ G 61 - 62  
→ G 26  
→ G 75 - 80

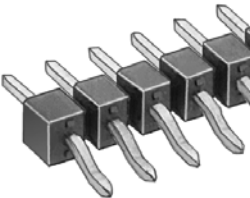
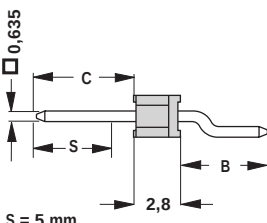
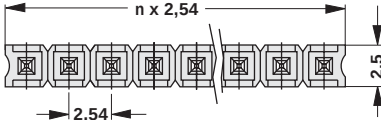
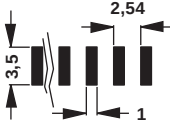
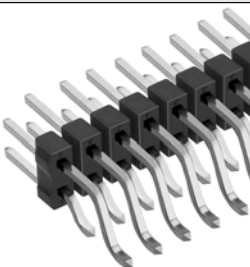
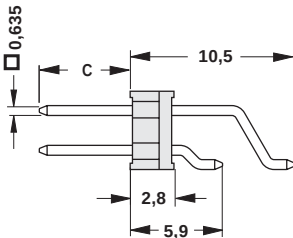
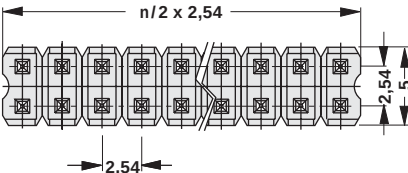
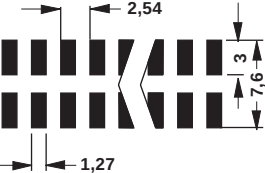
High-prec. fem. headers 2.54 sold.  
Female headers 2.00 SMD  
Female headers 2.54 press-fit  
Jumpers

→ G 31 - 34  
→ G 64  
→ G 53  
→ G 77 - 78

A

# Male headers in SMD mounting

□ 0.635 mm

|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |                                                                                      |                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                             |    |    |    |
| art. no.                                                                                                                                                                                                                                                                                                                                                                                                                                     | surface                                                                             | dim. [mm]                                                                            |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     | B                                                                                    | C                                                                                     |
| SL 12 SMD 031 ...                                                                                                                                                                                                                                                                                                                                                                                                                            | S/ G/ Z                                                                             | 5.20                                                                                 | 3.10                                                                                  |
| SL 12 SMD 032 ...                                                                                                                                                                                                                                                                                                                                                                                                                            | G/ Z                                                                                | 3.20                                                                                 | 5.80                                                                                  |
| SL 12 SMD 058 ...                                                                                                                                                                                                                                                                                                                                                                                                                            | S/ G/ Z                                                                             | 5.20                                                                                 | 5.80                                                                                  |
| SL 12 SMD 083 ...                                                                                                                                                                                                                                                                                                                                                                                                                            | S/ G/ Z                                                                             | 5.20                                                                                 | 8.30                                                                                  |
| SL 12 SMD 109 ...                                                                                                                                                                                                                                                                                                                                                                                                                            | S/ G/ Z                                                                             | 5.20                                                                                 | 10.90                                                                                 |
| please indicate:    ... no. of contacts                      ... surface                      ... packing (option)<br>one row 2-20                      S = sel. gold-plated                      B SM = pick and place pad and bar<br>G = gold-plated                                              magazine<br>Z = tin-plated                                              B TR = pick and place pad and<br>tape and reel (500<br>pcs/reel) |                                                                                     |                                                                                      |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
| art. no.                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     | dim. [mm]                                                                            |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     | C                                                                                    |                                                                                       |
| SL 17 SMD 058 ...                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     | 5.80                                                                                 |                                                                                       |
| SL 17 SMD 083 ...                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     | 8.30                                                                                 |                                                                                       |
| SL 17 SMD 109 ...                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     | 10.90                                                                                |                                                                                       |
| please indicate:    ... no. of contacts                      ... surface                      ... packing (option)<br>two rows 4-40                      G = gold-plated                      B SM = pick and place pad and bar<br>Z = tin-plated                                              magazine<br>B TR = pick and place pad and<br>tape and reel (300<br>pcs/reel)                                                                  |                                                                                     |                                                                                      |                                                                                       |

... packing (option) - additions:

SL 12 SMD ... B TR: 2-13 contacts  
SL 17 SMD ... B TR: 6-24 contacts

For further informations please see "for automatic assembly" following this series!

N

**G 39**

Female headers 2.54 press-fit  
Female headers 2.00 SMD  
Jumpers  
Technical data

→ G 53  
→ G 64  
→ G 77 - 78  
→ G 73 - 78

High-prec. fem. headers 2.54 sold.  
Male headers 2.54 solder  
Male headers 2.00 SMD  
Male headers 2.54 solder

→ G 31 - 34  
→ G 8  
→ G 61 - 62  
→ G 8

# Male headers in SMD mounting

Low profile in SMD □ 0.635 mm

|                                                                                                                                                                                                                                                                                                                                                   |           |                     |           |          |           |          |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------|-----------|----------|-----------|----------|-----------|
|                                                                                                                                                                                                                                                                  |           |                     |           |          |           |          |           |
| art. no.                                                                                                                                                                                                                                                                                                                                          | dim. [mm] | art. no.            | dim. [mm] | art. no. | dim. [mm] | art. no. | dim. [mm] |
|                                                                                                                                                                                                                                                                                                                                                   | C         |                     | C         |          | C         |          | C         |
| SL LP 5 SMD 038 ...                                                                                                                                                                                                                                                                                                                               | 3.80      | SL LP 5 SMD 066 ... | 6.60      |          |           |          |           |
| SL LP 5 SMD 051 ...                                                                                                                                                                                                                                                                                                                               | 5.10      |                     |           |          |           |          |           |
| <p>please indicate: ... no. of contacts one row 4-20 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (250 pcs/reel)</p>                                                                             |           |                     |           |          |           |          |           |
|                                                                                                                                                                                                                                                                 |           |                     |           |          |           |          |           |
| art. no.                                                                                                                                                                                                                                                                                                                                          | dim. [mm] | art. no.            | dim. [mm] | art. no. | dim. [mm] | art. no. | dim. [mm] |
|                                                                                                                                                                                                                                                                                                                                                   | C         |                     | C         |          | C         |          | C         |
| SL LP 6 SMD 038 ...                                                                                                                                                                                                                                                                                                                               | 3.80      | SL LP 6 SMD 066 ... | 6.60      |          |           |          |           |
| SL LP 6 SMD 051 ...                                                                                                                                                                                                                                                                                                                               | 5.10      |                     |           |          |           |          |           |
| <p>please indicate: ... no. of contacts two rows 4-40 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (250 pcs/reel) ... position (option) PS = locating pin (2 pcs/bar bigger than 6 contacts)</p> |           |                     |           |          |           |          |           |

... packing (option) - additions:

SL LP 5 SMD ...: ... SM; ... B SM; 4-20 contacts

SL LP 5 SMD ...: ... B TR, 4-12 contacts

SL LP 6 SMD ...: ... SM; ... B SM; 6-40 contacts

SL LP 6 SMD ...: ... B TR, 6-24 contacts

For further informations please see "for automatic assembly" following this series!

Female headers 1.27 solder  
Female headers 2.00 SMD  
Jumpers  
Technical data

→ G 70  
→ G 64  
→ G 77 - 78  
→ G 75 - 80

High-prec. fem. headers 1.27 solder → G 72  
High-prec. male head. 1.27 solder → G 71  
Male headers 2.00 solder → G 56 - 58

G 40



A



2.54

Male headers in SMD mounting

B

Empty page

C

D

E

F

G

H

I

K

L

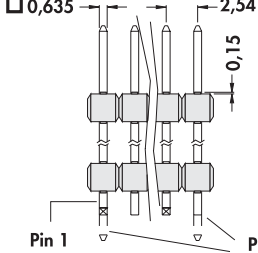
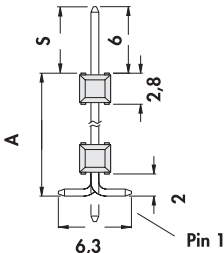
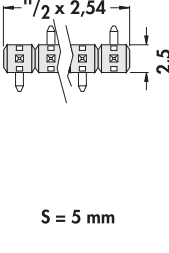
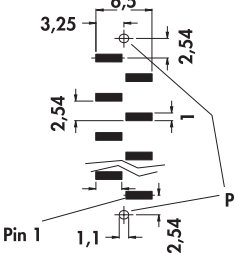
M

N

Male headers in SMD mounting

0.635 mm – for interconnections of stacked PCBs

one row, 4-20 contacts

|                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |
| art. no.                                                                          | dim. [mm]                                                                         |                                                                                   |                                                                                    |                                                                                     |
|                                                                                   | A                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| SL 15 SMD 107 ...                                                                 | 10.70                                                                             |                                                                                   |                                                                                    |                                                                                     |
| SL 15 SMD 182 ...                                                                 | 18.20                                                                             |                                                                                   |                                                                                    |                                                                                     |
| SL 15 SMD 207 ...                                                                 | 20.70                                                                             |                                                                                   |                                                                                    |                                                                                     |
| please indicate:                                                                  | ... no. of contacts<br>one row 4-20                                               | ... surface<br>S = sel. gold-plated<br>G = gold-plated<br>Z = tin-plated          | ... position (option)<br>P = end pins straight for positioning                     |                                                                                     |

A

High-precision female headers in SMD mounting

for □ 0.635 mm and up to 0.85 mm Ø

B

C

D

E

F

G

H

I

K

L

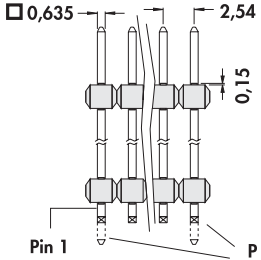
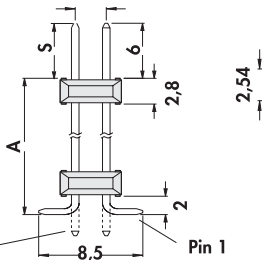
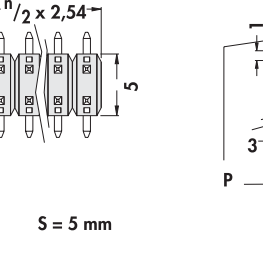
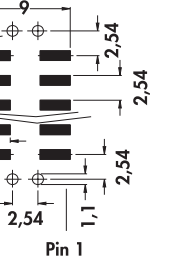
M

N

|                  |                                     |                                                                                                                                                          |  |  |
|------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| art. no.         |                                     |                                                                                                                                                          |  |  |
| BL LP 5 SMD ...  |                                     |                                                                                                                                                          |  |  |
| please indicate: | ... no. of contacts<br>one row 4-20 | ... packing (option)<br>SM = bar magazine<br>B SM = pick and place pad and bar magazine<br>B TR = pick and place pad and tape and reel<br>(250 pcs/reel) |  |  |

Male headers in SMD mounting

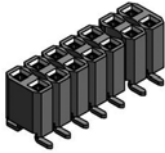
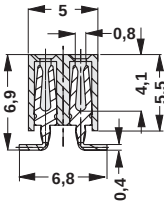
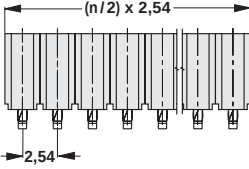
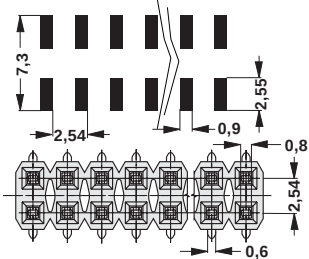
two rows, 4-40 contacts

|                                                                                   |                                                                                   |           |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|--|-----------------------------------------------------------------------------------|--|--|------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------|--|--|
|  |  |           |  |  |  |  |  |  |  |  |  |  |
| art. no.                                                                          |                                                                                   | dim. [mm] |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| SL 16 SMD 107 ...                                                                 |                                                                                   | A         |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| SL 16 SMD 157 ...                                                                 |                                                                                   | 10.70     |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| SL 16 SMD 182 ...                                                                 |                                                                                   | 15.70     |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| SL 16 SMD 207 ...                                                                 |                                                                                   | 18.20     |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| SL 16 SMD 247 ...                                                                 |                                                                                   | 20.70     |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| SL 16 SMD 247 ...                                                                 |                                                                                   | 24.70     |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| please indicate: ... no. of contacts ... surface ... position (option)            |                                                                                   |           |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| two rows 4-40 S = sel. gold-plated P = end pins straight for positioning          |                                                                                   |           |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |
| G = gold-plated Z = tin-plated                                                    |                                                                                   |           |  |                                                                                   |  |  |                                                                                    |  |  |                                                                                     |  |  |

Within the total length the insulator can be changed according to customer's request.

A  
B  
C  
D  
E  
F  
G  
H  
I  
K  
L  
M  
N

High-precision female headers in SMD mounting

|                                                |                                                                                   |                                                                                                                                                       |                                                                                    |                                                                                     |
|------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <div>art. no.</div> <div>BL LP 6 SMD ...</div> |  |                                                                      |  |  |
| please indicate:                               | ... no. of contacts<br>two rows 4-40                                              | ... packing (option)<br>SM = bar magazine<br>B SM = pick and place pad and bar magazine<br>B TR = pick and place pad and tape and reel (250 pcs/reel) |                                                                                    |                                                                                     |

High-precision female headers in SMD mounting

for □ 0.635 mm and up to 0.85 mm Ø

|                  |                                                                                         |
|------------------|-----------------------------------------------------------------------------------------|
|                  |                                                                                         |
| art. no.         | dim. [mm]                                                                               |
|                  | A B C                                                                                   |
| BL 15 SMD 043... | 4.30 5.00 2.50                                                                          |
| BL 15 SMD 089... | 8.90 9.50 4.80                                                                          |
| please indicate: | ... no. of contacts one row 4-20                                                        |
|                  | ... packing (option)<br>SM = bar magazine<br>B SM = pick and place pad and bar magazine |

|                   |                                                                                                                                                       |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |                                                                                                                                                       |
| art. no.          | dim. [mm]                                                                                                                                             |
|                   | A B C                                                                                                                                                 |
| BL 16 SMD 067 ... | 6.70 7.50 2.50                                                                                                                                        |
| BL 16 SMD 113 ... | 11.30 12.00 4.80                                                                                                                                      |
| please indicate:  | ... no. of contacts two rows 4-40                                                                                                                     |
|                   | ... packing (option)<br>SM = bar magazine<br>B SM = pick and place pad and bar magazine<br>B TR = pick and place pad and tape and reel (250 pcs/reel) |
|                   | ... position (option)<br>PS = locating pin (2 pcs/bar bigger than 6 contacts)                                                                         |

contact shell surface: tin-plated  
contact spring: gold-plated

No capillary action when soldering due to protected contact insert.  
V-notches permit breaking! Therefore any required number of contacts is available.

... packing (option) - additions:  
BL 16 SMD ... B TR: 6-24 contacts

For further informations please see "for automatic assembly" following this series!

Female headers 1.27 SMD → G 74  
Female headers 2.00 SMD → G 64  
Female headers 2.54 press-fit → G 53  
Fem. head. 2.54 solder, put through → G 29

Technical data  
Male headers 2.54 solder → G 75 - 80  
Male headers 2.54 SMD → G 8  
→ G 37 - 42

A

# High-precision female headers in SMD mounting

for □ 0.635 mm and up to 0.85 mm Ø

|                                                                                                                                                                                                                         |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>BL 17 SMD ...</b>                                                                                                                                             |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>BL 20 SMD ...</b>                                                                                                                                             |  |  |
| <b>please indicate:</b> <div> <div>... no. of contacts</div> <div>one row 2-20</div> <div>two rows 4-40</div> </div> <div> <div>... packing (option)</div> <div>SM = bar magazine</div> </div>                          |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 22 SMD ...</b>                                                                                                                                             |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 222 SMD ...</b>                                                                                                                                            |  |  |
| <b>please indicate:</b> <div> <div>... no. of contacts</div> <div>one row 4-20</div> <div>two rows 4-40</div> </div> <div> <div>... packing (option)</div> <div>B SM = pick and place pad and bar magazine</div> </div> |  |  |
| <b>art. no.</b><br><br><br><br><br><br><br><br><br><br><b>MK 24 SMD ...</b>                                                                                                                                             |  |  |
| <b>please indicate:</b> <div> <div>... no. of contacts</div> <div>one row 2-20</div> </div>                                                                                                                             |  |  |

**contact shell surface:** tin-plated; **contact spring:** gold-plated

No capillary action when soldering due to protected contact insert.

**... packing (option) - additions:**
**BL 17 SMD ... SM:** 5-20 contacts; **BL 20 SMD ... SM:** 10-40 contacts

For further informations please see "for automatic assembly" following this series!

**G 47**
**Technical data**

Male headers 2.54 solder

Male headers 2.54 SMD

Fem. head. 2.54 solder, put through

→ G 75 - 80

→ G 8

→ G 37 - 42

→ G 29

**Female headers 1.27 SMD**
**Female headers 2.00 SMD**
**Female headers 2.54 press-fit**

→ G 74

→ G 64

→ G 53

N

High-precision female headers in SMD mounting

Empty page



A

High-precision female headers in SMD mounting

for Ø 0.5 mm

one and two rows

|                  |                                                      |  |                                                                   |  |
|------------------|------------------------------------------------------|--|-------------------------------------------------------------------|--|
| art. no.         |                                                      |  |                                                                   |  |
| MK 23 SMD ...    |                                                      |  |                                                                   |  |
| art. no.         |                                                      |  |                                                                   |  |
| MK 223 SMD ...   |                                                      |  |                                                                   |  |
| please indicate: | ... no. of contacts<br>one row 4-20<br>two rows 4-40 |  | ... packing (option)<br>B SM =pick and place pad and bar magazine |  |

Two row

|                  |                                      |  |                                                                                                                                                                                             |  |
|------------------|--------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| art. no.         |                                      |  |                                                                                                                                                                                             |  |
| MK 220 SMD ...   |                                      |  |                                                                                                                                                                                             |  |
| please indicate: | ... no. of contacts<br>two rows 4-40 |  | ... packing (option)<br>B SM =pick and place pad and bar magazine<br>B TR =pick and place pad and tape and reel<br>(4-12 contacts 800 pcs/reel, 4-12 contacts; 14-40 contacts 500 pcs/reel) |  |

For further informations please see "for automatic assembly" following this series!

one row

|                  |                                     |  |  |  |
|------------------|-------------------------------------|--|--|--|
| art. no.         |                                     |  |  |  |
| MK 25 SMD ...    |                                     |  |  |  |
| please indicate: | ... no. of contacts<br>one row 2-20 |  |  |  |

contact shell surface: tin-plated  
contact spring: gold-plated

G 49

Fem. head. 2.54 solder, put through → G 29  
Technical data → G 75 - 80  
Female headers 1.27 SMD → G 74  
Female headers 2.00 SMD → G 64

Female headers 2.54 press-fit → G 53  
High-precision female headers → G 3 - 5  
Female headers 2.54 solder → G 27

N

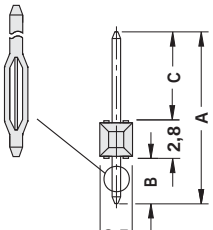
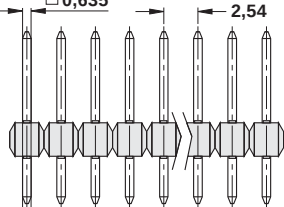
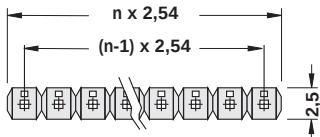
High-precision female headers in SMD mounting

Empty page

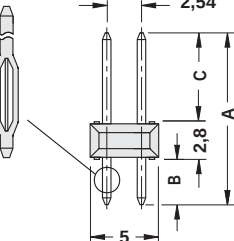
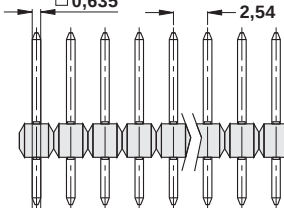
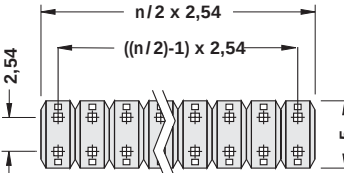
## Connectors in press-fit mounting

## Male connectors

one row, 1-36 contacts, for PCB thickness  $\geq 1.6$  mm dimension B = 3.5 mm and  $\geq 3.0$  mm dimension B = 4.5 mm

|     |           |      |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|-------|
| art. no.                                                                                                                                                                                                                                                                                                                                   | dim. [mm] |      |       |
|                                                                                                                                                                                                                                                                                                                                            | A         | B    | C     |
| SLP 1 16 117 ...                                                                                                                                                                                                                                                                                                                           | 11.70     | 3.50 | 5.40  |
| SLP 1 16 129 ...                                                                                                                                                                                                                                                                                                                           | 12.90     | 3.50 | 6.60  |
| SLP 1 16 144 ...                                                                                                                                                                                                                                                                                                                           | 14.40     | 3.50 | 8.10  |
| SLP 1 16 195 ...                                                                                                                                                                                                                                                                                                                           | 19.50     | 3.50 | 13.20 |
| SLP 1 32 139 ...                                                                                                                                                                                                                                                                                                                           | 13.90     | 4.50 | 6.60  |
| SLP 1 32 164 ...                                                                                                                                                                                                                                                                                                                           | 16.40     | 4.50 | 9.10  |
| please indicate:      ... no. of contacts<br>one row 1-36      ... surface<br>G = gold-plated<br>Z = tin-plated                                                                                                                                                                                                                            |           |      |       |

two rows, 2-72 contacts, for PCB thickness  $\geq 1.6$  mm dimension B = 3.5 mm and  $\geq 3.0$  mm dimension B = 4.5 mm

|     |           |      |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|-------|
| art. no.                                                                                                                                                                                                                                                                                                                                           | dim. [mm] |      |       |
|                                                                                                                                                                                                                                                                                                                                                    | A         | B    | C     |
| SLP 2 16 117 ...                                                                                                                                                                                                                                                                                                                                   | 11.70     | 3.50 | 5.40  |
| SLP 2 16 129 ...                                                                                                                                                                                                                                                                                                                                   | 12.90     | 3.50 | 6.60  |
| SLP 2 16 144 ...                                                                                                                                                                                                                                                                                                                                   | 14.40     | 3.50 | 8.10  |
| SLP 2 16 195 ...                                                                                                                                                                                                                                                                                                                                   | 19.50     | 3.50 | 13.20 |
| SLP 2 32 139 ...                                                                                                                                                                                                                                                                                                                                   | 13.90     | 4.50 | 6.60  |
| SLP 2 32 164 ...                                                                                                                                                                                                                                                                                                                                   | 16.40     | 4.50 | 9.10  |
| please indicate:      ... no. of contacts<br>two rows 2-72      ... surface<br>G = gold-plated<br>Z = tin-plated                                                                                                                                                                                                                                   |           |      |       |

contact material: Cu Sn 6

Press-fit mounting without soldering, resilient press-fit area, easy insertion into PCB. V-notches permit breaking!  
 Any required number of contacts available.

PCB layout please see BLP ...

G 51

Technical data  
 Jumpers  
 Female headers 2.54 press-fit  
 Programmable headers

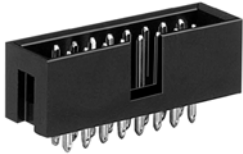
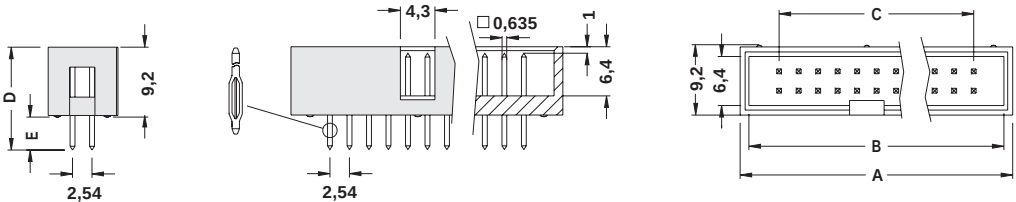
→ G 73 - 78  
 → G 77 - 78  
 → G 53  
 → F 23

Male headers 2.00 solder  
 Single contacts metal strip  
 Male headers 2.54 solder

→ G 56 - 58  
 → G 26  
 → G 8

Male header with shroud

suitable for bolttable female header VFL, can be combined with many other female headers with grid spacing 2,54 mm (e. g.: PV, BL)

|  |  |           |       |       |       |          |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|-------|-------|----------|
| art. no.                                                                          | no. of contacts                                                                    | dim. [mm] |       |       |       |          |
|                                                                                   |                                                                                    | A         | B     | C     | D     | E (max.) |
| SLUP 31 10 ...                                                                    | 10                                                                                 | 20.40     | 17.80 | 10.16 | 12.60 | 3.50     |
| SLUP 31 16 ...                                                                    | 16                                                                                 | 28.00     | 25.40 | 17.78 | 12.60 | 3.50     |
| SLUP 31 20 ...                                                                    | 20                                                                                 | 33.10     | 30.50 | 22.86 | 12.60 | 3.50     |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                     |                                                                                    |           |       |       |       |          |

contact material: Cu Sn 6

Press-fit mounting without soldering, resilient press-fit area, easy insertion into PCB.

PCB layout please see BLP ...

Connectors in press-fit mounting

High-precision female headers 0,635 mm and pins up to 0,85 mm Ø

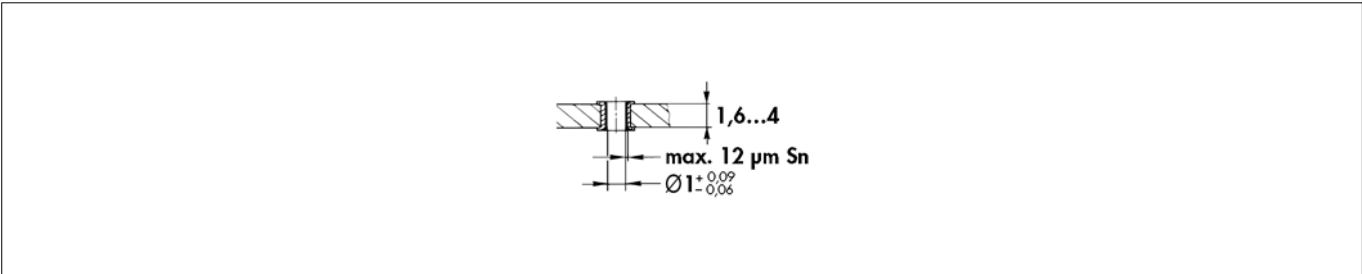
Press-fit mounting without soldering, resilient press-fit area.

| art. no.                                                              |  |  |  |  |
|-----------------------------------------------------------------------|--|--|--|--|
| BLP 1 ...                                                             |  |  |  |  |
| BLP 2 ...                                                             |  |  |  |  |
| please indicate: ... no. of contacts<br>one row 1-36<br>two rows 2-72 |  |  |  |  |

contact-insert: gold-plated  
contact shell: tin-plated

V-notches permit breaking! Therefore any required numbers of contacts are available.

Hole diameter in PCB - PCB hole structure acc. to DIN EN 60352-5



Direct female connector

Without short circuit contact for PCB thickness: 0.7-0.9 mm

for removable connection of digital displays, coding switches, impulse counters

|             |  |  |  |  |
|-------------|--|--|--|--|
| art. no.    |  |  |  |  |
| DF 1 OK 9 Z |  |  |  |  |
| art. no.    |  |  |  |  |
| DF 2 OK 9 Z |  |  |  |  |

With short circuit contact for PCB thickness: 0.7-0.9 mm

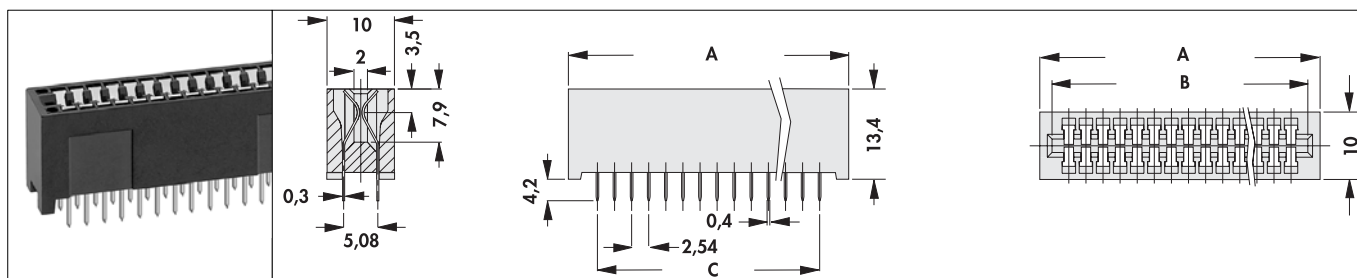
for removable connection of digital displays, coding switches, impulse counters

|             |  |  |  |  |
|-------------|--|--|--|--|
| art. no.    |  |  |  |  |
| DF 1 MK 9 Z |  |  |  |  |
| art. no.    |  |  |  |  |
| DF 2 MK 9 Z |  |  |  |  |

K\* = arcing contact

## Direct female connector

for PCB thickness: 1.4-1.8 mm



| art. no.        | no. of contacts | dim. [mm] |       |       |
|-----------------|-----------------|-----------|-------|-------|
|                 |                 | A         | B     | C     |
| <b>DF OB 06</b> | 12              | 21.33     | 17.70 | 12.70 |
| <b>DF OB 07</b> | 14              | 23.87     | 20.24 | 15.24 |
| <b>DF OB 10</b> | 20              | 31.49     | 27.86 | 22.86 |
| <b>DF OB 17</b> | 34              | 49.27     | 45.64 | 40.64 |
| <b>DF OB 18</b> | 36              | 51.81     | 48.18 | 43.18 |

**contact surface finish:** tin-plated

0.5 mm, straight

|                                                                                                                            |           |      |      |
|----------------------------------------------------------------------------------------------------------------------------|-----------|------|------|
|                                                                                                                            |           |      |      |
| art. no.                                                                                                                   | dim. [mm] |      |      |
|                                                                                                                            | A         | B    | C    |
| SLY 1 081 ...                                                                                                              | 8.10      | 3.00 | 3.60 |
| SLY 1 085 ...                                                                                                              | 8.50      | 3.00 | 4.00 |
| SLY 1 098 ...                                                                                                              | 9.80      | 3.00 | 5.30 |
| SLY 1 104 ...                                                                                                              | 10.40     | 3.00 | 5.90 |
| SLY 1 139 ... G                                                                                                            | 13.90     | 3.00 | 9.40 |
| SLY 1 139 ... Z                                                                                                            | 13.90     | 3.00 | 9.40 |
| please indicate: ... no. of contacts one row 1 - 50 ... surface S = selective gold-plated G = gold-plated Z = tin-plated   |           |      |      |
|                                                                                                                            |           |      |      |
| art. no.                                                                                                                   | dim. [mm] |      |      |
|                                                                                                                            | A         | B    | C    |
| SLY 2 081 ...                                                                                                              | 8.10      | 3.00 | 3.60 |
| SLY 2 085 ...                                                                                                              | 8.50      | 3.00 | 4.00 |
| SLY 2 098 ...                                                                                                              | 9.80      | 3.00 | 5.30 |
| SLY 2 104 ...                                                                                                              | 10.40     | 3.00 | 5.90 |
| SLY 2 139 ... G                                                                                                            | 13.90     | 3.00 | 9.40 |
| SLY 2 139 ... Z                                                                                                            | 13.90     | 3.00 | 9.40 |
| please indicate: ... no. of contacts two rows 4 - 100 ... surface S = selective gold-plated G = gold-plated Z = tin-plated |           |      |      |



A

Male headers soldering technique

0.5 mm, angled

|                  |                                                                               |      |      |
|------------------|-------------------------------------------------------------------------------|------|------|
|                  |                                                                               |      |      |
| art. no.         | dim. [mm]                                                                     |      |      |
|                  | A                                                                             | B    | C    |
| SLY 3 035 ...    | 1.50                                                                          | 2.80 | 3.50 |
| SLY 3 041 ...    | 1.50                                                                          | 2.80 | 4.10 |
| SLY 3 082 ...    | 1.50                                                                          | 2.80 | 8.20 |
| please indicate: | ... no. of contacts<br>one row 1-50                                           |      |      |
|                  | ... surface<br>S = selective gold-plated<br>G = gold-plated<br>Z = tin-plated |      |      |
|                  |                                                                               |      |      |
| art. no.         | dim. [mm]                                                                     |      |      |
|                  | A                                                                             | B    | C    |
| SLY 4 035...     | 1.50                                                                          | 2.80 | 3.50 |
| SLY 4 041...     | 1.50                                                                          | 2.80 | 4.10 |
| SLY 4 082...     | 1.50                                                                          | 2.80 | 8.20 |
| please indicate: | ... no. of contacts<br>two rows 4-100                                         |      |      |
|                  | ... surface<br>S = selective gold-plated<br>G = gold-plated<br>Z = tin-plated |      |      |

Therefore any required number of contacts is available.

K

L

M

N

G 57

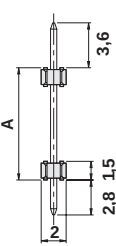
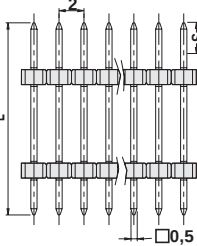
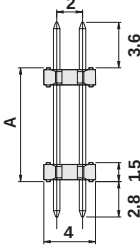
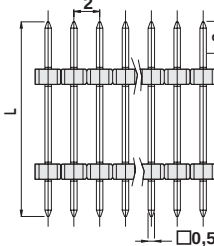
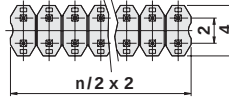
Technical data  
Female headers 2.00 SMD  
Jumpers  
Male headers .05" solder

→ G 73 - 78  
→ G 64  
→ G 77 - 78  
→ G 67  
Male headers 2.00 solder  
Male headers 2.54 solder  
Female headers 2.00 solder

→ G 56 - 58  
→ G 8  
→ G 60

0.5 mm

suitable for female headers BLY

|                                                                                    |                                                                                    |                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |   |   |  |
| art. no.                                                                           | dim. [mm]                                                                          | art. no.                                                                           | dim. [mm]                                                                           |
|                                                                                    | A L                                                                                |                                                                                    | A L                                                                                 |
| SLY 5 040 ...                                                                      | 4.00 10.40                                                                         | SLY 5 101 ...                                                                      | 10.10 16.50                                                                         |
| SLY 5 075 ...                                                                      | 7.50 13.90                                                                         | SLY 5 122 ...                                                                      | 12.20 18.60                                                                         |
| SLY 5 081 ...                                                                      | 8.10 14.50                                                                         |                                                                                    |                                                                                     |
|  |  |  |  |
| art. no.                                                                           | dim. [mm]                                                                          | art. no.                                                                           | dim. [mm]                                                                           |
|                                                                                    | A L                                                                                |                                                                                    | A L                                                                                 |
| SLY 6 040 ...                                                                      | 4.00 10.40                                                                         | SLY 6 101 ...                                                                      | 10.10 16.50                                                                         |
| SLY 6 075 ...                                                                      | 7.50 13.90                                                                         | SLY 6 122 ...                                                                      | 12.20 18.60                                                                         |
| SLY 6 081 ...                                                                      | 8.10 14.50                                                                         |                                                                                    |                                                                                     |
| please indicate:                                                                   | ... no. of contacts<br>one row 1-50<br>two rows 2-100                              |                                                                                    |                                                                                     |
|                                                                                    | ... surface<br>S = selective gold-plated<br>G = gold-plated<br>Z = tin-plated      |                                                                                    |                                                                                     |

Are used for interconnections of stacked PCBs.  
The position of the insulator can be changed within the total length of the pin.

Therefore any required number of contacts is available.



Empty page

High-precision female headers soldering technique

for 0.5 mm and up to 0.56 mm Ø

|                  |  |                                                       |  |
|------------------|--|-------------------------------------------------------|--|
| art. no.         |  |                                                       |  |
| BLY 1 ...        |  |                                                       |  |
| art. no.         |  |                                                       |  |
| BLY 2 ...        |  |                                                       |  |
| art. no.         |  |                                                       |  |
| BLY 3 ...        |  |                                                       |  |
| art. no.         |  |                                                       |  |
| BLY 4 ...        |  |                                                       |  |
| please indicate: |  | ... no. of contacts<br>one row 1-50<br>two rows 2-100 |  |

contact shell surface: tin-plated  
contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

Male headers 2.00 SMD  
Male headers 2.00 solder  
Female header grid 2.00  
Female headers 2.00 SMD

→ G 61 - 62  
→ G 56 - 58  
→ H 10  
→ G 64

Jumpers  
Design spec. for male headers  
Technical data

→ G 77 - 78  
→ G 19  
→ G 75 - 80

G 60

A

B

C

D

E

F

G

H

I

K

L

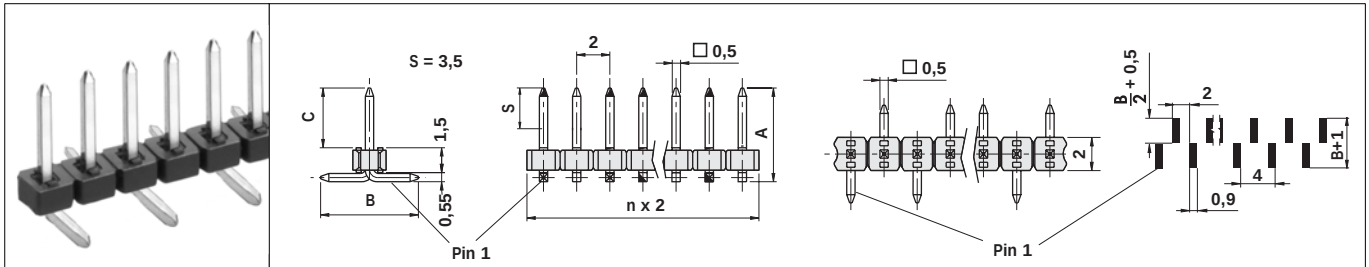
M

N

A

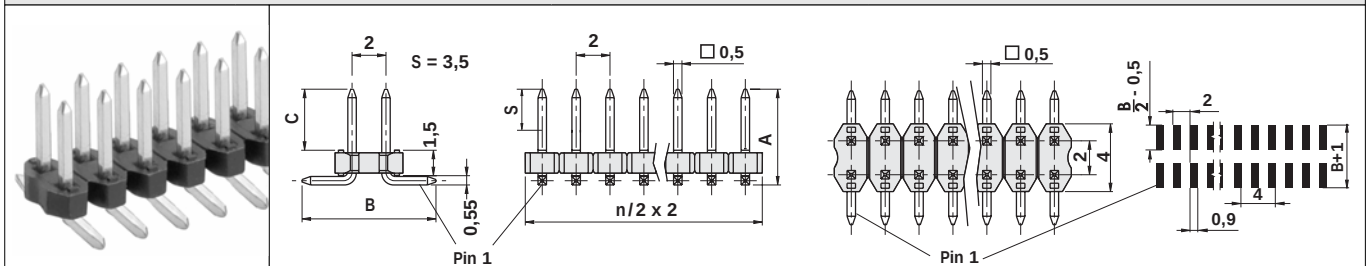
# Male headers in SMD mounting

□ 0.5 mm



| art. no.                 | dim. [mm] |      |      |      |
|--------------------------|-----------|------|------|------|
|                          | A         | B    | C    | S    |
| <b>SLY 7 SMD 036 ...</b> | 5.60      | 6.30 | 3.60 | 3.00 |
| <b>SLY 7 SMD 045 ...</b> | 6.50      | 4.60 | 4.50 | 3.50 |
| <b>SLY 7 SMD 062 ...</b> | 8.20      | 4.60 | 6.20 | 3.50 |

please indicate: ... no. of contacts one row 4-20 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine



| art. no.                 | dim. [mm] |      |      |      |
|--------------------------|-----------|------|------|------|
|                          | A         | B    | C    | S    |
| <b>SLY 8 SMD 036 ...</b> | 5.60      | 8.50 | 3.60 | 3.00 |
| <b>SLY 8 SMD 045 ...</b> | 6.50      | 6.50 | 4.50 | 3.50 |
| <b>SLY 8 SMD 062 ...</b> | 8.20      | 6.50 | 6.20 | 3.50 |

please indicate: ... no. of contacts two rows 4-40 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) SM = bar magazine B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (650 pcs/reel)

... packing (option) - additions:

**SLY 8 SMD ... SM; ... B SM: 6-40 contacts**

**SLY 8 SMD 036/045 B TR: 6-30 contacts**

For further informations please see "for automatic assembly" following this series!

K

L

M

N

**G 61**

Male headers 2.00 solder  
High-prec.male head.in SMD mount.  
Special male & female headers  
Female header grid 2.00

→ G 56 - 58  
→ G 35  
→ G 19  
→ H 10

Female headers 2.00 solder  
Female headers 2.00 SMD  
Technical data  
Jumpers

→ G 60  
→ G 64  
→ G 75 - 80  
→ G 77 - 78

Male headers in SMD mounting

0.5 mm

|                                                                                                                                                                                                                                               |           |      |      |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|------|------|
|                                                                                                                                                                                                                                               |           |      |      |      |
| art. no.                                                                                                                                                                                                                                      | dim. [mm] |      |      |      |
|                                                                                                                                                                                                                                               | A         | B    | C    | S    |
| SLY 9 SMD 040 ...                                                                                                                                                                                                                             | 8.80      | 3.30 | 4.00 | 3.50 |
| SLY 9 SMD 055 ...                                                                                                                                                                                                                             | 10.30     | 3.30 | 5.50 | 3.50 |
| please indicate: ... no. of contacts one row 2-20 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) B SM = pick and place pad and bar magazine                                                             |           |      |      |      |
|                                                                                                                                                                                                                                               |           |      |      |      |
| art. no.                                                                                                                                                                                                                                      | dim. [mm] |      |      |      |
|                                                                                                                                                                                                                                               | A         | B    | C    | S    |
| SLY 10 SMD 040 ...                                                                                                                                                                                                                            | 12.30     | 6.80 | 4.00 | 3.50 |
| please indicate: ... no. of contacts two rows 4-40 ... surface S = sel. gold-plated G = gold-plated Z = tin-plated ... packing (option) B SM = pick and place pad and bar magazine B TR = pick and place pad and tape and reel (700 pcs/reel) |           |      |      |      |

... packing (option) - additions:

SLY 10 SMD 040 ...: ... B TR, 4-16 contacts

For further informations please see "for automatic assembly" following this series!

A



Male headers in SMD mounting

B

Empty page

C

D

E

F

G

H

I

K

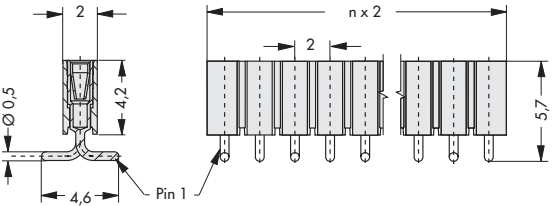
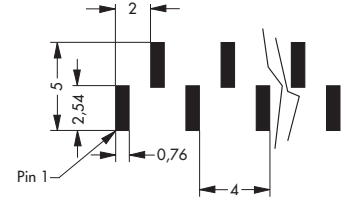
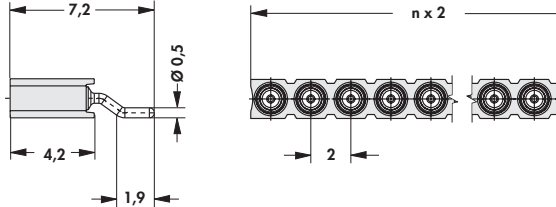
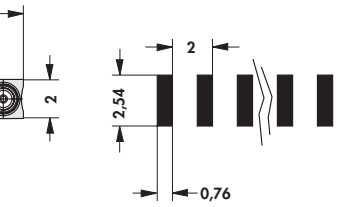
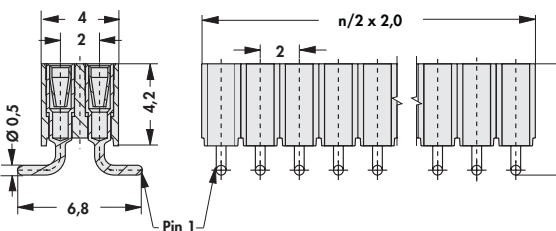
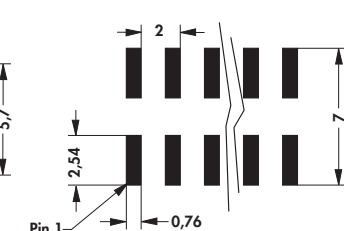
L

M

N

# High-precision female headers in SMD mounting

for □ 0.5 mm and up to 0.56 mm Ø

|                      |                                                                                     |                                                                                                                                   |                                                                                      |
|----------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| art. no.             |    |                                                 |   |
| <b>BLY 5 SMD ...</b> |                                                                                     |                                                                                                                                   |                                                                                      |
| please indicate:     | ... no. of contacts<br>one row 4-20                                                 | ... packing (option)<br>B SM =pick and place pad and bar magazine                                                                 |                                                                                      |
| art. no.             |    |                                                 |   |
| <b>BLY 6 SMD ...</b> |                                                                                     |                                                                                                                                   |                                                                                      |
| please indicate:     | ... no. of contacts<br>one row 2-20                                                 | ... packing (option)<br>TR =tape and reel (2.400 pcs/reel)                                                                        |                                                                                      |
| art. no.             |  |                                                |  |
| <b>BLY 8 SMD ...</b> |                                                                                     |                                                                                                                                   |                                                                                      |
| please indicate:     | ... no. of contacts<br>two rows 4-40                                                | ... packing (option)<br>B SM =pick and place pad and bar magazine<br>B TR =pick and place pad and tape and reel<br>(650 pcs/reel) |                                                                                      |

contact shell surface: tin-plated

contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

V-notches permit breaking! Therefore any required number of contacts is available.

... packing (option) - additions:

**BLY 6 SMD ... TR: 2-10 contacts**

**BLY 8 SMD ... B TR: 6-30 contacts**

For further informations please see "for automatic assembly" following this series!



A



High-precision female headers in SMD mounting

B

Empty page

C

D

E

F

G

H

I

K

L

M

N

Straight, narrow insulator □ 0.3 mm

suitable for female header BLM, one row 1-20 contacts

|                  |                                                  |      |       |
|------------------|--------------------------------------------------|------|-------|
|                  |                                                  |      |       |
| art. no.         | dim. [mm]                                        |      |       |
|                  | A                                                | B    | C     |
| SLM N 1 063 ...  | 11.10                                            | 3.10 | 6.30  |
| SLM N 1 092 ...  | 14.00                                            | 3.10 | 9.20  |
| SLM N 1 117 ...  | 16.50                                            | 3.10 | 11.70 |
| SLM N 11 063 ... | 12.80                                            | 4.80 | 6.30  |
| SLM N 11 117 ... | 18.20                                            | 4.80 | 11.70 |
| please indicate: | ... no. of contacts<br>one row 1 - 20            |      |       |
|                  | ... surface<br>G = gold-plated<br>Z = tin-plated |      |       |

Male headers soldering technique

□ 0,4 mm

suitable for female header BLM, one row 1-36 contacts

|                                                                                          |           |      |       |
|------------------------------------------------------------------------------------------|-----------|------|-------|
|                                                                                          |           |      |       |
| art. no.                                                                                 | dim. [mm] |      |       |
|                                                                                          | A         | B    | C     |
| SLV W 1 055 ...                                                                          | 9.70      | 2.50 | 5.50  |
| SLV W 1 080 ...                                                                          | 12.20     | 2.50 | 8.00  |
| SLV W 1 105 ...                                                                          | 14.70     | 2.50 | 10.50 |
| SLV W 1 130 ...                                                                          | 17.20     | 2.50 | 13.00 |
| please indicate: ... no. of contacts one row 1-36 ... surface G=gold-plated Z=tin-plated |           |      |       |

suitable for female header BLM, two rows 4-72 contacts, grid spacing 1,27 x 2,54 mm

|                                                                                           |           |      |       |
|-------------------------------------------------------------------------------------------|-----------|------|-------|
|                                                                                           |           |      |       |
| art. no.                                                                                  | dim. [mm] |      |       |
|                                                                                           | A         | B    | C     |
| SLV W 2 055 ...                                                                           | 9.70      | 2.50 | 5.50  |
| SLV W 2 080 ...                                                                           | 12.20     | 2.50 | 8.00  |
| SLV W 2 105 ...                                                                           | 14.70     | 2.50 | 10.50 |
| SLV W 2 130 ...                                                                           | 17.20     | 2.50 | 13.00 |
| please indicate: ... no. of contacts two rows 4-72 ... surface G=gold-plated Z=tin-plated |           |      |       |

Male headers soldering technique

0.4 mm, 90° angled

one row 1-36 contacts

|                    |                                              |      |       |
|--------------------|----------------------------------------------|------|-------|
|                    |                                              |      |       |
| art. no.           | dim. [mm]                                    |      |       |
|                    | A                                            | B    | C     |
| SLV W 1 KA 030 ... | 3.90                                         | 2.50 | 3.00  |
| SLV W 1 KA 055 ... | 3.90                                         | 2.50 | 5.50  |
| SLV W 1 KA 080 ... | 3.90                                         | 2.50 | 8.00  |
| SLV W 1 KA 105 ... | 3.90                                         | 2.50 | 10.50 |
| please indicate:   | ... no. of contacts<br>one row 1-36          |      |       |
|                    | ... surface<br>G=gold-plated<br>Z=tin-plated |      |       |

suitable for female header BLM, two rows 6-72 contacts, grid spacing 1,27 x 2,54 mm

| art. no.           | no. of contacts | VPE | dim. [mm] |      |      | art. no.           | no. of contacts | VPE | dim. [mm] |      |      |
|--------------------|-----------------|-----|-----------|------|------|--------------------|-----------------|-----|-----------|------|------|
|                    |                 |     | A         | B    | C    |                    |                 |     | A         | B    | C    |
| SLVW2 KA 030 10... | 10              | 78  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 10... | 10              | 78  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 14... | 14              | 55  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 14... | 14              | 55  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 16... | 16              | 50  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 16... | 16              | 50  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 20... | 20              | 40  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 20... | 20              | 40  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 26... | 26              | 31  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 26... | 26              | 31  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 30... | 30              | 27  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 30... | 30              | 27  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 34... | 34              | 24  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 34... | 34              | 24  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 40... | 40              | 20  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 40... | 40              | 20  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 50... | 50              | 16  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 50... | 50              | 16  | 3.70      | 2.50 | 5.40 |
| SLVW2 KA 030 72... | 72              | 11  | 3.70      | 2.50 | 3.00 | SLVW2 KA 054 72... | 72              | 11  | 3.70      | 2.50 | 5.40 |
| please indicate:   |                 |     |           |      |      |                    |                 |     |           |      |      |

SLV W 2 KA ...: packing bar magazine

VPE = packing unit (pieces/tube);

preferred number of contacts, different ones between 6 and 72 can be made upon request

Female headers 1.27 SMD → G 74  
High-prec. fem. headers 1.27 solder → G 72  
High-prec.female headers SMD → G 76  
Single contacts metal strip → G 26

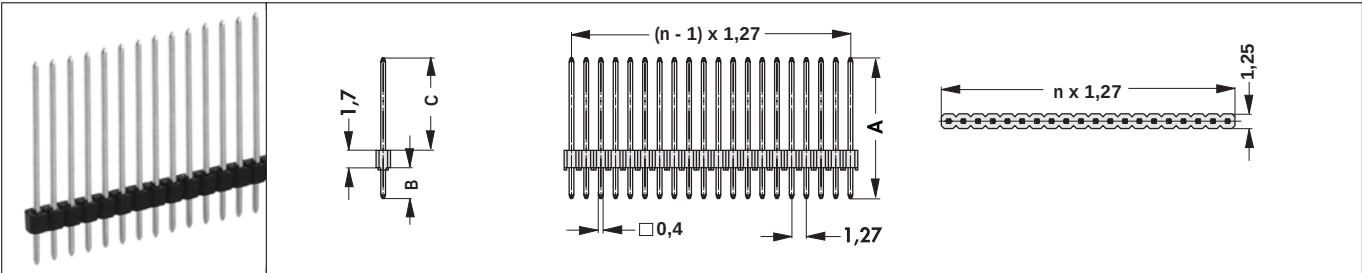
High-prec.male head.in SMD mount. → G 35  
Jumpers → G 77 - 78  
Jump. links 2.00 & 2.54 solder → G 20

G 68

Male headers soldering technique

Straight, narrow insulator □ 0.4 mm

suitable for female header BLM, one row 1-20 contacts

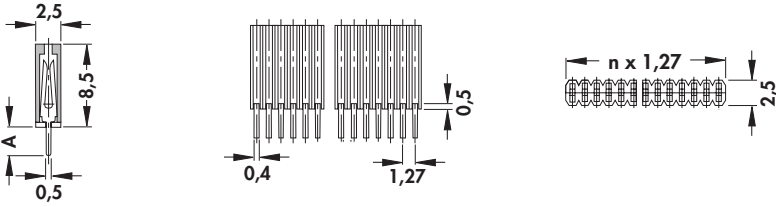
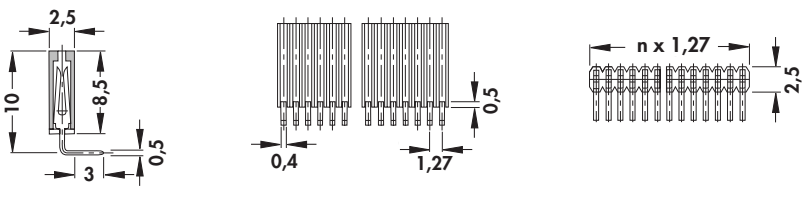


| art. no.         | dim. [mm] |      |       |
|------------------|-----------|------|-------|
|                  | A         | B    | C     |
| SLV N 1 055 ...  | 9.70      | 2.50 | 5.50  |
| SLV N 1 080 ...  | 12.20     | 2.50 | 8.00  |
| SLV N 1 105 ...  | 14.70     | 2.50 | 10.50 |
| SLV N 1 130 ...  | 17.20     | 2.50 | 13.00 |
| SLV N 11 055 ... | 12.20     | 5.00 | 5.50  |
| SLV N 11 080 ... | 14.70     | 5.00 | 8.00  |
| SLV N 11 105 ... | 17.20     | 5.00 | 10.50 |

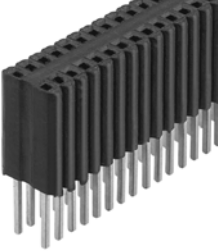
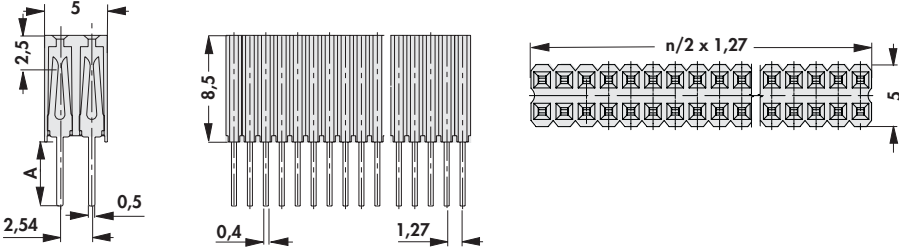
please indicate: ... no. of contacts one row 1-20 ... surface G= gold-plated Z= tin-plated

Female headers soldering technique

suitable for male header SLM and SLV, one row 1-36 contacts

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          | dim. [mm]<br>A                                                                     |
| BLM KG 1 ...                                                                      | 3.00                                                                               |
| BLM LG 1 ...                                                                      | 5.10                                                                               |
|  |  |
| art. no.                                                                          |                                                                                    |
| BLM LA 1 ...                                                                      |                                                                                    |
| please indicate:                                                                  | ... no. of contacts<br>one row 1-36                                                |
|                                                                                   | ... surface<br>G=gold-plated<br>Z=tin-plated                                       |

suitable for male header SLV, two rows 4-72 contacts - grid spacing 1.27 x 2.54 mm

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            | dim. [mm]<br>A                                                                       |
| BLM KG 2 ...                                                                        | 3.00                                                                                 |
| BLM LG 2 ...                                                                        | 5.10                                                                                 |
| please indicate:                                                                    | ... no. of contacts<br>two rows 4-72                                                 |
|                                                                                     | ... surface<br>G=gold-plated<br>Z=tin-plated                                         |

A



High-precision male headers soldering technique

B

Ø 0.43 mm

turned precision contacts, less space required on PCB

C

D

E

F

G

H

I

K

L

M

N

|                  |                                              |  |  |
|------------------|----------------------------------------------|--|--|
|                  |                                              |  |  |
| art. no.         | no. of contacts                              |  |  |
| SLR 1 025 ...    | 25                                           |  |  |
| SLR 1 050 ...    | 50                                           |  |  |
|                  |                                              |  |  |
| art. no.         | no. of contacts                              |  |  |
| SLR 2 050 ...    | 50                                           |  |  |
| SLR 2 100 ...    | 100                                          |  |  |
|                  |                                              |  |  |
| art. no.         | no. of contacts                              |  |  |
| SLR 3 025 ...    | 25                                           |  |  |
| SLR 3 050 ...    | 50                                           |  |  |
|                  |                                              |  |  |
| art. no.         | no. of contacts                              |  |  |
| SLR 4 050 ...    | 50                                           |  |  |
| SLR 4 100 ...    | 100                                          |  |  |
| please indicate: | ... surface<br>G=gold-plated<br>Z=tin-plated |  |  |

Other number of contacts on request!

G 71

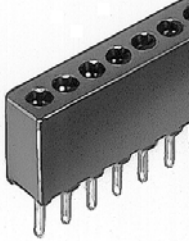
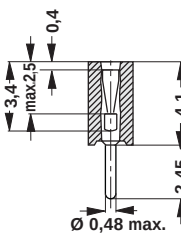
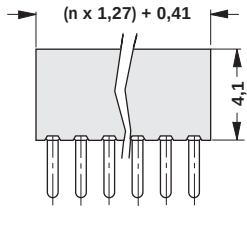
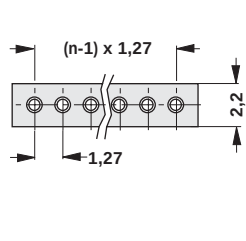
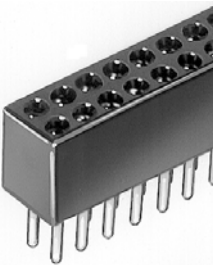
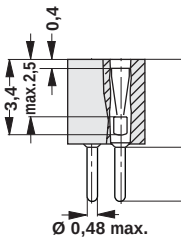
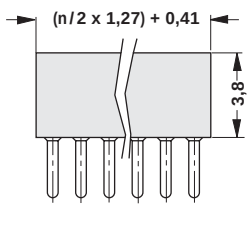
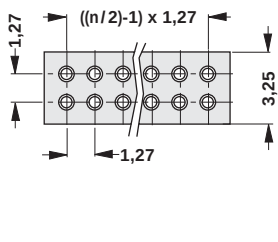
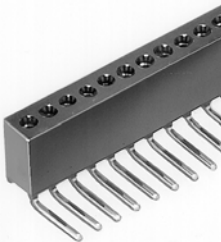
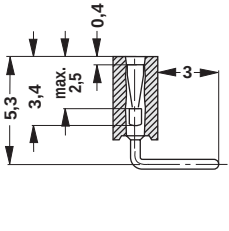
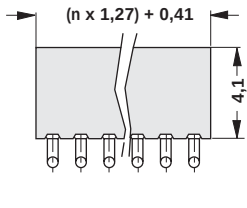
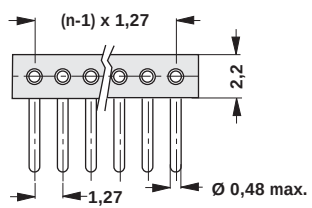
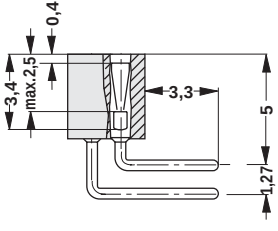
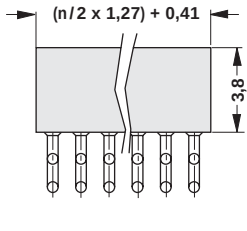
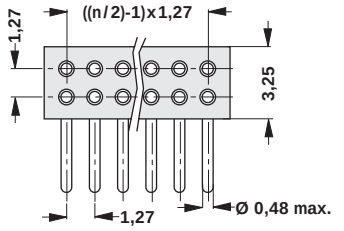
Jumpers  
Male headers .05" solder  
Special male & female headers  
Technical data

→ G 77 - 78  
→ G 67  
→ G 19  
→ G 73 - 78

High-prec. fem. headers 1.27 solder → G 72  
High-prec.female headers SMD → G 76  
Single contacts metal strip → G 26

High-precision female headers soldering technique

for Ø 0.35–0.45 mm

|                                                                                     |                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |          |
| art. no.                                                                            | no. of contacts                                                                                                                                                                                                                                                |
| BLR 1 025 Z                                                                         | 25                                                                                                                                                                                                                                                             |
| BLR 1 050 Z                                                                         | 50                                                                                                                                                                                                                                                             |
|    |          |
| art. no.                                                                            | no. of contacts                                                                                                                                                                                                                                                |
| BLR 2 050 Z                                                                         | 50                                                                                                                                                                                                                                                             |
| BLR 2 100 Z                                                                         | 100                                                                                                                                                                                                                                                            |
|  |    |
| art. no.                                                                            | no. of contacts                                                                                                                                                                                                                                                |
| BLR 3 025 Z                                                                         | 25                                                                                                                                                                                                                                                             |
| BLR 3 050 Z                                                                         | 50                                                                                                                                                                                                                                                             |
|  |    |
| art. no.                                                                            | no. of contacts                                                                                                                                                                                                                                                |
| BLR 4 050 Z                                                                         | 50                                                                                                                                                                                                                                                             |
| BLR 4 100 Z                                                                         | 100                                                                                                                                                                                                                                                            |

contact shell surface: tin-plated

contact spring: gold-plated

No capillary action when soldering due to protected contact insert.

Other number of contacts on request!

Special male & female headers → G 19  
Female headers 1.27 solder → G 70  
High-prec. male headers 1.27 SMD → G 75  
Technical data → G 75 - 80

Special male & female headers → G 19  
High-prec.female headers SMD → G 76  
High-prec. male head. 1.27 solder → G 71



A

Male headers in SMD mounting

0.4 mm

suitable for female header BLM, one row 4-20 contacts

|                    |                                                                         |
|--------------------|-------------------------------------------------------------------------|
|                    |                                                                         |
| art. no.           | dim. [mm]                                                               |
|                    | A B C                                                                   |
| SLV W 1 SMD 048... | 8.20 4.00 4.80                                                          |
| SLV W 1 SMD 073... | 10.70 4.00 7.30                                                         |
| please indicate:   | ... no. of contacts one row 4-20 ... surface G=gold-plated Z=tin-plated |

suitable for female header BLM, two rows 4-40 contacts, grid spacing 1,27 x 2,54 mm

|                    |                                                                          |
|--------------------|--------------------------------------------------------------------------|
|                    |                                                                          |
| art. no.           | dim. [mm]                                                                |
|                    | A B C                                                                    |
| SLV W 2 SMD 048... | 8.20 6.60 4.80                                                           |
| SLV W 2 SMD 073... | 10.70 6.60 7.30                                                          |
| please indicate:   | ... no. of contacts two rows 4-40 ... surface G=gold-plated Z=tin-plated |

H

I

K

L

M

N

G 73

Female headers 1.27 solder  
Jumpers  
High-prec. fem. headers 1.27 solder  
Technical data

→ G 70  
→ G 77 - 78  
→ G 72  
→ G 75 - 80

High-prec.female headers SMD → G 76  
High-prec.male head.in SMD mount. → G 35

Female headers in SMD mounting

Wide insulator with 0.3 mm and 0.4 mm

suitable for male header SLM and SLV, one row 4-20 contacts

|                  |                                     |                                              |
|------------------|-------------------------------------|----------------------------------------------|
| art. no.         |                                     |                                              |
| BLM 1 SMD ...    |                                     |                                              |
| please indicate: | ... no. of contacts<br>one row 4-20 | ... surface<br>G=gold-plated<br>Z=tin-plated |

Grid spacing 1.27 x 2.54 mm

suitable for male header SLV, two rows 4-40 contacts

|                  |                                      |                                              |
|------------------|--------------------------------------|----------------------------------------------|
| art. no.         |                                      |                                              |
| BLM 2 SMD ...    |                                      |                                              |
| please indicate: | ... no. of contacts<br>two rows 4-40 | ... surface<br>G=gold-plated<br>Z=tin-plated |

A



# High-precision male headers in SMD mounting

B

## Turned precision contacts

less space required on PCB

C

D

|                                                               |                 |  |  |
|---------------------------------------------------------------|-----------------|--|--|
|                                                               |                 |  |  |
| art. no.                                                      | no. of contacts |  |  |
| SLR 5 SMD ...                                                 | 50              |  |  |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated |                 |  |  |
|                                                               |                 |  |  |
| art. no.                                                      | no. of contacts |  |  |
| SLR 6 SMD ...                                                 | 100             |  |  |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated |                 |  |  |
|                                                               |                 |  |  |
| art. no.                                                      | no. of contacts |  |  |
| SLR 7 SMD ...                                                 | 50              |  |  |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated |                 |  |  |

H

I

K

L

M

Other number of contacts on request!

N

**G 75**

Male headers .05" solder  
Peel-off terminal strips  
High-prec. male head. 1.27 solder  
Technical data

→ G 67  
→ G 25  
→ G 71  
→ G 73 - 78

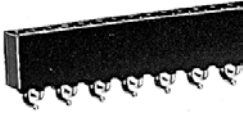
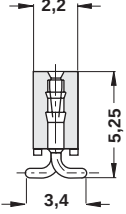
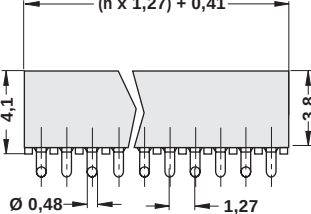
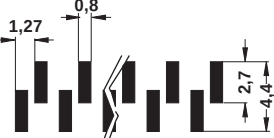
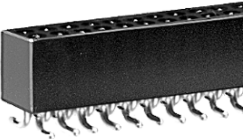
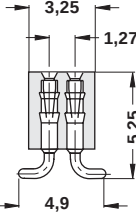
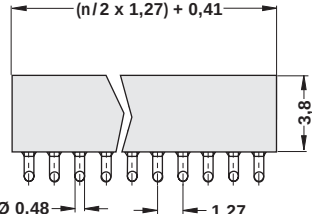
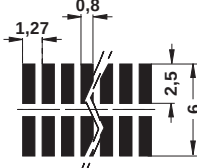
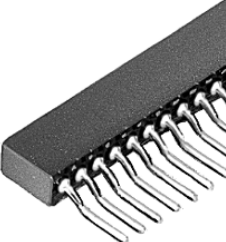
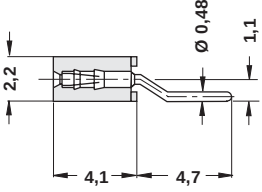
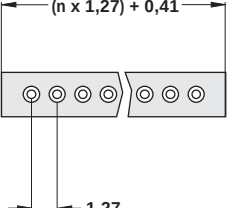
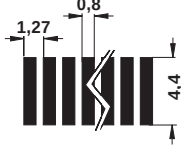
High-prec.female headers SMD  
High-prec. fem. headers 1.27 solder  
Female headers 1.27 SMD  
Female headers 1.27 solder

→ G 76  
→ G 72  
→ G 74  
→ G 70

High-precision female headers in SMD mounting

Turned precision contacts for Ø 0.35-0.45 mm

less space required on PCB

|                                                                                     |                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |          |
| art. no.<br>BLR 5 SMD                                                               | no. of contacts<br>50                                                                                                                                                                                                                                          |
|    |          |
| art. no.<br>BLR 6 SMD                                                               | no. of contacts<br>100                                                                                                                                                                                                                                         |
|  |    |
| art. no.<br>BLR 7 SMD                                                               | no. of contacts<br>50                                                                                                                                                                                                                                          |

contact shell: tin-plated  
contact insert: gold-plated

Closed precision rotary part with 3-finger contact prevents rising of flux agents.

Other number of contacts on request!

A

Jumpers

for 0.6-0.64 mm wire wrap pins and Ø 0.6-0.7 mm

B

C

D

E

F

G

H

I

K

L

M

N

| art. no.                                                                    | no. of contacts | surface     | version                                  | grid |  |  |  |
|-----------------------------------------------------------------------------|-----------------|-------------|------------------------------------------|------|--|--|--|
| CAB 4 G ...                                                                 | 2               | 0.1 μm gold | closed                                   | 2.54 |  |  |  |
| CAB 4 Z ...                                                                 | 2               | 5.0 μm tin  | closed                                   | 2.54 |  |  |  |
|                                                                             |                 |             |                                          |      |  |  |  |
| CAB 5 05 G ...                                                              | 2               | 0.5 μm gold | closed, hole for probe trip              | 5.08 |  |  |  |
| CAB 5 10 G ...                                                              | 2               | 1.0 μm gold | closed, hole for probe trip              | 5.08 |  |  |  |
| CAB 5 Z ...                                                                 | 2               | 5.0 μm tin  | closed, hole for probe trip              | 5.08 |  |  |  |
|                                                                             |                 |             |                                          |      |  |  |  |
| CAB 6 05 G ...                                                              | 2               | 0.5 μm gold | open, suitable for miniature test probes | 2.54 |  |  |  |
| CAB 6 10 G ...                                                              | 2               | 1.0 μm gold | open, suitable for miniature test probes | 2.54 |  |  |  |
| CAB 6 Z ...                                                                 | 2               | 5.0 μm tin  | open, suitable for miniature test probes | 2.54 |  |  |  |
|                                                                             |                 |             |                                          |      |  |  |  |
| CAB 9 G ...                                                                 | 2               | 0.1 μm gold | tag, open                                | 2.54 |  |  |  |
| please indicate: ... colour<br>B = blue<br>G = grey<br>R = red<br>S = black |                 |             |                                          |      |  |  |  |

Colour "grey" except for CAB 9.

The flexible contacts are shorting two pins. The jumpers can be mounted behind and next to each other.

G 77

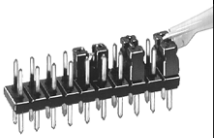
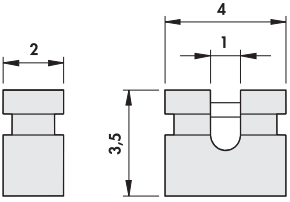
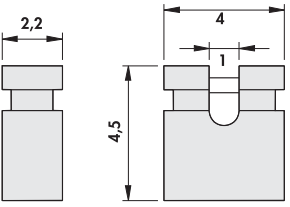
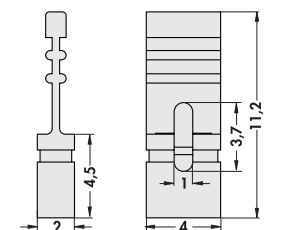
Male headers 2.54 SMD  
Male headers 2.54 solder  
Male headers 2.54 press-fit  
Male headers 2.00 SMD

→ G 37 - 42  
→ G 8  
→ G 51  
→ G 61 - 62

Male headers 2.00 solder  
Technical data  
Special male & female headers  
Jump. links 2.00 & 2.54 solder

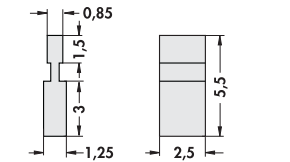
→ G 56 - 58  
→ G 73 - 78  
→ G 19  
→ G 20

for square 0.5 mm and Ø 0.4-0.5 mm

| art. no.   | no. of contacts | surface      | version                                       | grid |                                                                                     |                                                                                      |
|------------|-----------------|--------------|-----------------------------------------------|------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| CAB 10 G S | 2               | 0.1 µm gold  | open, suitable for miniature test probes      | 2.00 |   |   |
| CAB 11 G S | 2               | 0.1 µm gold  | open, suitable for miniature test probes      | 2.00 |   |   |
| CAB 14 G S | 2               | <0,1 µm gold | tag, open, suitable for miniature test probes | 2.00 |  |  |

colour:  
black

for square 0.3-0.4 mm and Ø 0.4-0.5 mm

| art. no.   | no. of contacts | surface      | version     | grid |                                                                                      |                                                                                       |
|------------|-----------------|--------------|-------------|------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| CAB 15 G S | 2               | <0,1 µm gold | closed, tag | 1.27 |  |  |

colour:  
black

Technical data  
High-prec. male head. 1.27 solder  
High-prec. male headers 1.27 SMD  
Male headers 2.54 press-fit

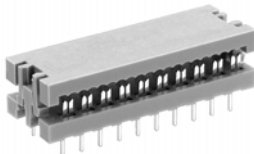
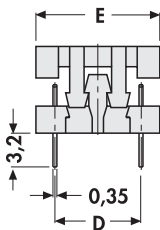
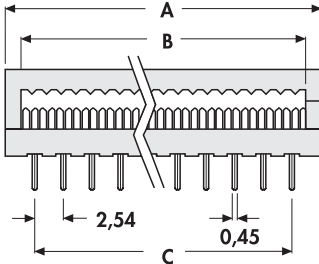
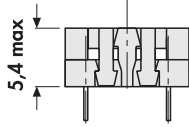
→ G 73 - 78  
→ G 71  
→ G 75  
→ G 51

Single contacts metal strip  
Male headers 2.00 solder  
Male headers 2.00 SMD

→ G 26  
→ G 56 - 58  
→ G 61 - 62

Printed circuit connector

Design DIL

|  |  |           |  |       |  |          |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|----------|
| art. no.                                                                          | no. of contacts                                                                   | dim. [mm] |                                                                                    |       |                                                                                     |          |
|                                                                                   |                                                                                   | A         | B                                                                                  | C     | D                                                                                   | E (max.) |
| KK 04 Z                                                                           | 4                                                                                 | 8.00      | 5.10                                                                               | 2.54  | 7.62                                                                                | 11.00    |
| KK 06 Z                                                                           | 6                                                                                 | 10.30     | 7.60                                                                               | 5.08  | 7.62                                                                                | 11.00    |
| KK 08 Z                                                                           | 8                                                                                 | 13.00     | 10.20                                                                              | 7.62  | 7.62                                                                                | 11.00    |
| KK 10 Z                                                                           | 10                                                                                | 15.40     | 12.70                                                                              | 10.16 | 7.62                                                                                | 11.00    |
| KK 12 Z                                                                           | 12                                                                                | 18.00     | 15.30                                                                              | 5.08  | 7.62                                                                                | 11.00    |
| KK 14 Z                                                                           | 14                                                                                | 20.50     | 17.80                                                                              | 15.24 | 7.62                                                                                | 11.00    |
| KK 16 Z                                                                           | 16                                                                                | 23.00     | 20.30                                                                              | 17.78 | 7.62                                                                                | 11.00    |
| KK 18 Z                                                                           | 18                                                                                | 25.60     | 22.90                                                                              | 20.32 | 7.62                                                                                | 11.00    |
| KK 20 Z                                                                           | 20                                                                                | 28.10     | 25.40                                                                              | 22.86 | 7.62                                                                                | 11.00    |
| KK 24 Z                                                                           | 24                                                                                | 33.00     | 30.50                                                                              | 27.94 | 15.24                                                                               | 18.70    |
| KK 28 Z                                                                           | 28                                                                                | 38.10     | 35.60                                                                              | 33.02 | 15.24                                                                               | 18.70    |
| KK 40 Z                                                                           | 40                                                                                | 53.30     | 50.80                                                                              | 48.26 | 15.24                                                                               | 18.70    |

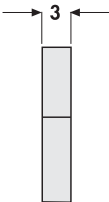
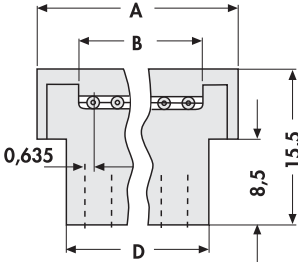
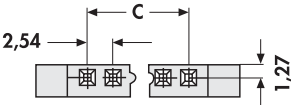
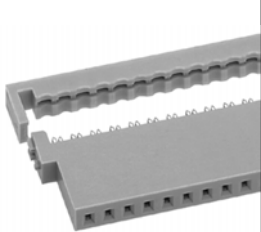
Use with ribbon cable:

round conductor flat strip:  
AWG 28 = solid or stranded  
AWG 30 = solid

conductor diameter:  
AWG 28 ... 30 = 0.09 ... 0.05 mm<sup>2</sup>  
insulation-Ø:  
max. 1.1 mm

Female connector

One row

| <div></div> |                 |           |       |       |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|-------|
| art. no.                                                                                                                                                                                                                                                                                                                                           | no. of contacts | dim. [mm] |       |       |       |
|                                                                                                                                                                                                                                                                                                                                                    |                 | A         | B     | C     | D     |
| FV 03 ...                                                                                                                                                                                                                                                                                                                                          | 3               | 15.24     | 7.62  | 5.08  | 8.89  |
| FV 04 ...                                                                                                                                                                                                                                                                                                                                          | 4               | 17.78     | 10.16 | 7.62  | 11.43 |
| FV 05 ...                                                                                                                                                                                                                                                                                                                                          | 5               | 20.32     | 12.70 | 10.16 | 7.62  |
| FV 06 ...                                                                                                                                                                                                                                                                                                                                          | 6               | 22.86     | 15.24 | 5.08  | 16.51 |
| FV 07 ...                                                                                                                                                                                                                                                                                                                                          | 7               | 25.40     | 17.78 | 15.24 | 19.05 |
| FV 08 ...                                                                                                                                                                                                                                                                                                                                          | 8               | 27.94     | 20.32 | 17.78 | 21.59 |
| FV 10 ...                                                                                                                                                                                                                                                                                                                                          | 10              | 33.02     | 25.40 | 22.86 | 26.67 |
| FV 12 ...                                                                                                                                                                                                                                                                                                                                          | 12              | 38.10     | 30.48 | 27.94 | 31.75 |
| FV 13 ...                                                                                                                                                                                                                                                                                                                                          | 13              | 40.64     | 33.02 | 30.48 | 34.29 |
| FV 14 ...                                                                                                                                                                                                                                                                                                                                          | 14              | 43.18     | 35.66 | 33.02 | 36.83 |
| FV 16 ...                                                                                                                                                                                                                                                                                                                                          | 16              | 48.26     | 40.64 | 38.10 | 41.91 |
| FV 17 ...                                                                                                                                                                                                                                                                                                                                          | 17              | 50.80     | 43.18 | 40.64 | 44.45 |
| FV 18 ...                                                                                                                                                                                                                                                                                                                                          | 18              | 53.34     | 45.72 | 43.18 | 46.99 |
| FV 20 ...                                                                                                                                                                                                                                                                                                                                          | 20              | 58.42     | 50.80 | 48.26 | 52.07 |
| FV 24 ...                                                                                                                                                                                                                                                                                                                                          | 24              | 68.58     | 60.96 | 58.42 | 62.23 |
| FV 25 ...                                                                                                                                                                                                                                                                                                                                          | 25              | 71.12     | 63.50 | 60.96 | 64.77 |
| FV 36 ...                                                                                                                                                                                                                                                                                                                                          | 36              | 99.06     | 91.44 | 88.90 | 92.71 |
| please indicate: ... surface<br>G = gold-plated<br>Z = tin-plated                                                                                                                                                                                                                                                                                  |                 |           |       |       |       |

recommended plugs  
□ 0.635 mm  
length 5 ... 8 mm

Use with ribbon cable:

round conductor flat strip:  
AWG 28 = solid or stranded  
AWG 30 = solid

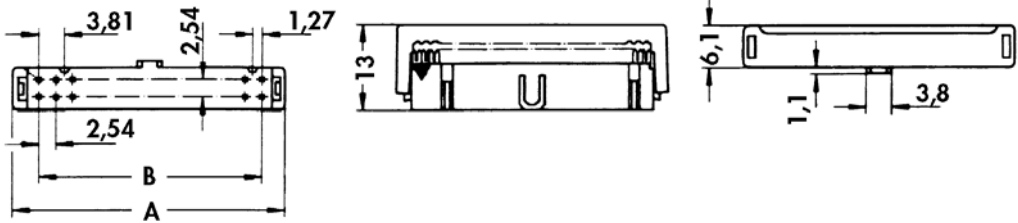
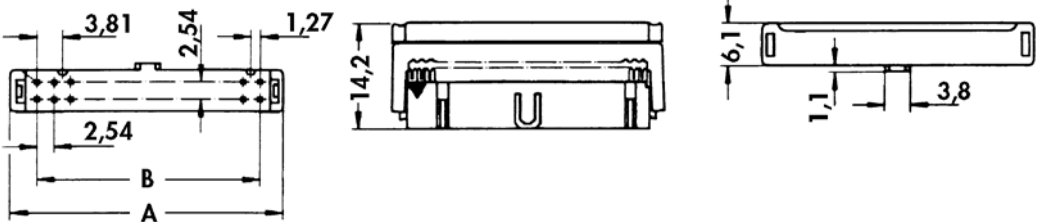
conductor diameter:  
AWG 28 ... 30 = 0.09 ... 0.05 mm<sup>2</sup>  
insulation-Ø:  
max. 1.1 mm



Female connector

Two rows, with guiding nose

suitable for shrouded male header ASL ...

| <br><b>PV</b>        |  |           |       |                        |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|------------------------|
| <br><b>PV + ZEPV</b> |  |           |       |                        |
| art. no.                                                                                              | no. of contacts                                                                    | dim. [mm] |       | suitable strain relief |
|                                                                                                       |                                                                                    | A         | B     |                        |
| <b>PV 06 G</b>                                                                                        | 6                                                                                  | 12.20     | 5.08  | <b>ZEPV 06</b>         |
| <b>PV 10 G</b>                                                                                        | 10                                                                                 | 17.30     | 10.16 | <b>ZEPV 10</b>         |
| <b>PV 14 G</b>                                                                                        | 14                                                                                 | 22.40     | 15.24 | <b>ZEPV 14</b>         |
| <b>PV 16 G</b>                                                                                        | 16                                                                                 | 24.90     | 17.78 | <b>ZEPV 16</b>         |
| <b>PV 20 G</b>                                                                                        | 20                                                                                 | 30.00     | 22.86 | <b>ZEPV 20</b>         |
| <b>PV 26 G</b>                                                                                        | 26                                                                                 | 37.60     | 30.48 | <b>ZEPV 26</b>         |
| <b>PV 34 G</b>                                                                                        | 34                                                                                 | 47.80     | 40.64 | <b>ZEPV 34</b>         |
| <b>PV 40 G</b>                                                                                        | 40                                                                                 | 55.40     | 48.26 | <b>ZEPV 40</b>         |
| <b>PV 50 G</b>                                                                                        | 50                                                                                 | 68.10     | 60.96 | <b>ZEPV 50</b>         |

contact surface finish: gold-plated

Use with ribbon cable:

round conductor flat strip:

AWG 28 = solid or stranded

AWG 30 = solid

conductor diameter:

AWG 28 ... 30 = 0.09 ... 0.05 mm²

insulation-Ø:

max 1.1 mm

Male headers 2.54 solder  
Application tools  
Single contacts metal strip  
Technical data

→ G 8  
→ H 11  
→ G 26  
→ H 12

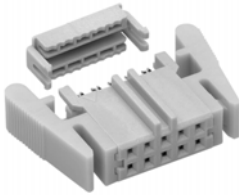
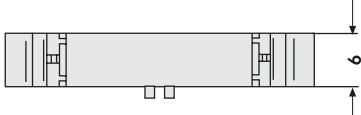
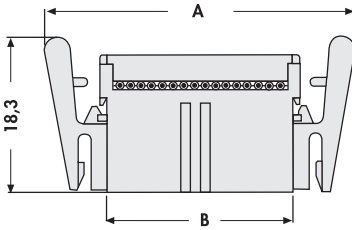
Boltable female header  
Shroud. male header SMD  
Shrouded male header

→ H 5  
→ H 7  
→ H 6

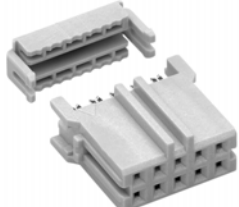
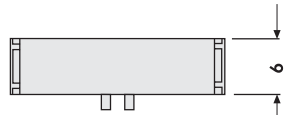
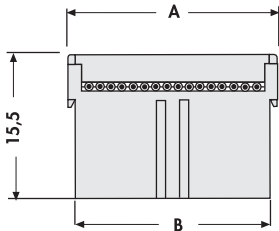
Female connector

Two rows, with guiding nose

boltable female header, suitable for shrouded male header ASL ...

|  |                 |  |       |  |                 |  |       |
|-----------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------|
| art. no.                                                                          | no. of contacts | dim. [mm]                                                                         |       | art. no.                                                                           | no. of contacts | dim. [mm]                                                                           |       |
|                                                                                   |                 | A                                                                                 | B     |                                                                                    |                 | A                                                                                   | B     |
| VFL 06 ...                                                                        | 6               | 23.58                                                                             | 9.56  | VFL 20 ...                                                                         | 20              | 41.36                                                                               | 27.34 |
| VFL 08 ...                                                                        | 8               | 26.12                                                                             | 12.10 | VFL 26 ...                                                                         | 26              | 48.98                                                                               | 34.96 |
| VFL 10 ...                                                                        | 10              | 28.66                                                                             | 14.64 | VFL 34 ...                                                                         | 34              | 59.14                                                                               | 45.12 |
| VFL 12 ...                                                                        | 12              | 31.20                                                                             | 17.18 | VFL 40 ...                                                                         | 40              | 66.76                                                                               | 52.74 |
| VFL 14 ...                                                                        | 14              | 33.74                                                                             | 19.72 | VFL 50 ...                                                                         | 50              | 79.46                                                                               | 65.44 |
| VFL 16 ...                                                                        | 16              | 36.28                                                                             | 22.26 |                                                                                    |                 |                                                                                     |       |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                     |                 |                                                                                   |       |                                                                                    |                 |                                                                                     |       |

suitable for shrouded male header ASL ...

|  |                 |  |       |  |                 |           |       |
|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------|-----------------|-----------|-------|
| art. no.                                                                            | no. of contacts | dim. [mm]                                                                           |       | art. no.                                                                             | no. of contacts | dim. [mm] |       |
|                                                                                     |                 | A                                                                                   | B     |                                                                                      |                 | A         | B     |
| FLMP 06 ...                                                                         | 6               | 10.97                                                                               | 9.56  | FLMP 20 ...                                                                          | 20              | 28.75     | 27.34 |
| FLMP 08 ...                                                                         | 8               | 13.51                                                                               | 12.10 | FLMP 26 ...                                                                          | 26              | 36.37     | 34.96 |
| FLMP 10 ...                                                                         | 10              | 16.05                                                                               | 14.64 | FLMP 34 ...                                                                          | 34              | 46.53     | 45.12 |
| FLMP 12 ...                                                                         | 12              | 18.59                                                                               | 17.18 | FLMP 40 ...                                                                          | 40              | 54.15     | 52.74 |
| FLMP 14 ...                                                                         | 14              | 21.13                                                                               | 19.72 | FLMP 50 ...                                                                          | 50              | 66.85     | 65.44 |
| FLMP 16 ...                                                                         | 16              | 23.67                                                                               | 22.26 |                                                                                      |                 |           |       |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                       |                 |                                                                                     |       |                                                                                      |                 |           |       |

Use with ribbon cable:

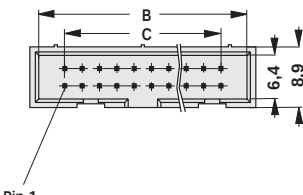
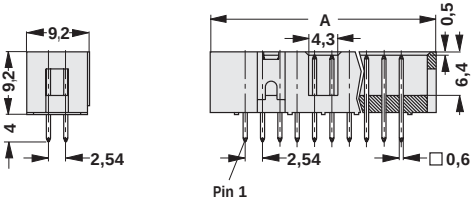
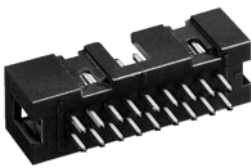
round conductor flat strip:  
AWG 28 = solid or stranded  
AWG 30 = solid

conductor diameter:  
AWG 28 ... 30 = 0.09 ... 0.05 mm<sup>2</sup>  
insulation-Ø: max 1.1 mm

Male header

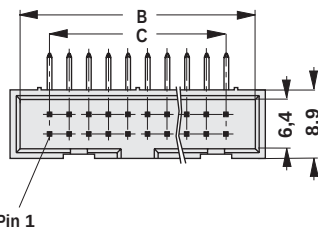
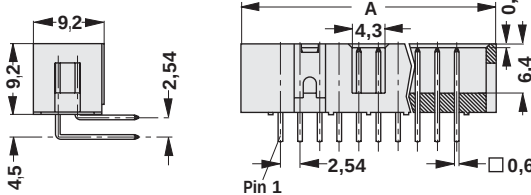
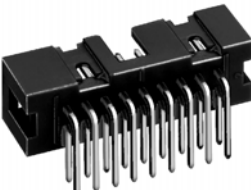
Straight, two rows, shrouded

suitable for boltable female header VFL, FLMP, PV

| <div></div> |                 |           |       |       |             |                 |           |       |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|-------------|-----------------|-----------|-------|-------|
| art. no.                                                                                                                                                                                                                                                         | no. of contacts | dim. [mm] |       |       | art. no.    | no. of contacts | dim. [mm] |       |       |
|                                                                                                                                                                                                                                                                  |                 | A         | B     | C     |             |                 | A         | B     | C     |
| ASLG 06 ...                                                                                                                                                                                                                                                      | 6               | 15.30     | 12.70 | 5.08  | ASLG 20 ... | 20              | 33.10     | 30.50 | 22.86 |
| ASLG 08 ...                                                                                                                                                                                                                                                      | 8               | 17.80     | 15.20 | 7.62  | ASLG 26 ... | 26              | 40.70     | 38.10 | 30.48 |
| ASLG 10 ...                                                                                                                                                                                                                                                      | 10              | 20.40     | 17.80 | 10.16 | ASLG 34 ... | 34              | 50.90     | 48.30 | 40.64 |
| ASLG 12 ...                                                                                                                                                                                                                                                      | 12              | 22.90     | 20.30 | 12.70 | ASLG 40 ... | 40              | 58.50     | 55.90 | 48.26 |
| ASLG 14 ...                                                                                                                                                                                                                                                      | 14              | 25.40     | 22.90 | 15.24 | ASLG 50 ... | 50              | 71.20     | 68.60 | 60.96 |
| ASLG 16 ...                                                                                                                                                                                                                                                      | 16              | 28.00     | 25.40 | 17.78 |             |                 |           |       |       |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                                                                                                                                                                                                    |                 |           |       |       |             |                 |           |       |       |

Angled, two rows, shrouded

suitable for boltable female header VFL, FLMP, PV

| <div></div> |                 |           |       |       |             |                 |           |       |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|-------------|-----------------|-----------|-------|-------|
| art. no.                                                                                                                                                                                                                                                               | no. of contacts | dim. [mm] |       |       | art. no.    | no. of contacts | dim. [mm] |       |       |
|                                                                                                                                                                                                                                                                        |                 | A         | B     | C     |             |                 | A         | B     | C     |
| ASLA 06 ...                                                                                                                                                                                                                                                            | 6               | 15.30     | 12.70 | 5.08  | ASLA 20 ... | 20              | 33.10     | 30.50 | 22.86 |
| ASLA 08 ...                                                                                                                                                                                                                                                            | 8               | 17.80     | 15.20 | 7.62  | ASLA 26 ... | 26              | 40.70     | 38.10 | 30.48 |
| ASLA 10 ...                                                                                                                                                                                                                                                            | 10              | 20.40     | 17.80 | 10.16 | ASLA 34 ... | 34              | 50.90     | 48.30 | 40.64 |
| ASLA 12 ...                                                                                                                                                                                                                                                            | 12              | 22.90     | 20.30 | 12.70 | ASLA 40 ... | 40              | 58.50     | 55.90 | 48.26 |
| ASLA 14 ...                                                                                                                                                                                                                                                            | 14              | 25.40     | 22.90 | 15.24 | ASLA 50 ... | 50              | 71.20     | 68.60 | 60.96 |
| ASLA 16 ...                                                                                                                                                                                                                                                            | 16              | 28.00     | 25.40 | 17.78 |             |                 |           |       |       |
| please indicate: ... surface<br>G=gold-plated<br>Z=tin-plated                                                                                                                                                                                                          |                 |           |       |       |             |                 |           |       |       |

Gold-plated resp. tin-plated contacts are available with either straight or squared terminations.  
In addition they can be combined with many other stripline connectors in 2.54 mm pitch.

Male header

SMD, two rows, shrouded

suitable for bolttable female header VFL, FLMP, PV

| art. no.       | no. of contacts | VPE | dim. [mm] |       | art. no.       | no. of contacts | VPE | dim. [mm] |       |
|----------------|-----------------|-----|-----------|-------|----------------|-----------------|-----|-----------|-------|
|                |                 |     | A         | B     |                |                 |     | A         | B     |
| ASL 06 SMD ... | 6               | 32  | 15.30     | 5.08  | ASL 20 SMD ... | 20              | 15  | 33.10     | 22.86 |
| ASL 08 SMD ... | 8               | 27  | 17.80     | 7.62  | ASL 26 SMD ... | 26              | 12  | 40.70     | 30.48 |
| ASL 10 SMD ... | 10              | 24  | 20.40     | 10.16 | ASL 34 SMD ... | 34              | 9   | 50.90     | 40.64 |
| ASL 12 SMD ... | 12              | 21  | 22.90     | 12.70 | ASL 40 SMD ... | 40              | 8   | 58.50     | 48.26 |
| ASL 14 SMD ... | 14              | 19  | 25.40     | 15.24 | ASL 50 SMD ... | 50              | 7   | 71.20     | 60.96 |
| ASL 16 SMD ... | 16              | 17  | 28.00     | 17.78 |                |                 |     |           |       |

please indicate:

... surface  
G=gold-plated  
Z=tin-plated

... packing (option)  
SM =bar magazine  
B SM =pick and place pad and bar magazine

VPE = packing unit (pieces/tube); Gold-plated resp. tin-plated contacts are available with either straight or squared terminations.

In addition they can be combined with many other strip-line connectors in 2.54 mm pitch.

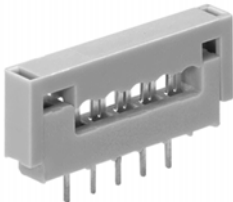
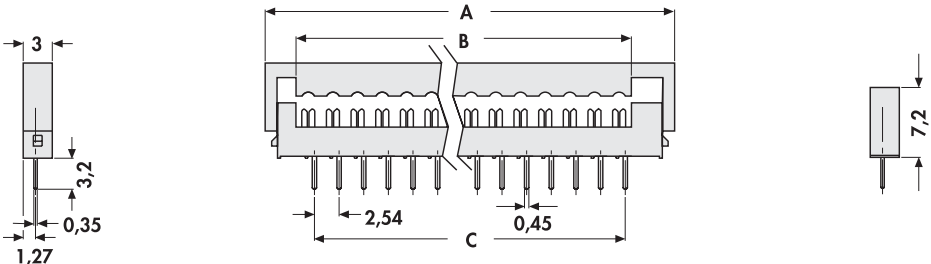
For automatic assembly: Pick and place pad "B" and tube magazin "SM"

– position in the middle

| art. no. |
|----------|
| ... B SM |

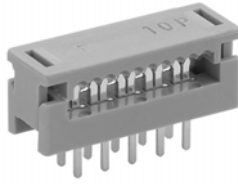
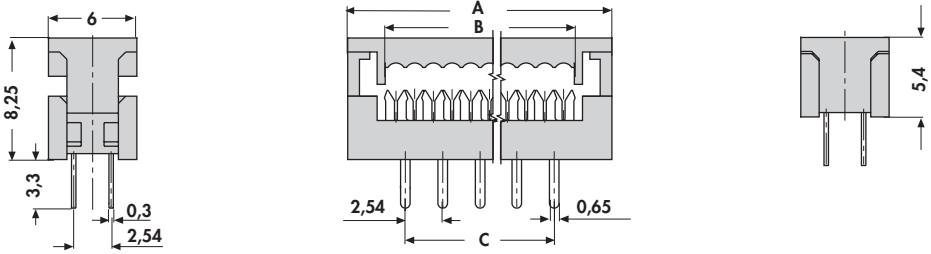
Printed circuit connector

One row

|  |  |           |       |       |                    |                 |           |       |       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|-------|--------------------|-----------------|-----------|-------|-------|
| art. no.                                                                          | no. of contacts                                                                    | dim. [mm] |       |       | art. no.           | no. of contacts | dim. [mm] |       |       |
|                                                                                   |                                                                                    | A         | B     | C     |                    |                 | A         | B     | C     |
| <b>SBAU 1 04 Z</b>                                                                | 4                                                                                  | 17.78     | 10.16 | 7.62  | <b>SBAU 1 14 Z</b> | 14              | 43.18     | 35.56 | 33.02 |
| <b>SBAU 1 06 Z</b>                                                                | 6                                                                                  | 22.86     | 15.24 | 12.70 | <b>SBAU 1 16 Z</b> | 16              | 48.26     | 40.64 | 38.10 |
| <b>SBAU 1 08 Z</b>                                                                | 8                                                                                  | 27.94     | 20.32 | 17.78 | <b>SBAU 1 17 Z</b> | 17              | 50.80     | 43.18 | 40.64 |
| <b>SBAU 1 10 Z</b>                                                                | 10                                                                                 | 33.02     | 25.40 | 22.86 | <b>SBAU 1 18 Z</b> | 18              | 53.34     | 45.72 | 43.18 |
| <b>SBAU 1 12 Z</b>                                                                | 12                                                                                 | 38.10     | 30.48 | 27.94 | <b>SBAU 1 20 Z</b> | 20              | 58.42     | 50.80 | 48.26 |

contact surface finish: tin-plated

Two rows

|  |  |           |       |       |           |                 |           |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|-------|-------|-----------|-----------------|-----------|-------|-------|
| art. no.                                                                           | no. of contacts                                                                     | dim. [mm] |       |       | art. no.  | no. of contacts | dim. [mm] |       |       |
|                                                                                    |                                                                                     | A         | B     | C     |           |                 | A         | B     | C     |
| SBAU 06 S                                                                          | 6                                                                                   | 12.90     | 7.80  | 5.08  | SBAU 20 S | 20              | 30.70     | 25.60 | 22.86 |
| SBAU 10 S                                                                          | 10                                                                                  | 18.00     | 12.90 | 10.16 | SBAU 26 S | 26              | 38.30     | 33.20 | 30.48 |
| SBAU 14 S                                                                          | 14                                                                                  | 23.00     | 18.00 | 15.24 | SBAU 34 S | 34              | 48.50     | 43.40 | 40.64 |
| SBAU 16 S                                                                          | 16                                                                                  | 25.60     | 20.50 | 17.78 |           |                 |           |       |       |

contact surface finish: selective gold-plated: solder area gold-plated, IDC area nickel-plated

Use with ribbon cable:

round conductor flat strip:

AWG 28 = solid or stranded, AWG 30 = solid

conductor diameter:

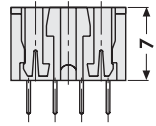
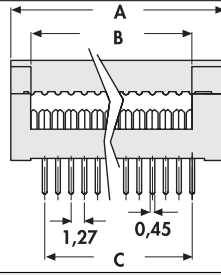
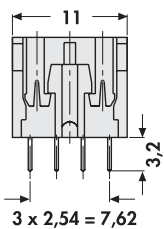
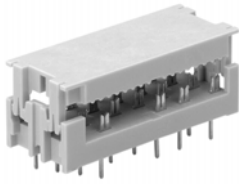
AWG 28 ... 30 = 0.09 ... 0.05 mm<sup>2</sup>

insulation-Ø:

max. 1.1 mm

Printed circuit connector

Four rows

| <div></div> |                 |           |       |       |                    |                 |           |       |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|-------|--------------------|-----------------|-----------|-------|-------|
| art. no.                                                                                                                                                                                                                                                                                                                                           | no. of contacts | dim. [mm] |       |       | art. no.           | no. of contacts | dim. [mm] |       |       |
|                                                                                                                                                                                                                                                                                                                                                    |                 | A         | B     | C     |                    |                 | A         | B     | C     |
| <b>SBAU 4 10 S</b>                                                                                                                                                                                                                                                                                                                                 | 10              | 17.78     | 12.70 | 11.43 | <b>SBAU 4 26 S</b> | 26              | 38.10     | 33.02 | 31.75 |
| <b>SBAU 4 16 S</b>                                                                                                                                                                                                                                                                                                                                 | 16              | 25.40     | 20.32 | 19.05 | <b>SBAU 4 50 S</b> | 50              | 68.58     | 63.50 | 62.23 |
| <b>SBAU 4 20 S</b>                                                                                                                                                                                                                                                                                                                                 | 20              | 30.48     | 25.40 | 24.13 |                    |                 |           |       |       |

contact surface finish: **S** = selective-gold-plated: soldering area gold plated, IDC nickel-plated

Use with ribbon cable:

round conductor flat strip:

AWG 28 = solid or stranded, AWG 30 = solid

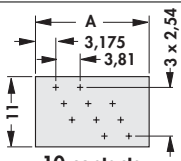
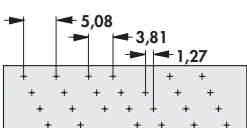
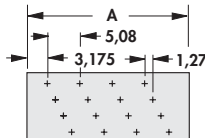
conductor diameter:

AWG 28 ... 30 = 0.09 ... 0.05 mm<sup>2</sup>

insulation-Ø:

max. 1.1 mm

Print-layout for SBAU 4 ...

|                                                                                                        |                                                                                                        |                                                                                                         |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|  <p>10 contacts</p> |  <p>26 contacts</p> |  <p>50 contacts</p> |
|  <p>16 contacts</p> |  <p>20 contacts</p> |                                                                                                         |

Sockets for DIL-IC  
Application tools  
Male headers 2.54 solder  
Technical data

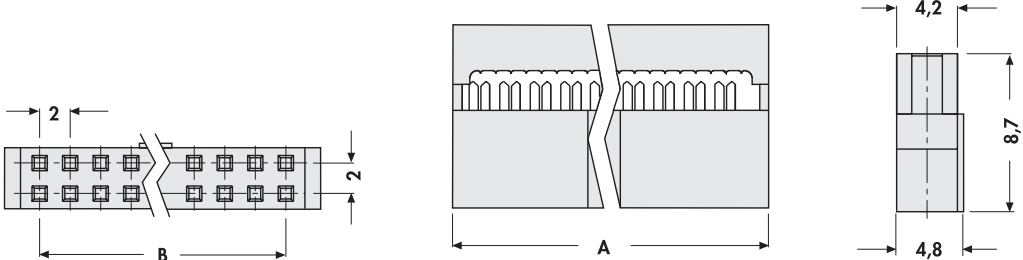
→ F 4 - 10  
→ H 11  
→ G 8  
→ H 12

Female header grid 2.00  
D-Sub connectors /flat cable  
PC connectors  
PC connector design DIL

→ H 10  
→ I 11  
→ H 8 - 9  
→ H 2

Female connector

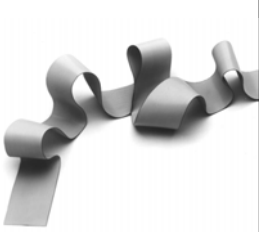
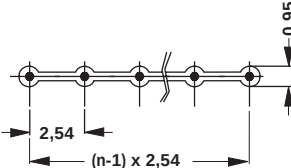
Two rows

|  |  |           |       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|
| art. no.                                                                          | no. of contacts                                                                    | dim. [mm] |       |
|                                                                                   |                                                                                    | A         | B     |
| PVY 20 S                                                                          | 20                                                                                 | 25.10     | 18.00 |
| PVY 40 S                                                                          | 40                                                                                 | 45.30     | 38.00 |
| PVY 44 S                                                                          | 44                                                                                 | 49.30     | 42.00 |
| PVY 50 S                                                                          | 50                                                                                 | 55.10     | 48.00 |

contact surface finish: selective gold-plated

Accessories for flat ribbon cable and application tools

Flat ribbon cable - spacing 2,54 mm - suitable for connectors FV, SBAU 1

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          | no. of contacts                                                                    |
| BK 01 32                                                                          | 32                                                                                 |

Technical data:

current rating: 2 A; conductor resistance: ≤ 230 mΩ/m; capacitance: ≤ 65 pF/m symmetrical; wave impedance: 170 Ω symmetrical  
cross section: AWG 28/~0.089 mm<sup>2</sup>; conductor: 7 x Ø 0,127 mm; operating voltage: 300 V<sub>eff</sub> max. operating temperature range: -30 ... +105 °C

Bench press

height without handle: 28 cm, weight: 9.02 kg

|                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                           |                                                                                      |
| VBK 1                                                                              |                                                                                      |

The bench press VBK 1 connects all contacts of IDC connector types KK, SB, FV, PV, PVZ and VFL in one simple operation.

By piercing through the insulation, the contacts form, due to their conception, a gas-tight and corrosion-proof connection.

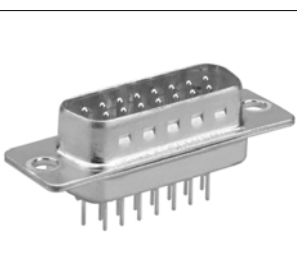
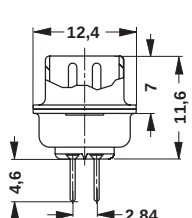
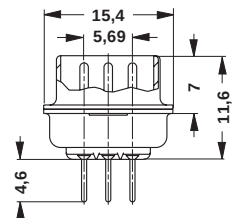
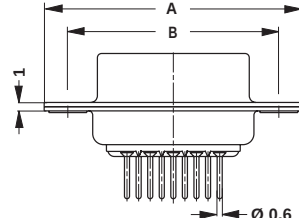
Accessories, suitable for strip-line connector

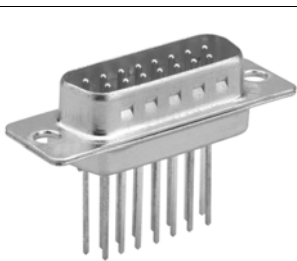
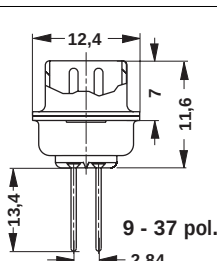
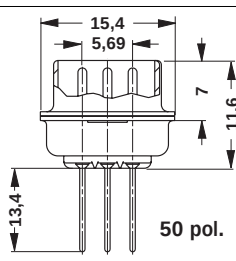
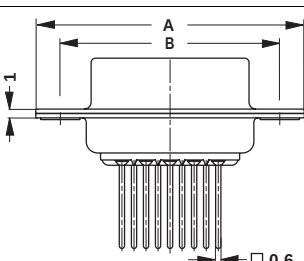
|          |                                                 |
|----------|-------------------------------------------------|
| art. no. | suitable for male connectors and female headers |
| KK W     | KK                                              |
| SB W     | SB                                              |
| PV W     | PV, VFL, FLMP                                   |
| PVY W    | PVY                                             |
| D W 9 37 | D-Sub (9-37 contacts)                           |

Removable locating frames for every indicated type available.



## Male headers manual soldering

|  | <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p><b>9 - 37 pol.</b></p>  </div> <div style="text-align: center;"> <p><b>50 pol.</b></p>  </div> <div style="text-align: center;">  </div> </div> |         |                 |           |       |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|-----------|-------|
| art. no.                                                                           | no. of contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | contact | connection type | dim. [mm] |       |
| <b>DS 09 T</b>                                                                     | 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | male    | dip soldering   | A         | B     |
| <b>DS 15 T</b>                                                                     | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | male    | dip soldering   | 30.80     | 25.00 |
| <b>DS 25 T</b>                                                                     | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | male    | dip soldering   | 39.20     | 33.30 |
| <b>DS 37 T</b>                                                                     | 37                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | male    | dip soldering   | 53.10     | 47.00 |
| <b>DS 50 T</b>                                                                     | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | male    | dip soldering   | 69.50     | 63.50 |
| <b>DS 50 T</b>                                                                     | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | male    | dip soldering   | 67.00     | 61.10 |

|  |  |         |  |           |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------|--|
| art. no.                                                                            | no. of contacts                                                                     | contact | connection type                                                                     | dim. [mm] |                                                                                       |  |
|                                                                                     |                                                                                     |         |                                                                                     | A         | B                                                                                     |  |
| DS 09 WW 3                                                                          | 9                                                                                   | male    | wire wrap                                                                           | 30.80     | 25.00                                                                                 |  |
| DS 15 WW 3                                                                          | 15                                                                                  | male    | wire wrap                                                                           | 39.20     | 33.30                                                                                 |  |
| DS 25 WW 3                                                                          | 25                                                                                  | male    | wire wrap                                                                           | 53.10     | 47.00                                                                                 |  |
| DS 37 WW 3                                                                          | 37                                                                                  | male    | wire wrap                                                                           | 69.50     | 63.50                                                                                 |  |
| DS 50 WW 3                                                                          | 50                                                                                  | male    | wire wrap                                                                           | 67.00     | 61.10                                                                                 |  |

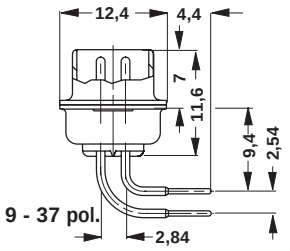
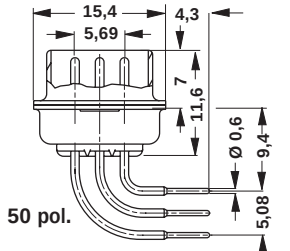
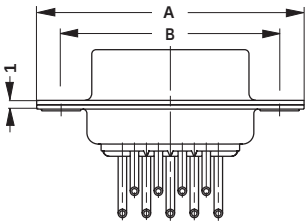
A

**D-Sub standard connectors**

B

C

D

|                                                                                   |                                                                                   |                 |                                                                                    |                 |                                                                                     |       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------|
|  |  |                 |  |                 |  |       |
|                                                                                   | <b>art. no.</b>                                                                   | no. of contacts | contact                                                                            | connection type | dim. [mm]                                                                           |       |
|                                                                                   |                                                                                   |                 |                                                                                    |                 | A                                                                                   | B     |
| <b>DS 37 LA</b>                                                                   |                                                                                   | 37              | male                                                                               | 90° angled      | 69.50                                                                               | 63.50 |
| <b>DS 50 LA</b>                                                                   |                                                                                   | 50              | male                                                                               | 90° angled      | 67.00                                                                               | 61.10 |

**cases:** tin-plated

With turned precision contacts. The screened version.

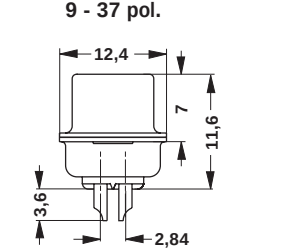
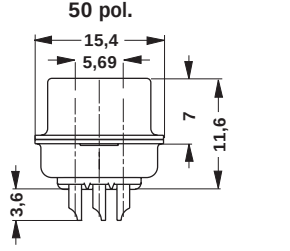
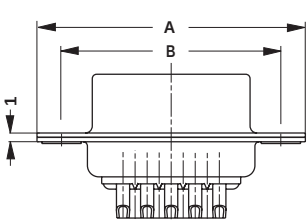
E

**Female headers manual soldering**

F

G

H

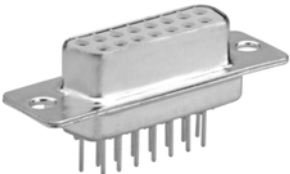
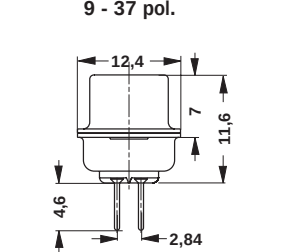
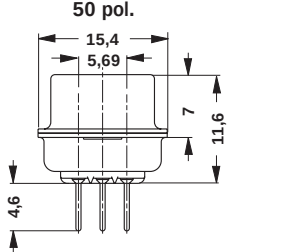
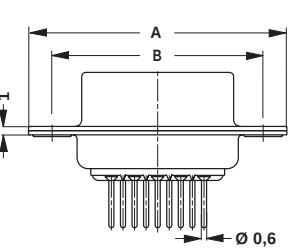
|                                                                                    |                                                                                    |                 |                                                                                     |                  |                                                                                      |       |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------|-------|
|  |  |                 |  |                  |  |       |
|                                                                                    | <b>art. no.</b>                                                                    | no. of contacts | contact                                                                             | connection type  | dim. [mm]                                                                            |       |
|                                                                                    |                                                                                    |                 |                                                                                     |                  | A                                                                                    | B     |
| <b>DB 09 L</b>                                                                     |                                                                                    | 9               | female                                                                              | manual soldering | 30.80                                                                                | 25.00 |
| <b>DB 15 L</b>                                                                     |                                                                                    | 15              | female                                                                              | manual soldering | 39.20                                                                                | 33.30 |
| <b>DB 25 L</b>                                                                     |                                                                                    | 25              | female                                                                              | manual soldering | 53.10                                                                                | 47.00 |
| <b>DB 37 L</b>                                                                     |                                                                                    | 37              | female                                                                              | manual soldering | 69.50                                                                                | 63.50 |
| <b>DB 50 L</b>                                                                     |                                                                                    | 50              | female                                                                              | manual soldering | 67.00                                                                                | 61.10 |

I

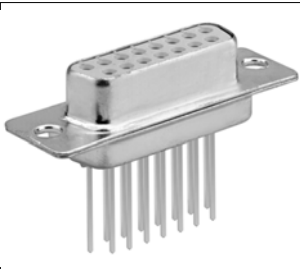
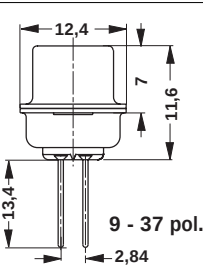
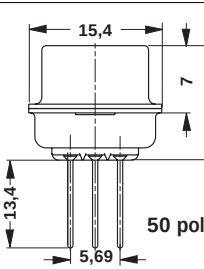
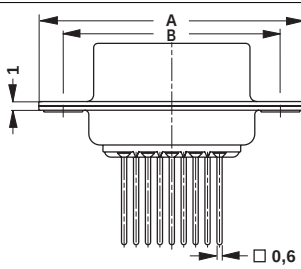
K

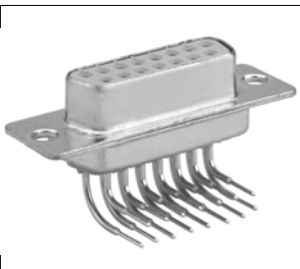
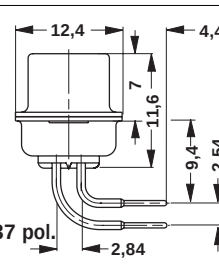
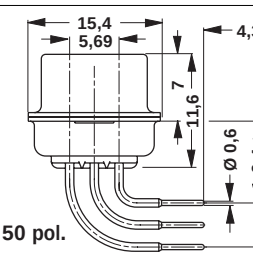
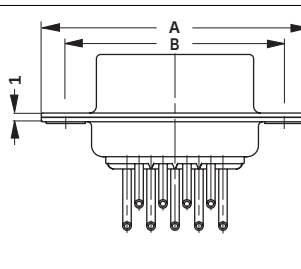
L

M

|                                                                                     |                                                                                     |                 |                                                                                      |                 |                                                                                       |       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|-------|
|  |  |                 |  |                 |  |       |
|                                                                                     | <b>art. no.</b>                                                                     | no. of contacts | contact                                                                              | connection type | dim. [mm]                                                                             |       |
|                                                                                     |                                                                                     |                 |                                                                                      |                 | A                                                                                     | B     |
| <b>DB 09 T</b>                                                                      |                                                                                     | 9               | female                                                                               | dip soldering   | 30.80                                                                                 | 25.00 |
| <b>DB 15 T</b>                                                                      |                                                                                     | 15              | female                                                                               | dip soldering   | 39.20                                                                                 | 33.30 |
| <b>DB 25 T</b>                                                                      |                                                                                     | 25              | female                                                                               | dip soldering   | 53.10                                                                                 | 47.00 |
| <b>DB 37 T</b>                                                                      |                                                                                     | 37              | female                                                                               | dip soldering   | 69.50                                                                                 | 63.50 |
| <b>DB 50 T</b>                                                                      |                                                                                     | 50              | female                                                                               | dip soldering   | 67.00                                                                                 | 61.10 |

N

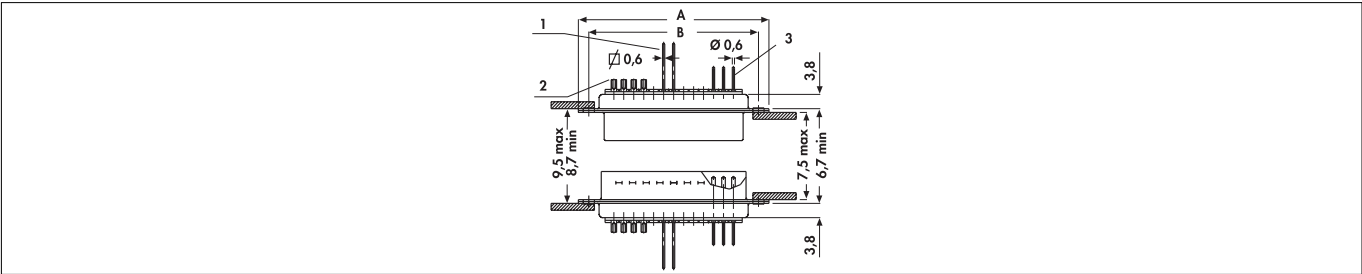
|  |  |         |  |  |       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------|
| art. no.                                                                          | no. of contacts                                                                   | contact | connection type                                                                   | dim. [mm]                                                                           |       |
|                                                                                   |                                                                                   |         |                                                                                   | A                                                                                   | B     |
| DB 09 WW 3                                                                        | 9                                                                                 | female  | wire wrap                                                                         | 30.80                                                                               | 25.00 |
| DB 15 WW 3                                                                        | 15                                                                                | female  | wire wrap                                                                         | 39.20                                                                               | 33.30 |
| DB 25 WW 3                                                                        | 25                                                                                | female  | wire wrap                                                                         | 53.10                                                                               | 47.00 |
| DB 37 WW 3                                                                        | 37                                                                                | female  | wire wrap                                                                         | 69.50                                                                               | 63.50 |
| DB 50 WW 3                                                                        | 50                                                                                | female  | wire wrap                                                                         | 67.00                                                                               | 61.10 |

|  |  |         |  |  |       |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------|
| art. no.                                                                           | no. of contacts                                                                    | contact | connection type                                                                     | dim. [mm]                                                                            |       |
|                                                                                    |                                                                                    |         |                                                                                     | A                                                                                    | B     |
| DB 25 LA                                                                           | 25                                                                                 | female  | 90° angled                                                                          | 53.10                                                                                | 47.00 |
| DB 37 LA                                                                           | 37                                                                                 | female  | 90° angled                                                                          | 69.50                                                                                | 63.50 |
| DB 50 LA                                                                           | 50                                                                                 | female  | 90° angled                                                                          | 67.00                                                                                | 61.10 |

cases: tin-plated

With turned precision contacts. The screened version.

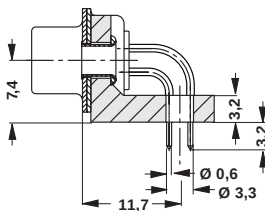
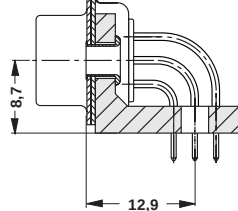
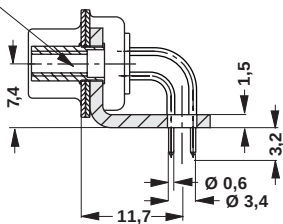
Einbaudarstellung

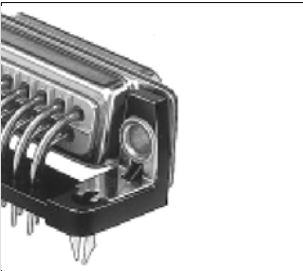
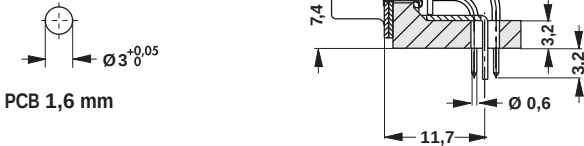


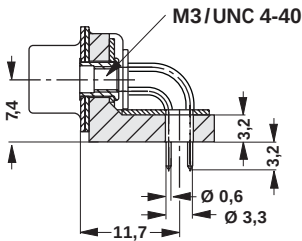
- 1 = wire wrap pin
- 2 = solder terminal
- 3 = solder pin for PCB

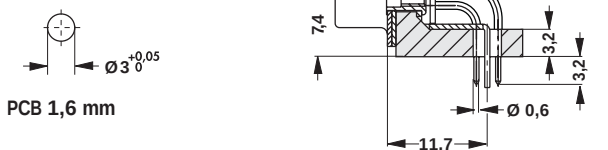
A  
B  
C  
D  
E  
F  
G  
H  
I  
K  
L  
M  
N

D-Sub standard connectors with mounting bracket

|                                                                                   |             |                                                                                    |                                                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  | 9 - 37 pol. |                                                                                    |  |  |
| art. no.                                                                          | contact     | mounting angle                                                                     |                                                                                   |                                                                                     |
| DB WK 9                                                                           | female      | plastic angle, riveted                                                             |                                                                                   |                                                                                     |
|                                                                                   |             |                                                                                    |                                                                                   |                                                                                     |
|  | UNC 4-40    |                                                                                    |                                                                                   |                                                                                     |
|                                                                                   |             |  |                                                                                   |                                                                                     |
| art. no.                                                                          | contact     | mounting angle                                                                     |                                                                                   |                                                                                     |
| DS WMV 4 ...                                                                      | male        | metal angle with screw fastening, thread UNC 4-40                                  |                                                                                   |                                                                                     |
| DB WMV 4 ...                                                                      | female      | metal angle with screw fastening, thread UNC 4-40                                  |                                                                                   |                                                                                     |
| please indicate: ... no. of contacts<br>9, 25                                     |             |                                                                                    |                                                                                   |                                                                                     |

|                                                                                   |                                                                                    |                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------|
|  |  |                                                    |
| art. no.                                                                          | contact                                                                            | mounting angle                                     |
| DS WR ...                                                                         | male                                                                               | plastic angle with earthing plate and snap-on clip |
| DB WR ...                                                                         | female                                                                             | plastic angle with earthing plate and snap-on clip |
| please indicate: ... no. of contacts<br>25, 37                                    |                                                                                    |                                                    |

|                                                                                    |                                                                                    |                                                               |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|
|  |  |                                                               |
| art. no.                                                                           | contact                                                                            | mounting angle                                                |
| DS WE 3 ...                                                                        | male                                                                               | plastic angle with earthing plate and threaded rivet M3       |
| DS WE 4 ...                                                                        | male                                                                               | plastic angle with earthing plate and threaded rivet UNC 4-40 |
| DB WE 3 ...                                                                        | female                                                                             | plastic angle with earthing plate and threaded rivet M3       |
| DB WE 4 ...                                                                        | female                                                                             | plastic angle with earthing plate and threaded rivet UNC 4-40 |
| please indicate: ... no. of contacts<br>9, 15, 25, 37                              |                                                                                    |                                                               |

|                                                                                     |                                                                                      |                                                                           |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
|  |  |                                                                           |
| art. no.                                                                            | contact                                                                              | mounting angle                                                            |
| DS WR 3 ...                                                                         | male                                                                                 | plastic angle with earthing plate, snap-on clip and threaded rivet M3     |
| DS WR 4 ...                                                                         | male                                                                                 | plastic angle with earthing plate, snap-on clip & threaded rivet UNC 4-40 |
| DB WR 3 ...                                                                         | female                                                                               | plastic angle with earthing plate, snap-on clip and threaded rivet M3     |
| DB WR 4 ...                                                                         | female                                                                               | plastic angle with earthing plate, snap-on clip & threaded rivet UNC 4-40 |
| please indicate: ... no. of contacts<br>9, 15, 25, 37                               |                                                                                      |                                                                           |

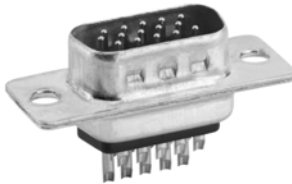
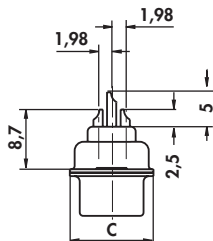
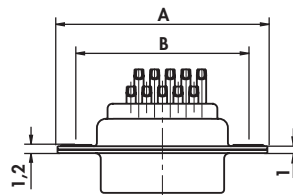
A

D-Sub connectors High Density

B

Male headers

C

|  |  |         |  |       |       |      |          |      |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------|-------|-------|------|----------|------|
| art. no.                                                                          | no. of contacts                                                                   | contact | dim. [mm]                                                                           |       |       |      |          |      |
|                                                                                   |                                                                                   |         | A                                                                                   | B     | C     | D    | E (max.) | F    |
| HD S 15 L                                                                         | 15                                                                                | male    | 30.60                                                                               | 25.00 | 12.20 | 7.10 | 7.60     | 2.29 |
| HD S 26 L                                                                         | 26                                                                                | male    | 39.00                                                                               | 33.30 | 12.20 | 6.80 | 7.00     | 2.29 |
| HD S 44 L                                                                         | 44                                                                                | male    | 52.80                                                                               | 47.00 | 12.20 | 7.00 | 6.80     | 2.29 |

D

cases: tin-plated; kind of terminal: manual soldering

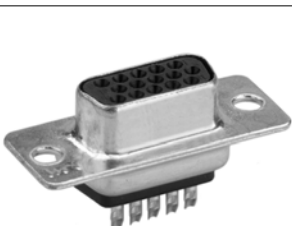
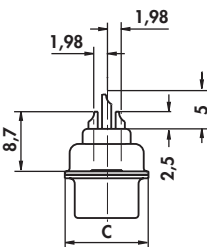
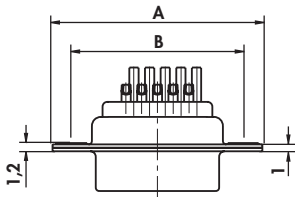
With turned precision contacts. The screened version.

E

F

Female headers

G

|                                                                                    |                                                                                    |           |                                                                                       |       |       |      |          |      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------|-------|-------|------|----------|------|
|  |  |           |  |       |       |      |          |      |
| <b>art. no.</b>                                                                    | no. of contacts                                                                    | contact   | dim. [mm]                                                                             |       |       |      |          |      |
|                                                                                    |                                                                                    |           | A                                                                                     | B     | C     | D    | E (max.) | F    |
|                                                                                    | <b>HD B 15 L</b>                                                                   | 15 female | 30.80                                                                                 | 25.00 | 12.20 | 7.60 | 7.10     | 2.29 |
|                                                                                    | <b>HD B 26 L</b>                                                                   | 26 female | 39.20                                                                                 | 33.30 | 12.20 | 7.00 | 6.80     | 2.29 |
|                                                                                    | <b>HD B 44 L</b>                                                                   | 44 female | 53.00                                                                                 | 47.00 | 12.20 | 6.80 | 7.00     | 2.29 |

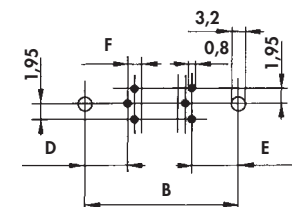
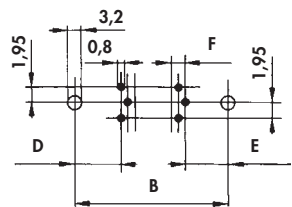
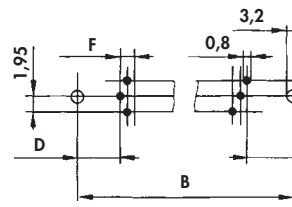
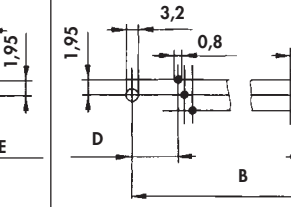
H

cases: tin-plated; kind of terminal: manual soldering

With turned precision contacts. The screened version.

I

K

|                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1                                                                                   | 2                                                                                   | 3                                                                                    | 4                                                                                     |
|  |  |  |  |

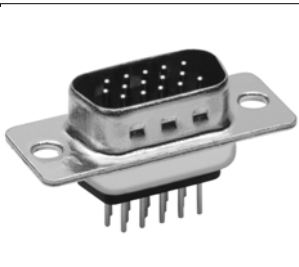
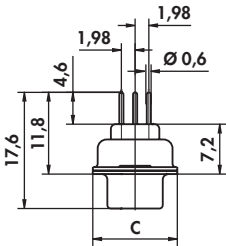
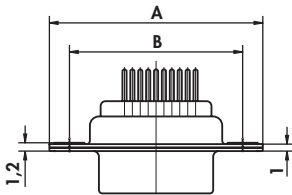
L

1 = male, 15 contacts; 2 = female, 15 contacts  
3 = male, 26/44 contacts; 4 = female, 26/44 contacts

M

N

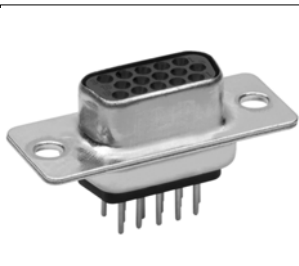
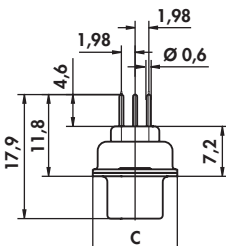
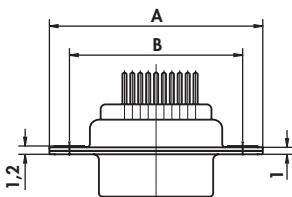
Male headers

|  |  |         |  |       |       |      |          |      |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------|-------|-------|------|----------|------|
| art. no.                                                                          | no. of contacts                                                                   | contact | dim. [mm]                                                                          |       |       |      |          |      |
|                                                                                   |                                                                                   |         | A                                                                                  | B     | C     | D    | E (max.) | F    |
| HD S 15 T                                                                         | 15                                                                                | male    | 30.60                                                                              | 25.00 | 12.20 | 7.10 | 7.60     | 2.29 |

cases: tin-plated; kind of terminal: dip soldering

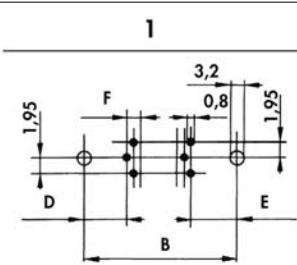
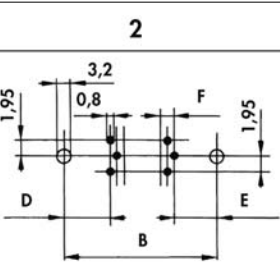
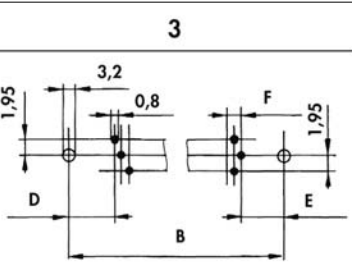
With turned precision contacts. The screened version.

Female headers

|  |  |         |  |       |       |      |          |      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------|-------|-------|------|----------|------|
| art. no.                                                                           | no. of contacts                                                                    | contact | dim. [mm]                                                                           |       |       |      |          |      |
|                                                                                    |                                                                                    |         | A                                                                                   | B     | C     | D    | E (max.) | F    |
| HD B 15 T                                                                          | 15                                                                                 | female  | 30.80                                                                               | 25.00 | 12.20 | 7.60 | 7.10     | 2.29 |
| HD B 26 T                                                                          | 26                                                                                 | female  | 39.20                                                                               | 33.30 | 12.20 | 7.00 | 6.80     | 2.29 |

cases: tin-plated; kind of terminal: dip soldering

With turned precision contacts. The screened version.

|                                                                                     |                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|

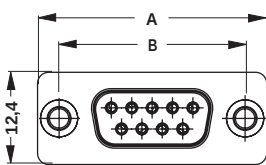
1 = male, 15 contacts; 2 = female, 15 contacts; 3 = female, 26 contacts

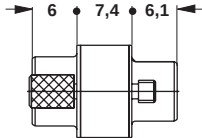
D-Sub filter connector

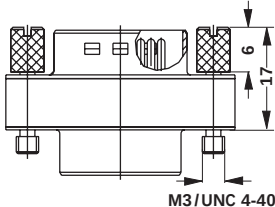
Adapter, 9-37 contacts

capacity per contact: 1000 pF









| art. no.         | no. of contacts | type of thread | dim. [mm] |       |
|------------------|-----------------|----------------|-----------|-------|
|                  |                 |                | A         | B     |
| FD A ... 09 1000 | 9               | 3              | 30.80     | 25.00 |
| FD A ... 15 1000 | 15              | 3              | 39.20     | 33.30 |
| FD A ... 25 1000 | 25              | 3              | 53.10     | 47.00 |
| FD A ... 37 1000 | 37              | 3              | 69.50     | 63.50 |

please indicate:

... type of thread

3 = M 3

4 = UNC 4-40

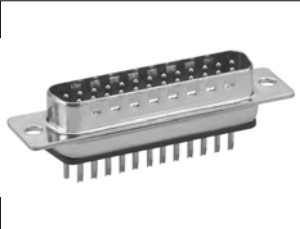
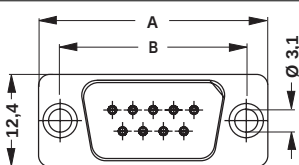
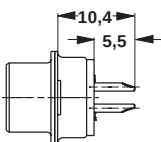
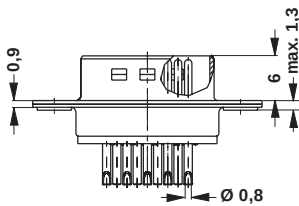
Standard installation dimensions.  
HF-tight, stud bolt mountable on both sides.  
Compatible with standard accessories.



D-Sub filter connector

Male headers, mit Lötkelch

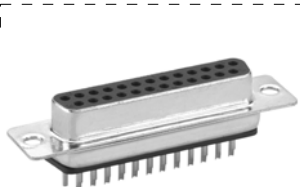
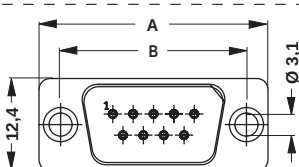
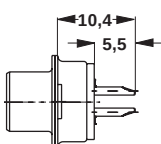
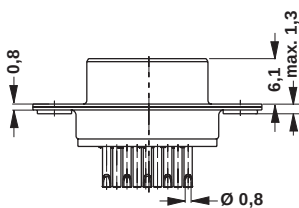
capacity per contact: 1000 pF - other components on request; geeignet für Kabel AWG 22

|  |  |         |  |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| art. no.                                                                          | no. of contacts                                                                   | contact | dim. [mm]                                                                          |                                                                                     |
|                                                                                   |                                                                                   |         | A                                                                                  | B                                                                                   |
| <b>FD S 09 L 1000</b>                                                             | 9                                                                                 | male    | 30.80                                                                              | 25.00                                                                               |
| <b>FD S 15 L 1000</b>                                                             | 15                                                                                | male    | 39.20                                                                              | 33.30                                                                               |
| <b>FD S 25 L 1000</b>                                                             | 25                                                                                | male    | 53.10                                                                              | 47.00                                                                               |
| <b>FD S 37 L 1000</b>                                                             | 37                                                                                | male    | 69.50                                                                              | 63.50                                                                               |

Standard installation dimensions.  
HF-tight, closed metal rear panel.  
Compatible with standard accessories.

Female headers, mit Lötkelch

capacity per contact: 1000 pF - other components on request; geeignet für AWG 22

|  |  |         |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| art. no.                                                                            | no. of contacts                                                                     | contact | dim. [mm]                                                                            |                                                                                       |
|                                                                                     |                                                                                     |         | A                                                                                    | B                                                                                     |
| <b>FD B 09 L 1000</b>                                                               | 9                                                                                   | female  | 30.80                                                                                | 25.00                                                                                 |
| <b>FD B 15 L 1000</b>                                                               | 15                                                                                  | female  | 39.20                                                                                | 33.30                                                                                 |
| <b>FD B 25 L 1000</b>                                                               | 25                                                                                  | female  | 53.10                                                                                | 47.00                                                                                 |
| <b>FD B 37 L 1000</b>                                                               | 37                                                                                  | female  | 69.50                                                                                | 63.50                                                                                 |

Standard installation dimensions.  
HF-tight, closed metal rear panel.  
Compatible with standard accessories.

A

**D-Sub connector for flat ribbon cable**

B

C

D

E

F

G

H

I

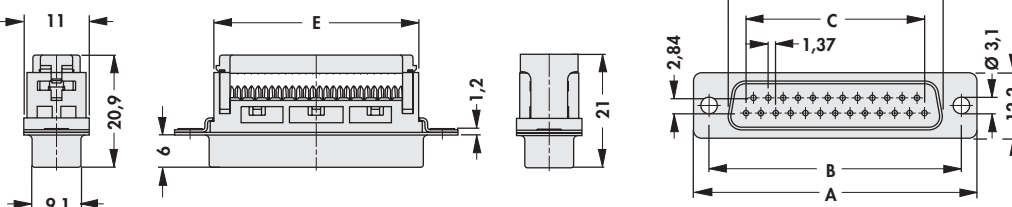
K

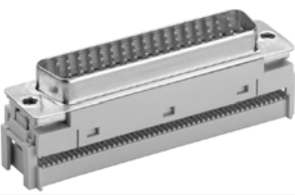
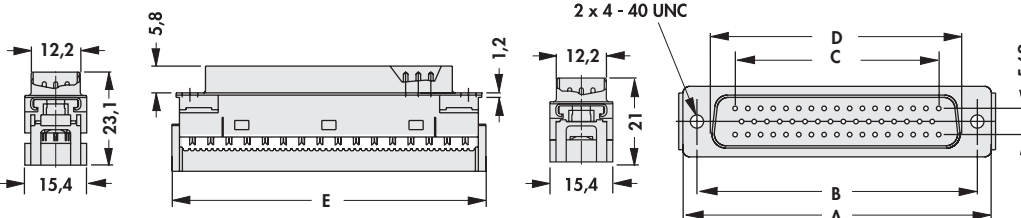
L

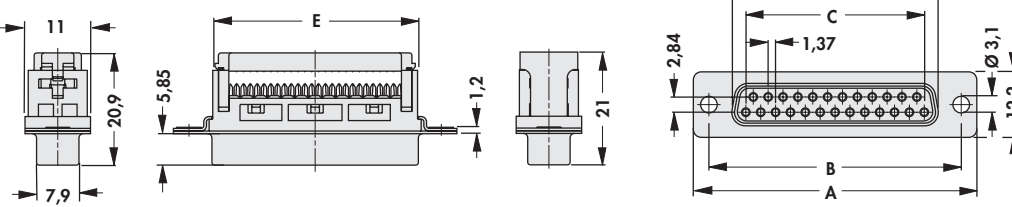
M

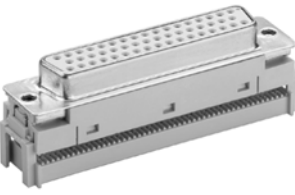
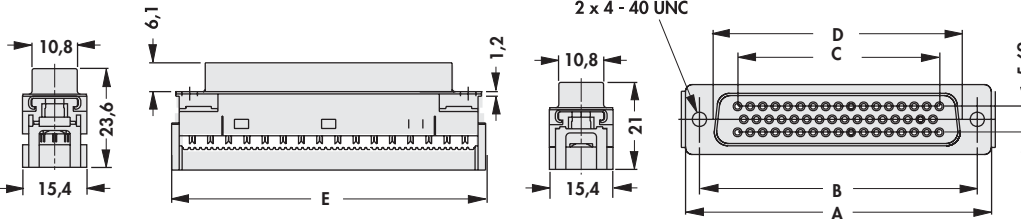
N

**Male headers and female headers**

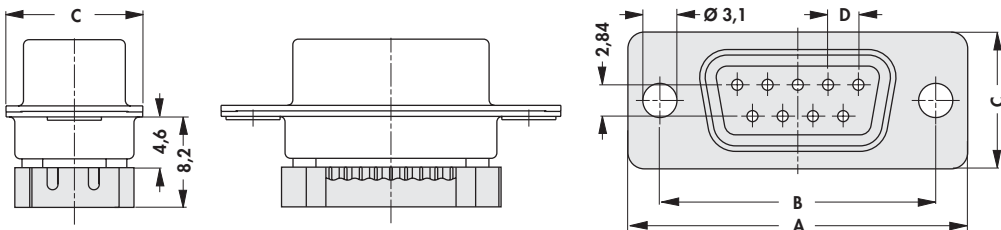
|  |                 |  |           |       |       |       |          |
|-----------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------|-----------|-------|-------|-------|----------|
| art. no.                                                                          | no. of contacts | contact                                                                            | dim. [mm] |       |       |       |          |
|                                                                                   |                 |                                                                                    | A         | B     | C     | D     | E (max.) |
| <b>DS BK 09</b>                                                                   | 9               | male                                                                               | 30.60     | 25.00 | 10.96 | 17.90 | 16.10    |
| <b>DS BK 15</b>                                                                   | 15              | male                                                                               | 39.00     | 33.30 | 19.33 | 26.20 | 23.90    |
| <b>DS BK 25</b>                                                                   | 25              | male                                                                               | 52.80     | 47.00 | 33.13 | 39.90 | 38.10    |
| <b>DS BK 37</b>                                                                   | 37              | male                                                                               | 69.20     | 63.50 | 49.70 | 56.30 | 54.70    |

|  |                 |  |           |       |       |       |          |
|------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-----------|-------|-------|-------|----------|
| art. no.                                                                           | no. of contacts | contact                                                                             | dim. [mm] |       |       |       |          |
|                                                                                    |                 |                                                                                     | A         | B     | C     | D     | E (max.) |
| <b>DS BK 50</b>                                                                    | 50              | male                                                                                | 66.80     | 61.10 | 44.20 | 54.00 | 68.60    |

|  |                 |  |           |       |       |       |          |
|-------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|-----------|-------|-------|-------|----------|
| art. no.                                                                            | no. of contacts | contact                                                                              | dim. [mm] |       |       |       |          |
|                                                                                     |                 |                                                                                      | A         | B     | C     | D     | E (max.) |
| <b>DB BK 09</b>                                                                     | 9               | female                                                                               | 30.60     | 25.00 | 10.96 | 16.30 | 16.10    |
| <b>DB BK 15</b>                                                                     | 15              | female                                                                               | 39.00     | 33.30 | 19.33 | 24.50 | 23.90    |
| <b>DB BK 25</b>                                                                     | 25              | female                                                                               | 52.80     | 47.00 | 33.13 | 38.50 | 38.10    |
| <b>DB BK 37</b>                                                                     | 37              | female                                                                               | 69.20     | 63.50 | 49.70 | 54.80 | 54.70    |

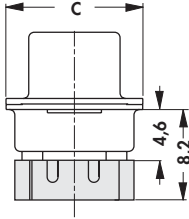
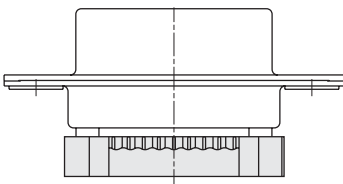
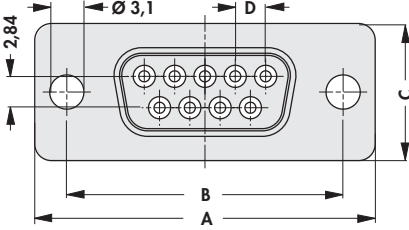
|  |                 |  |           |       |       |       |          |
|-------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|-----------|-------|-------|-------|----------|
| art. no.                                                                            | no. of contacts | contact                                                                              | dim. [mm] |       |       |       |          |
|                                                                                     |                 |                                                                                      | A         | B     | C     | D     | E (max.) |
| <b>DB BK 50</b>                                                                     | 50              | female                                                                               | 66.80     | 61.10 | 44.20 | 52.40 | 68.60    |

Male headers, low profile

|  |  |         |           |       |       |      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|-----------|-------|-------|------|
| art. no.                                                                          | no. of contacts                                                                    | contact | dim. [mm] |       |       |      |
|                                                                                   |                                                                                    |         | A         | B     | C     | D    |
| DS BK 09 LP                                                                       | 9                                                                                  | male    | 30.80     | 25.00 | 12.40 | 2.74 |
| DS BK 15 LP                                                                       | 15                                                                                 | male    | 39.20     | 33.30 | 12.40 | 2.74 |
| DS BK 25 LP                                                                       | 25                                                                                 | male    | 53.10     | 47.00 | 12.40 | 2.77 |
| DS BK 37 LP                                                                       | 37                                                                                 | male    | 69.50     | 63.50 | 12.40 | 2.77 |

useable ribbon cable: AWG 26 - 28

Female headers, low profile

|  |  |  |  |       |       |      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------|-------|------|
| art. no.                                                                           | no. of contacts                                                                    | contact                                                                            | dim. [mm]                                                                            |       |       |      |
|                                                                                    |                                                                                    |                                                                                    | A                                                                                    | B     | C     | D    |
| DB BK 09 LP                                                                        | 9                                                                                  | female                                                                             | 30.80                                                                                | 25.00 | 12.40 | 2.74 |
| DB BK 25 LP                                                                        | 25                                                                                 | female                                                                             | 53.10                                                                                | 47.00 | 12.40 | 2.77 |
| DB BK 37 LP                                                                        | 37                                                                                 | female                                                                             | 69.50                                                                                | 63.50 | 12.40 | 2.77 |

useable ribbon cable: AWG 26 - 28

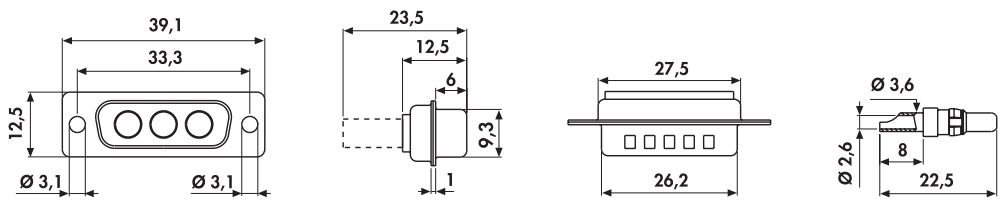
A

D-Sub mixed layout connectors

B

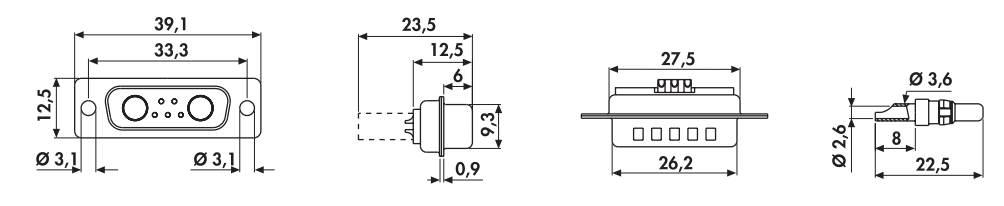
Male headers - suitable for standard D-Sub accessories

3 high current contacts

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          | contact                                                                            |
| DSM 3K3 L20                                                                       | male                                                                               |

D

2 high current contacts, 5 signal contacts

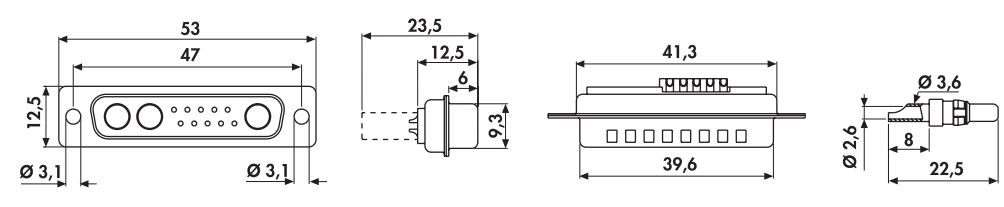
|                                                                                    |                                                                                    |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                           | contact                                                                            |
| DSM 7K2 L20                                                                        | male                                                                               |

E

F

G

3 high current contacts, 10 signal contacts

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            | contact                                                                              |
| DSM 13K3 L20                                                                        | male                                                                                 |

H

I

Gold-plated contacts.

With high current contacts up to 20 A.

For cables up to AWG 16.

K

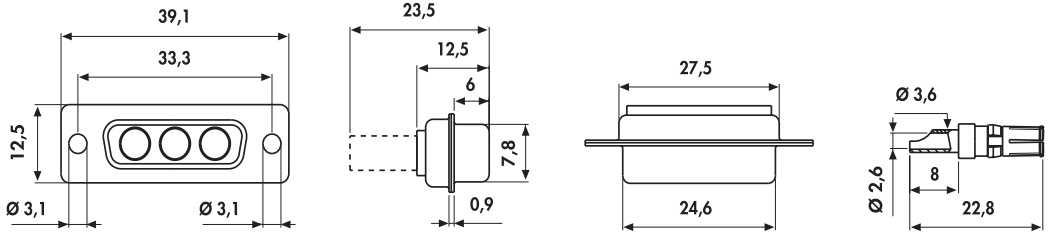
L

M

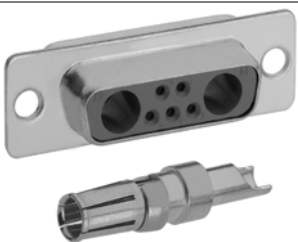
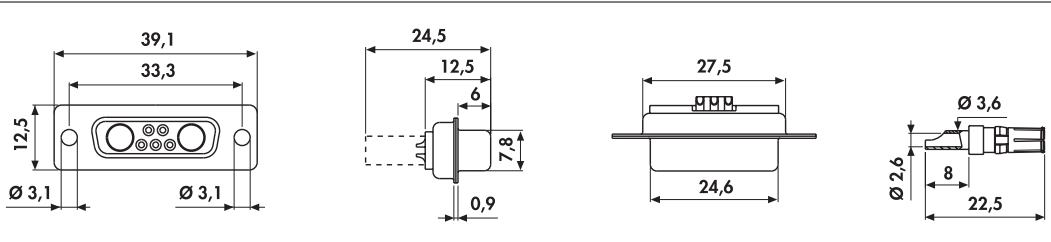
N

Female headers - suitable for standard D-Sub accessories

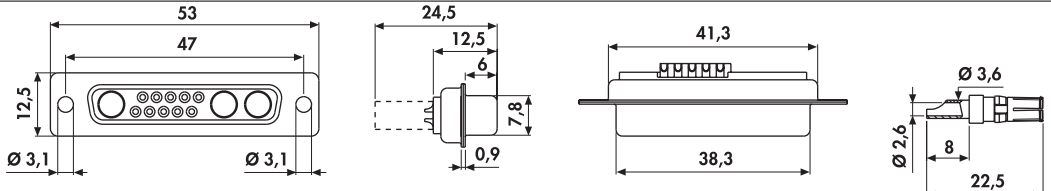
3 high current contacts

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          | contact                                                                            |
| DBM 3K3 L20                                                                       | female                                                                             |

2 high current contacts, 5 signal contacts

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          | contact                                                                            |
| DBM 7K2 L20                                                                       | female                                                                             |

3 high current contacts, 10 signal contacts

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            | contact                                                                              |
| DBM 13K3 L20                                                                        | female                                                                               |

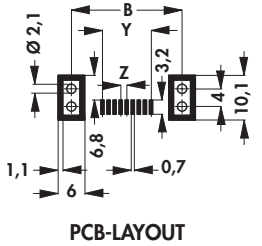
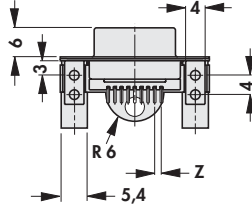
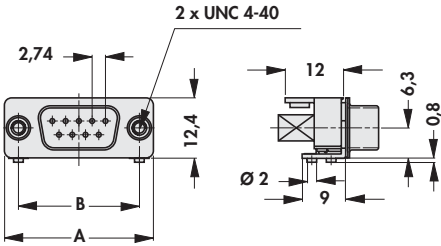
Gold-plated contacts.

With high current contacts up to 20 A.  
For cables up to AWG 16.



D-Sub in SMD-mounting

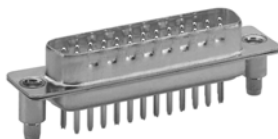
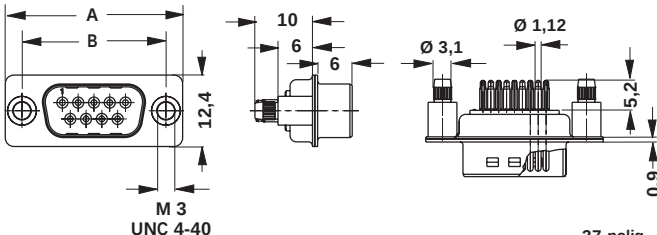
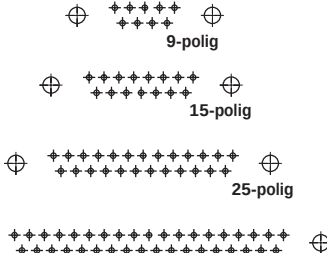
Male headers



PCB-LAYOUT

| art. no.     | no. of contacts | dim. [mm] |       |       |      |
|--------------|-----------------|-----------|-------|-------|------|
|              |                 | A         | B     | Y     | Z    |
| DS 09 SMD TR | 9               | 30.80     | 25.00 | 10.98 | 1.37 |
| DS 15 SMD TR | 15              | 39.20     | 33.30 | 19.20 | 1.37 |
| DS 25 SMD TR | 25              | 53.10     | 47.00 | 33.12 | 1.38 |
| DS 37 SMD TR | 37              | 69.50     | 63.50 | 49.68 | 1.38 |

packing: tape and reel (150 pcs/reel); reel outer diameter 330 mm

|  |  |                |  |       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------|-------|
| art. no.                                                                          | no. of contacts                                                                    | type of thread | dim. [mm]                                                                           |       |
|                                                                                   |                                                                                    |                | A                                                                                   | B     |
| DS ... 9 P                                                                        | 9                                                                                  | 3              | 30.80                                                                               | 25.00 |
| DS ... 15 P                                                                       | 15                                                                                 | 3              | 39.20                                                                               | 33.30 |
| DS ... 25 P                                                                       | 25                                                                                 | 3              | 53.10                                                                               | 47.00 |
| DS ... 37 P                                                                       | 37                                                                                 | 3              | 69.50                                                                               | 63.50 |
| please indicate:                                                                  |                                                                                    |                |                                                                                     |       |
| ... type of thread                                                                |                                                                                    |                |                                                                                     |       |
| 3 = M 3                                                                           |                                                                                    |                |                                                                                     |       |
| 4 = UNC 4-40                                                                      |                                                                                    |                |                                                                                     |       |

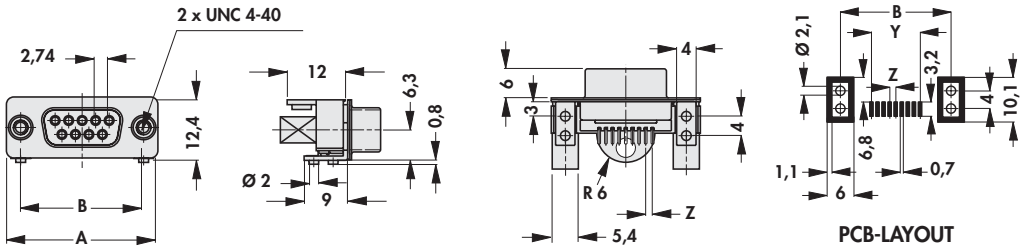
A

D-Sub in SMD-mounting

B

Female headers

C

|                                                                                   |                                                                                    |           |       |       |      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|-------|------|
|  |  |           |       |       |      |
|                                                                                   | <b>PCB-LAYOUT</b>                                                                  |           |       |       |      |
| <b>art. no.</b>                                                                   | no. of contacts                                                                    | dim. [mm] |       |       |      |
|                                                                                   |                                                                                    | A         | B     | Y     | Z    |
| <b>DB 09 SMD TR</b>                                                               | 9                                                                                  | 30.80     | 25.00 | 10.98 | 1.37 |
| <b>DB 15 SMD TR</b>                                                               | 15                                                                                 | 39.20     | 33.30 | 19.20 | 1.37 |
| <b>DB 25 SMD TR</b>                                                               | 25                                                                                 | 53.10     | 47.00 | 33.12 | 1.38 |
| <b>DB 37 SMD TR</b>                                                               | 37                                                                                 | 69.50     | 63.50 | 49.68 | 1.38 |

D

packing: tape and reel (150 pcs/reel); reel outer diameter 330 mm

E

F

G

H

I

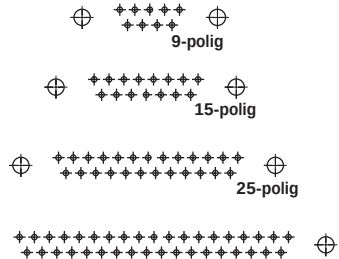
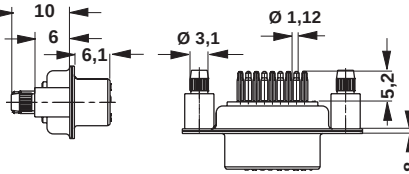
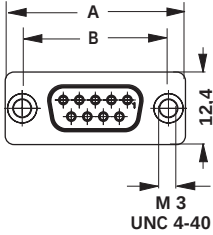
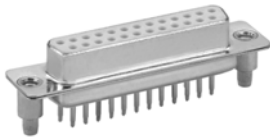
K

L

M

N



| <div></div> |                 |                |           |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|-----------|-------|
| art. no.                                                                                                                                                                                                                                                                                                                                           | no. of contacts | type of thread | dim. [mm] |       |
|                                                                                                                                                                                                                                                                                                                                                    |                 |                | A         | B     |
| DB ... 9 P                                                                                                                                                                                                                                                                                                                                         | 9               | 3              | 30.80     | 25.00 |
| DB ... 15 P                                                                                                                                                                                                                                                                                                                                        | 15              | 3              | 39.20     | 33.30 |
| DB ... 25 P                                                                                                                                                                                                                                                                                                                                        | 25              | 3              | 53.10     | 47.00 |
| DB ... 37 P                                                                                                                                                                                                                                                                                                                                        | 37              | 3              | 69.50     | 63.50 |
| please indicate: ... type of thread<br>3 = M 3<br>4 = UNC 4-40                                                                                                                                                                                                                                                                                     |                 |                |           |       |

A

D-Sub hoods, standard

B

C

D

E

F

G

H

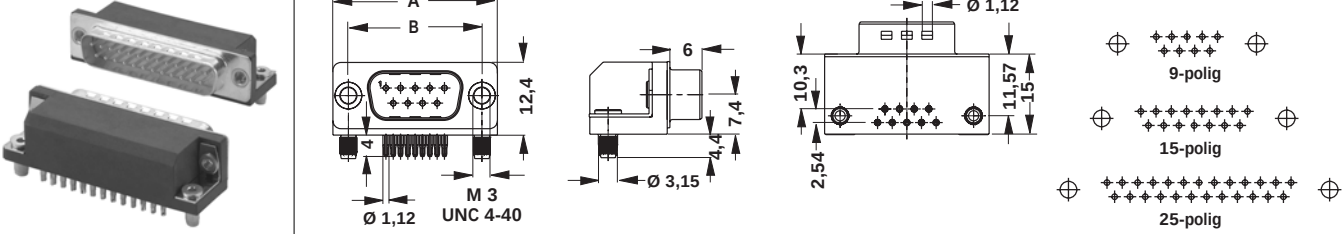
I

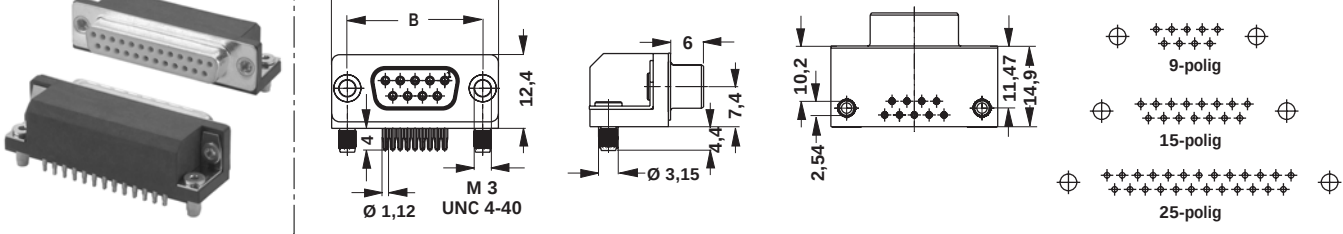
K

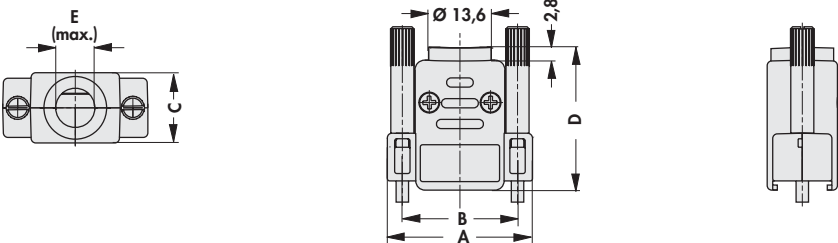
L

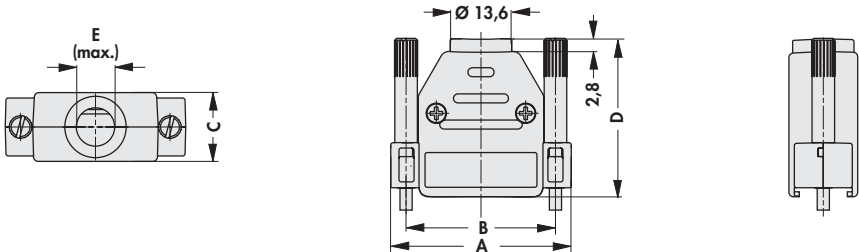
M

N

|  |                 |                |           |       |
|------------------------------------------------------------------------------------|-----------------|----------------|-----------|-------|
| art. no.                                                                           | no. of contacts | type of thread | dim. [mm] |       |
|                                                                                    |                 |                | A         | B     |
| DS WP ... 9                                                                        | 9               | 3              | 30.80     | 25.00 |
| DS WP ... 15                                                                       | 15              | 3              | 39.20     | 33.30 |
| DS WP ... 25                                                                       | 25              | 3              | 53.10     | 47.00 |
| DS WP ... 37                                                                       | 37              | 3              | 69.50     | 63.50 |
| please indicate: ... type of thread<br>3 = M 3<br>4 = UNC 4-40                     |                 |                |           |       |

|  |                 |                |           |       |
|-------------------------------------------------------------------------------------|-----------------|----------------|-----------|-------|
| art. no.                                                                            | no. of contacts | type of thread | dim. [mm] |       |
|                                                                                     |                 |                | A         | B     |
| DB WP ... 9                                                                         | 9               | 3              | 30.80     | 25.00 |
| DB WP ... 15                                                                        | 15              | 3              | 39.20     | 33.30 |
| DB WP ... 25                                                                        | 25              | 3              | 53.10     | 47.00 |
| DB WP ... 37                                                                        | 37              | 3              | 69.50     | 63.50 |
| please indicate: ... type of thread<br>3 = M 3<br>4 = UNC 4-40                      |                 |                |           |       |

|    |  |           |       |       |       |       |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|-------|-------|-------|
| art. no.                                                                            | no. of contacts                                                                    | dim. [mm] |       |       |       |       |
|                                                                                     |                                                                                    | E (max.)  | A     | B     | C     | D     |
| DH 09 ...                                                                           | 9                                                                                  | 8.50      | 31.50 | 25.00 | 15.20 | 31.00 |
| please indicate: ... case surface:<br>S = plastic, black<br>M = plastic, metallized |                                                                                    |           |       |       |       |       |

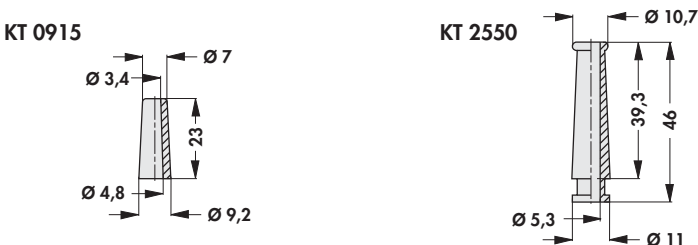
|    |  |           |       |       |       |       |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|-------|-------|-------|
| art. no.                                                                            | no. of contacts                                                                    | dim. [mm] |       |       |       |       |
|                                                                                     |                                                                                    | E (max.)  | A     | B     | C     | D     |
| DH 15 ...                                                                           | 15                                                                                 | 8.50      | 40.00 | 33.30 | 15.20 | 33.50 |
| DH 25 ...                                                                           | 25                                                                                 | 11.00     | 53.50 | 47.00 | 15.20 | 38.00 |
| DH 37 ...                                                                           | 37                                                                                 | 11.00     | 70.00 | 63.50 | 15.20 | 40.00 |
| DH 50 ...                                                                           | 50                                                                                 | 12.00     | 67.50 | 61.10 | 18.20 | 40.00 |
| please indicate: ... case surface:<br>S = plastic, black<br>M = plastic, metallized |                                                                                    |           |       |       |       |       |

E = max. diameter of the bushing in mm  
Threaded bolt UNC 4-40. Large cable space with few components.

version: 9-37 can be mounted in series in 3 HP grid, thus especially suitable for 19" technology.  
plastic material according: to UL 94:V-0

Suitable cable bushing

Protects the cable against damage by buckling.

|  |  |  |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| art. no.                                                                            | for no. of contacts                                                                  |  |
|                                                                                     | 9, 15                                                                                |  |
|                                                                                     | 25, 37, 50                                                                           |  |

A

D-Sub hoods, standard

B

With self-cutting threaded bolt

straight cable outlet with pre-assembled strain relief

C

D

E

F

G

H

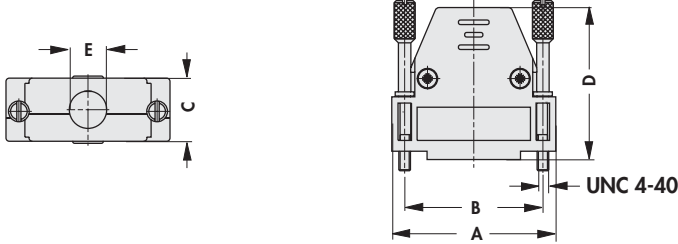
I

K

L

M

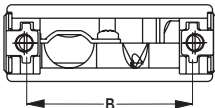
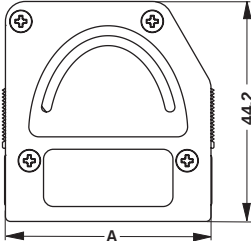
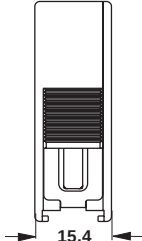
N

|                         |                 |  |       |       |       |       |
|----------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|
| art. no.                                                                                                 | no. of contacts | dim. [mm]                                                                          |       |       |       |       |
|                                                                                                          |                 | E (max.)                                                                           | A     | B     | C     | D     |
| DH SG 09 ...                                                                                             | 9               | 8.00                                                                               | 31.00 | 25.00 | 16.00 | 35.60 |
| DH SG 15 ...                                                                                             | 15              | 9.00                                                                               | 39.50 | 33.30 | 16.00 | 36.60 |
| DH SG 25 ...                                                                                             | 25              | 10.00                                                                              | 53.00 | 47.00 | 16.00 | 41.00 |
| DH SG 37 ...                                                                                             | 37              | 11.00                                                                              | 69.50 | 63.50 | 16.00 | 45.30 |
| DH SG 50 ...                                                                                             | 50              | 14.00                                                                              | 67.00 | 61.10 | 19.80 | 51.40 |
| please indicate:                      ... case surface:<br>S = plastic, black<br>M = plastic, metallized |                 |                                                                                    |       |       |       |       |

material: thermoplastic ABS

D-Sub hoods with quick-action locking system

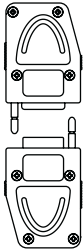
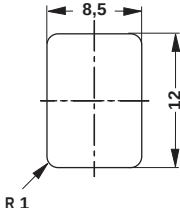
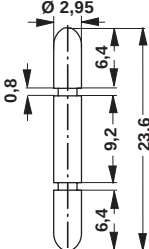
straight and side-gated cable outlet

|  |  |  |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| art. no.                                                                          | no. of contacts                                                                   | dim. [mm]                                                                          |                                                                                     |
| DH SV 09 S                                                                        | 9                                                                                 | A                                                                                  | B                                                                                   |
| DH SV 15 S                                                                        | 15                                                                                | 33.00                                                                              | 25.00                                                                               |
| DH SV 25 S                                                                        | 25                                                                                | 41.30                                                                              | 33.30                                                                               |
|                                                                                   |                                                                                   | 55.00                                                                              | 47.00                                                                               |

option: metallised surface on request

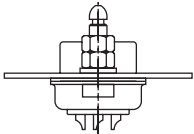
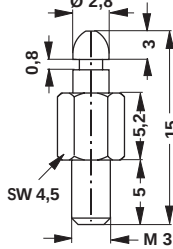
material: thermoplastic ABS

Accessories – latch pin for hood – hood connection

|  |  |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| art. no.                                                                            |                                                                                     |                                                                                      |                                                                                       |
| RS HH                                                                               |                                                                                     |                                                                                      |                                                                                       |

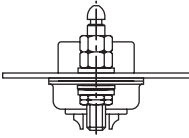
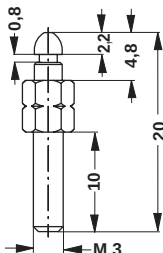
Accessories – latch pin for plug connector – hood connection

latch pin for connectors with thread M3 / UNC 4-40

|  |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| art. no.                                                                            | type of thread                                                                      |                                                                                       |
| RS SH 3                                                                             | M 3                                                                                 |                                                                                       |
| RS SH 4                                                                             | UNC 4-40                                                                            |                                                                                       |

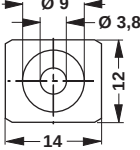
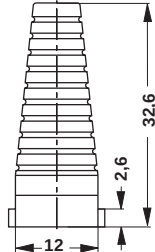
Accessories – latch pin for plug connector – hood connection

latch pin for existing connector with through hole

|                                                                                   |                                                                                                                                                                      |                                                                                     |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |   |  |
| art. no.                                                                          |                                                                                                                                                                      |                                                                                     |
| RS SH D                                                                           |                                                                                                                                                                      |                                                                                     |

Cable sleeve - quick-acting closure hood DH SV ...

for cable diameters 3-9 mm

|                                                                                    |                                                                                                                                                                          |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |   |
| art. no.                                                                           | no. of contacts                                                                                                                                                          |
| KT SV                                                                              | 9, 15, 25                                                                                                                                                                |

Cable sleeves are supplied with chamfers, which are adequate to a diameter-grading of 0.5 mm. They can be cut off depending on the existing diameter of the cable.

flammability: UL 94 HB

9-50 pins



Width C - 3 HP.

**version:** 9-37 pins can be mounted in series in 3 HP grid, thus especially suitable for 19" technology

**plastic material:** according to UL 94 V-0

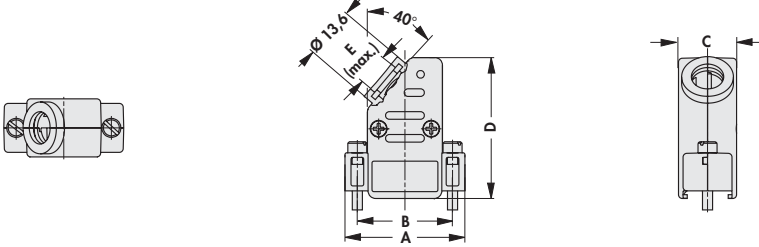
Metallized version with excellent shielding against electrical and magnetic alternating fields.

2-at side cable outputs (25-50 pins).

40° opening, open (9-50 pins). 90° opening, covered (25-50 pins).

Integrated dust protective shroud.

Captive latching screws with UNC 4-40 treads.

|  |                 |  |       |       |       |          |
|-------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|-------|-------|-------|----------|
| art. no.                                                                            | no. of contacts | dim. [mm]                                                                            |       |       |       |          |
|                                                                                     |                 | A                                                                                    | B     | C     | D     | E (max.) |
| DH 09 ...                                                                           | 9               | 31.50                                                                                | 25.00 | 15.20 | 37.00 | 8.50     |
| DH 15 ...                                                                           | 15              | 40.00                                                                                | 33.30 | 15.20 | 37.00 | 8.50     |
| DH 25 ...                                                                           | 25              | 53.50                                                                                | 47.00 | 15.20 | 41.00 | 11.00    |
| DH 37 ...                                                                           | 37              | 70.00                                                                                | 63.50 | 15.20 | 41.00 | 11.00    |
| DH 50 ...                                                                           | 50              | 67.80                                                                                | 61.10 | 18.20 | 41.00 | 12.00    |
| please indicate:                                                                    |                 | ... case surface:<br>K = plastic, black<br>KM = plastic, metallized                  |       |       |       |          |

E = max. diameter of the bushing in mm

A

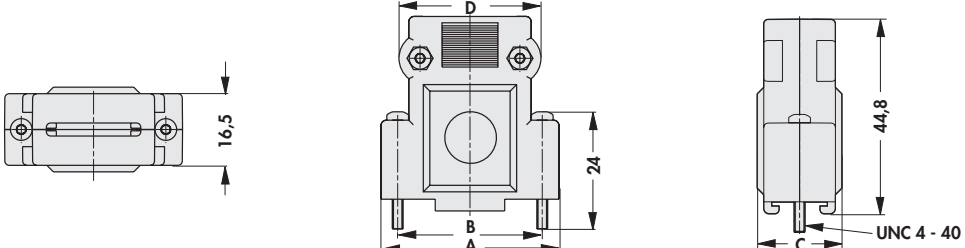
D-Sub cover for flat cable

B

D-Sub cover for flat cable, 9-25 contacts

for D-Sub connectors DS BK ... and DB BK ...

C

|    |                 |  |       |       |       |
|-------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------|-------|-------|-------|
| art. no.                                                                            | no. of contacts | dim. [mm]                                                                          |       |       |       |
|                                                                                     |                 | A                                                                                  | B     | C     | D     |
| DH BK 09 ...                                                                        | 9               | 33.00                                                                              | 25.00 | 19.50 | 24.60 |
| DH BK 25 ...                                                                        | 25              | 54.80                                                                              | 47.00 | 19.50 | 47.60 |
| please indicate: ... case surface:<br>K = plastic, grey<br>KM = plastic, metallized |                 |                                                                                    |       |       |       |

D

E

material: ABS; Internal strain relief. Two-part plastic hood with UNC 4-40 screws.

F

G

H

I

K

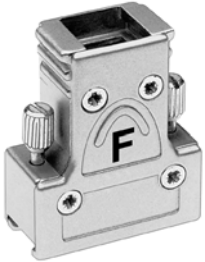
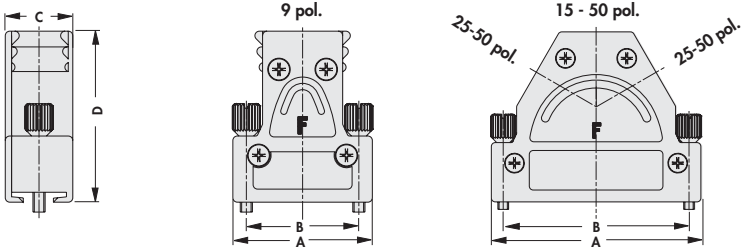
L

M

N



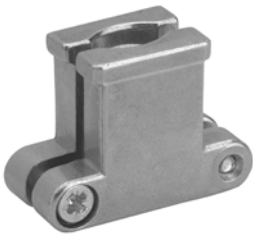
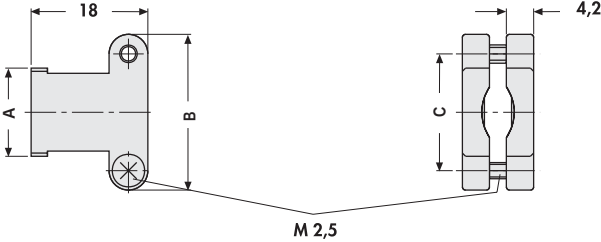
Vertical cable clamp

|  |  |              |              |              |           |       |       |       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------|--------------|--------------|-----------|-------|-------|-------|
| art. no.                                                                          | no. of contacts                                                                    | cable clamps | crimp flange | crimp sleeve | dim. [mm] |       |       |       |
|                                                                                   |                                                                                    |              |              |              | A         | B     | C     | D     |
| DH 09 VM                                                                          | 9                                                                                  | KKS 937      | CF ...       | CH ...       | 31.00     | 25.00 | 15.00 | 38.00 |
| DH 15 VM                                                                          | 15                                                                                 | KKS 937      | CF ...       | CH ...       | 39.50     | 33.30 | 15.00 | 35.00 |
| DH 25 VM                                                                          | 25                                                                                 | KKS 937      | CF ...       | CH ...       | 53.00     | 47.00 | 15.00 | 43.00 |
| DH 37 VM                                                                          | 37                                                                                 | KKS 937      | CF ...       | CH ...       | 69.50     | 63.50 | 15.00 | 43.00 |
| DH 50 VM                                                                          | 50                                                                                 | KKS 050      | CF ...       | CH ...       | 67.20     | 61.10 | 17.80 | 43.00 |

Lateral knurled screws with UNC 4-40 thread. Easy mounting due to pre-tapped thread.  
HF-tight due to crimp flange CF ...

Accessories for D-Sub hoods made of full metal - screwable cable clamp

For clamping the screen and as strain relief.

|  |  |           |       |       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------|-------|-------|
| art. no.                                                                            | no. of contacts                                                                      | dim. [mm] |       |       |
|                                                                                     |                                                                                      | A         | B     | C     |
| KKS 050                                                                             | 50                                                                                   | 19.80     | 25.00 | 19.00 |

A

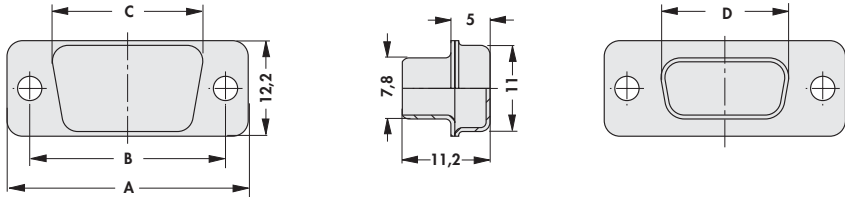
Cut-out cover

B

Cover for D-Sub cut outs in front and backpanel

suitable for EMC application, closed one side

C

|  |  |           |       |       |       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------|-------|-------|
| art. no.                                                                          | no. of contacts                                                                    | dim. [mm] |       |       |       |
|                                                                                   |                                                                                    | A         | B     | C     | D     |
| BADM 09                                                                           | 9                                                                                  | 30.80     | 25.00 | 19.20 | 16.30 |
| BADM 15                                                                           | 15                                                                                 | 39.30     | 33.30 | 27.50 | 24.50 |
| BADM 25                                                                           | 25                                                                                 | 53.00     | 47.00 | 41.20 | 38.30 |
| BADM 37                                                                           | 37                                                                                 | 69.40     | 63.50 | 57.70 | 54.80 |

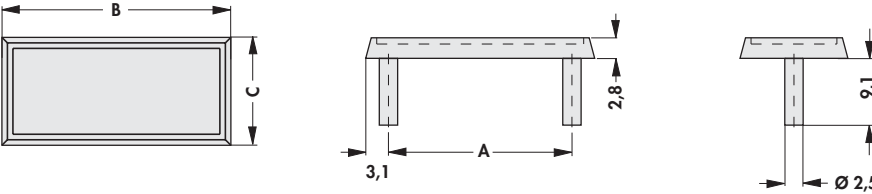
D

surface metal case: tin-plated

Blank covers for exact sealing of unused D-Sub cut outs in front- and backpanels.  
Size and form are as D-Sub housings.

F

G

|  |  |           |       |       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------|-------|-------|
| art. no.                                                                            | no. of contacts                                                                      | dim. [mm] |       |       |
|                                                                                     |                                                                                      | A         | B     | C     |
| BADP 09                                                                             | 9                                                                                    | 25.00     | 31.20 | 14.70 |
| BADP 15                                                                             | 15                                                                                   | 33.30     | 39.60 | 14.70 |
| BADP 25                                                                             | 25                                                                                   | 47.00     | 53.30 | 14.70 |
| BADP 37                                                                             | 37                                                                                   | 63.50     | 69.90 | 14.70 |
| BADP 50                                                                             | 50                                                                                   | 61.10     | 67.60 | 14.70 |

H

Plastic cover, blank, for blind D-Sub and other connector cutouts in front and rear panels.  
Easy to mount with enclosed clamping springs.

material: ABS  
flammability: UL 94 V-0  
colour: black  
clamping spring: steel

K

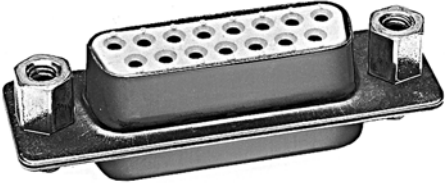
L

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Screw fastening, mounted

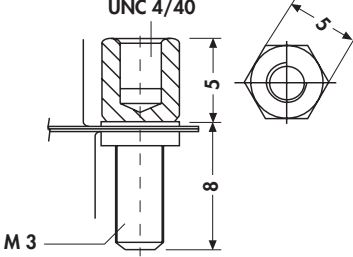
2 screw fastenings incl. spacer, washer, nut

|                                                                                    |  |
|------------------------------------------------------------------------------------|--|
|  |  |
| art. no.                                                                           |  |
| ... V                                                                              |  |

Please add a V to the corresponding art. no. ...

Screw fastening, loose

2 separate screw fasteners, with washer and nut

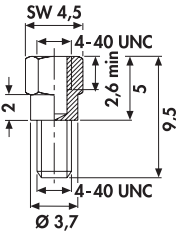
|                                                                                     |  |
|-------------------------------------------------------------------------------------|--|
|   |  |
|  |  |
| art. no.                                                                            |  |
| V 2                                                                                 |  |

material:

**screw** - brass nickel-plated; **screw-nut** - steel nickel-plated; **washer** - steel tin-plated

Screw fastening for assembly of cases, separate

2 screw fastenings incl. spacer, washer, nut

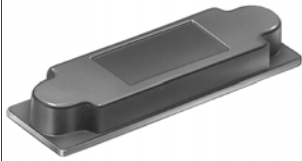
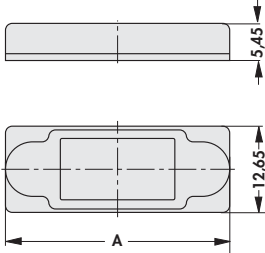
|                                                                                     |  |
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|  |  |
|  |  |
| art. no.                                                                            |  |
| VG 2                                                                                |  |

material:

**screw and screw-nut** - steel nickel-plated; **washer** - steel tin-plated

HF-tight caps, male headers and female headers

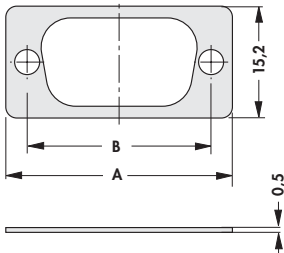
prevent HF-radiation at open interfaces

|                                                                                   |                                                                                    |                 |        |                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------|--------|----------------|
|  |  |                 |        |                |
|                                                                                   | art. no.                                                                           | no. of contacts | colour | contact        |
|                                                                                   |                                                                                    |                 |        | dim. [mm]<br>A |
|                                                                                   | HFK S 09                                                                           | 9               | blue   | male           |
|                                                                                   | HFK S 15                                                                           | 15              | blue   | male           |
|                                                                                   | HFK S 25                                                                           | 25              | blue   | male           |
|                                                                                   | HFK B 09                                                                           | 9               | red    | female         |
|                                                                                   | HFK B 15                                                                           | 15              | red    | female         |
|                                                                                   | HFK B 25                                                                           | 25              | red    | female         |

**material:** ABS plastics UL 94:V-0, nickel-plated on the inside  
**flammability:** <1 Ω  
**temperature range:** -25 °C ... +70 °C

HF-seals

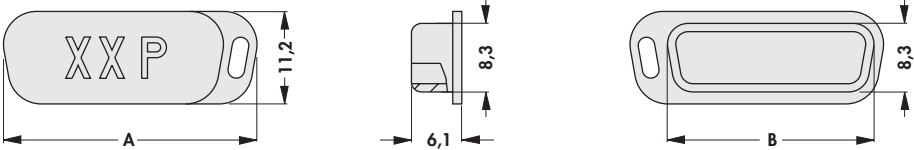
as seal between plug and housing

|                                                                                     |                                                                                      |                 |             |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------|-------------|
|  |  |                 |             |
|                                                                                     | art. no.                                                                             | no. of contacts | dim. [mm]   |
|                                                                                     |                                                                                      |                 | A B         |
|                                                                                     | HFD 09                                                                               | 9               | 30.80 25.00 |
|                                                                                     | HFD 15                                                                               | 15              | 39.40 33.30 |
|                                                                                     | HFD 25                                                                               | 25              | 53.40 47.00 |
|                                                                                     | HFD 37                                                                               | 37              | 70.70 63.50 |

**material:** silicone, filling of silvered copper particles

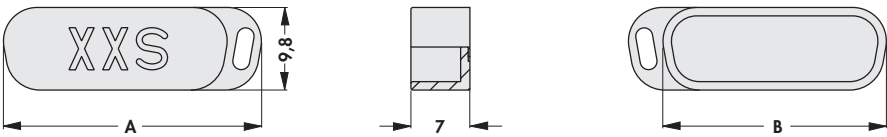
Extremely low contact resistance.

For male headers

|  |                 |           |       |  |  |  |  |
|-----------------------------------------------------------------------------------|-----------------|-----------|-------|------------------------------------------------------------------------------------|--|--|--|
| art. no.                                                                          | no. of contacts | dim. [mm] |       |                                                                                    |  |  |  |
|                                                                                   |                 | A         | B     |                                                                                    |  |  |  |
| SSK S 09                                                                          | 9               | 22.50     | 18.20 |                                                                                    |  |  |  |
| SSK S 15                                                                          | 15              | 30.60     | 26.50 |                                                                                    |  |  |  |
| SSK S 25                                                                          | 25              | 43.70     | 39.80 |                                                                                    |  |  |  |
| SSK S 37                                                                          | 37              | 60.30     | 56.20 |                                                                                    |  |  |  |

material: polyethylere

For female headers

|  |                 |           |       |  |  |  |  |
|------------------------------------------------------------------------------------|-----------------|-----------|-------|--------------------------------------------------------------------------------------|--|--|--|
| art. no.                                                                           | no. of contacts | dim. [mm] |       |                                                                                      |  |  |  |
|                                                                                    |                 | A         | B     |                                                                                      |  |  |  |
| SSK B 09                                                                           | 9               | 22.30     | 17.00 |                                                                                      |  |  |  |
| SSK B 15                                                                           | 15              | 30.60     | 25.00 |                                                                                      |  |  |  |
| SSK B 25                                                                           | 25              | 44.10     | 38.65 |                                                                                      |  |  |  |
| SSK B 37                                                                           | 37              | 60.70     | 55.30 |                                                                                      |  |  |  |

material: polyethylere

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Brackets for PC

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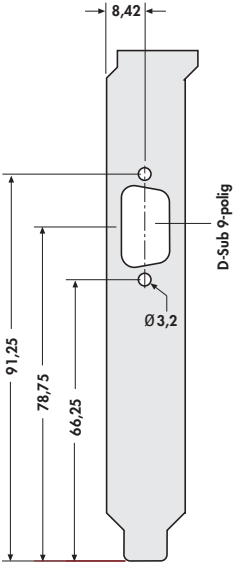
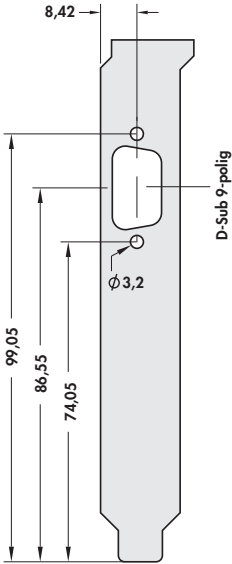
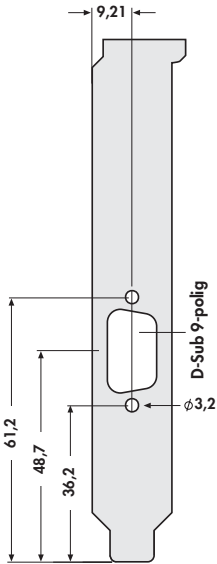
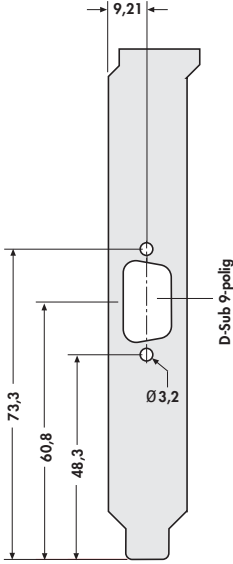
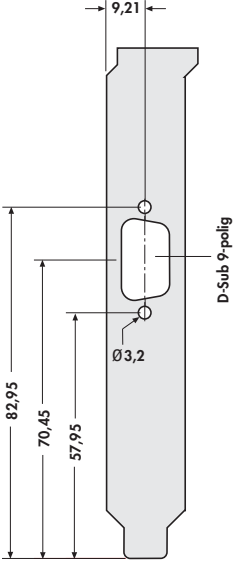
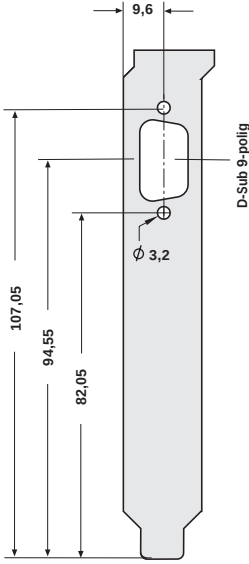
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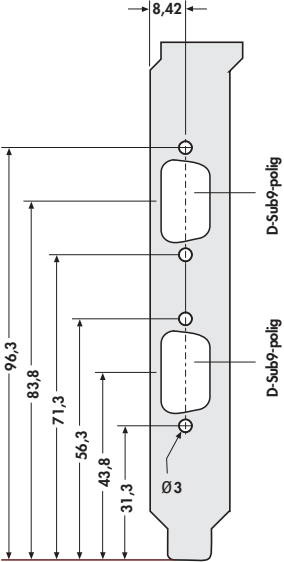
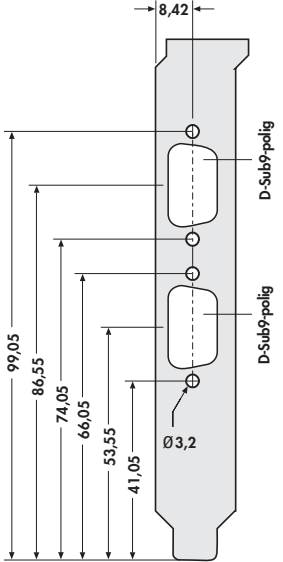
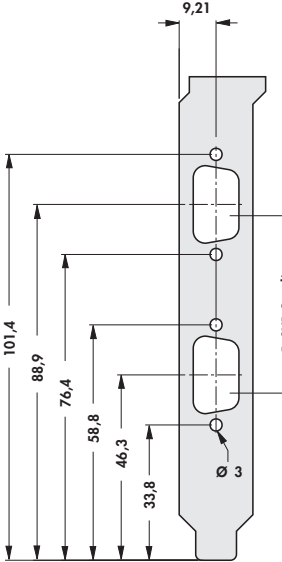
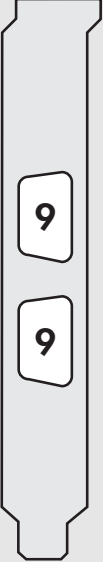
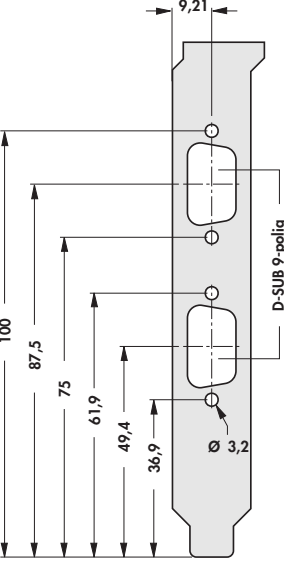
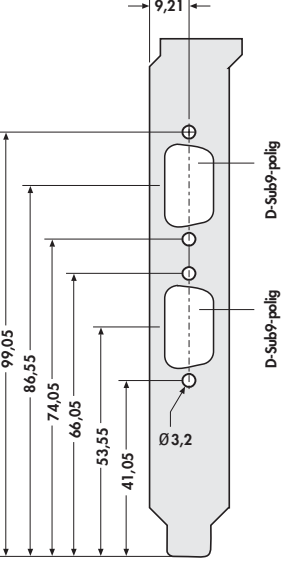
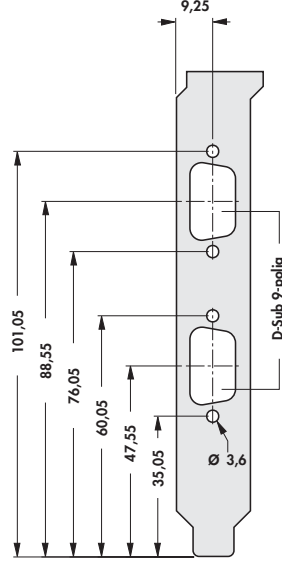
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|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  | <b>PCI 006 ...</b><br>  | <b>PCI 007 ...</b><br> | <b>PCI 055 ...</b><br> |
|                                                                                   | <b>PCI 004 ...</b><br> | <b>PCI 005 ...</b><br> | <b>PCI 029 L</b><br>   |

|                                                                                                              |                                                                                                              |                                                                                                              |                                                                                     |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p><b>PCI 011 ...</b></p>   | <p><b>PCI 013 ...</b></p>   | <p><b>PCI 039 ...</b></p>  |  |
| <p><b>PCI 041 ...</b></p>  | <p><b>PCI 012 ...</b></p>  | <p><b>PCI 040 O</b></p>   |                                                                                     |

please indicate: ... fixing tab  
L = bracket with fixing tab  
O = bracket without fixing tab



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Brackets for PC

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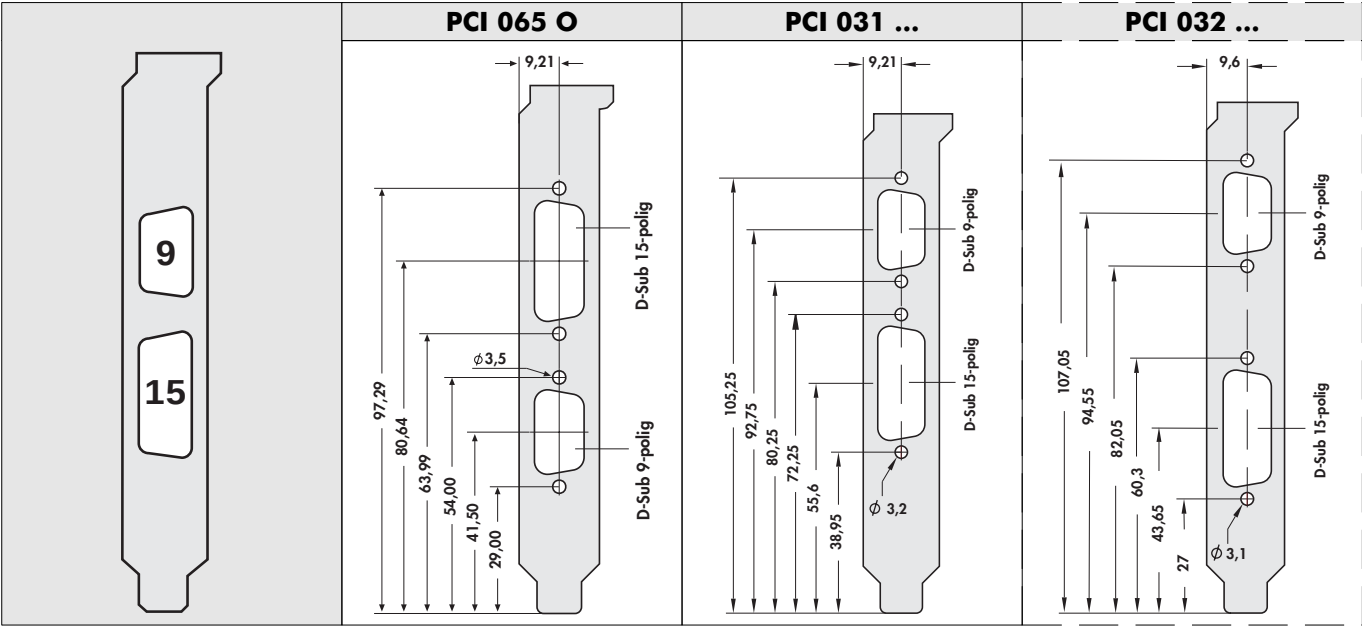
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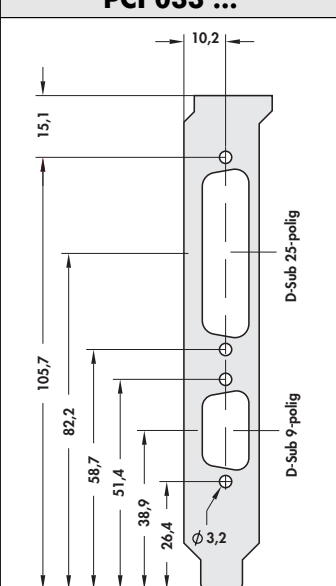
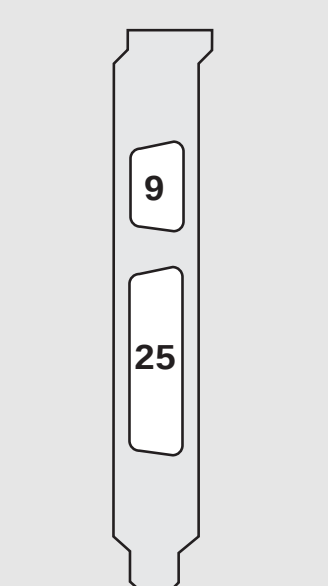
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K 9

If you do not find a suitable bracket,  
please use the PCI / KHPC design sheet  
at the end of section "K".

| PCI 033 ...                                                                       |  |  |                                                                                     |
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please indicate: ... fixing tab  
L = bracket with fixing tab  
O = bracket without fixing tab

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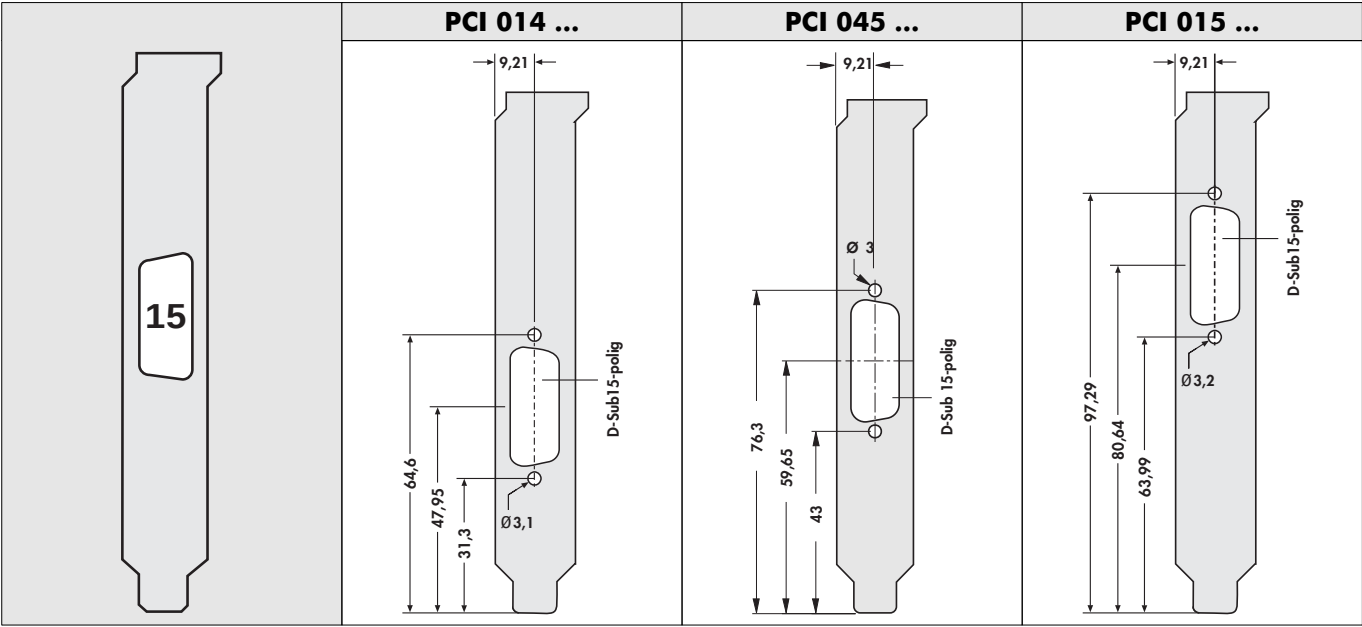
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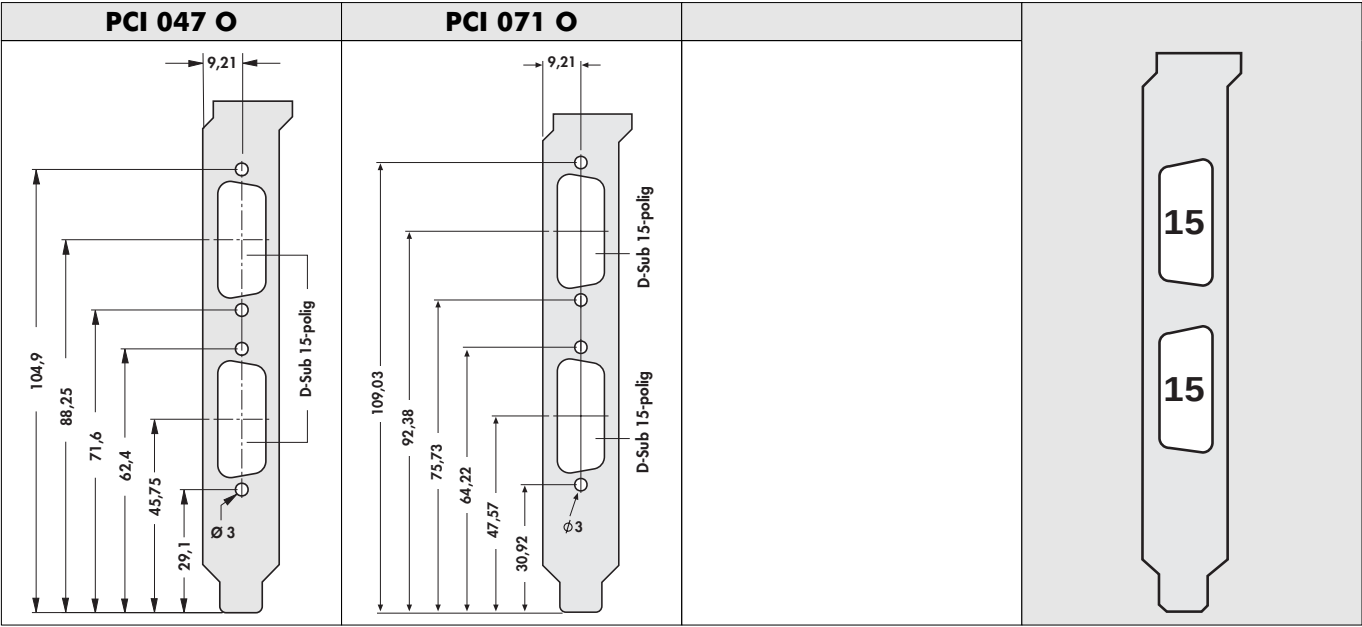
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please indicate: ... fixing tab  
L = bracket with fixing tab  
O = bracket without fixing tab

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Brackets for PC

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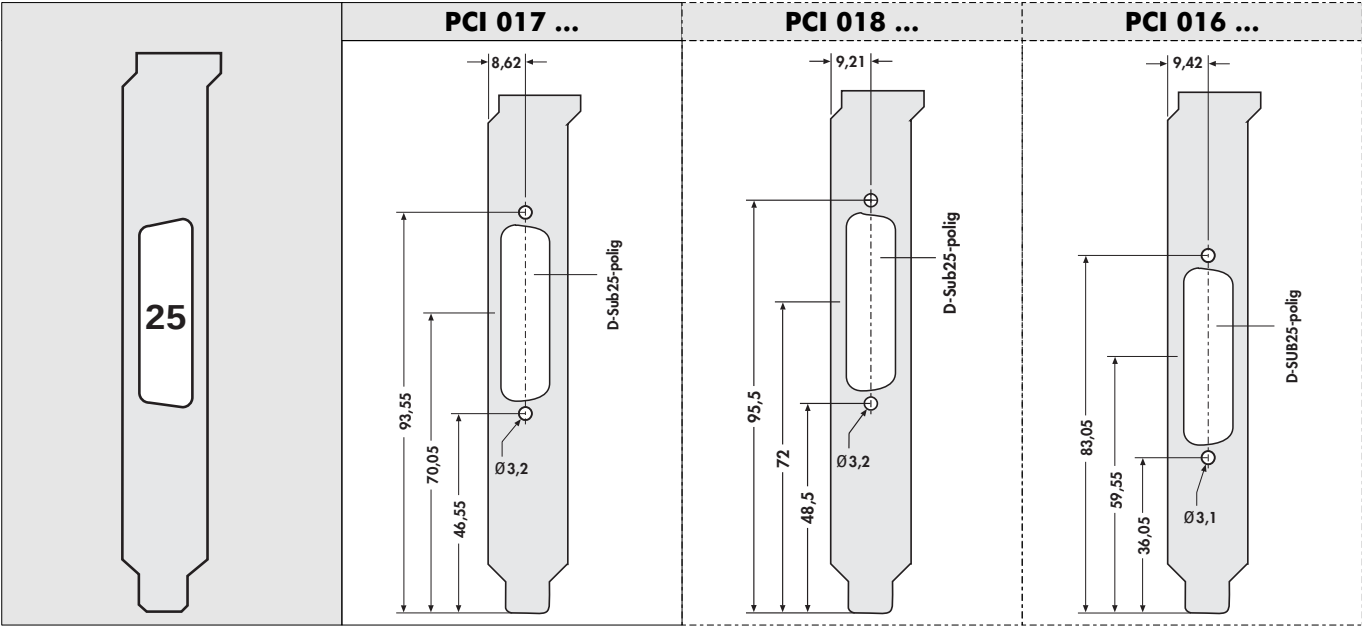
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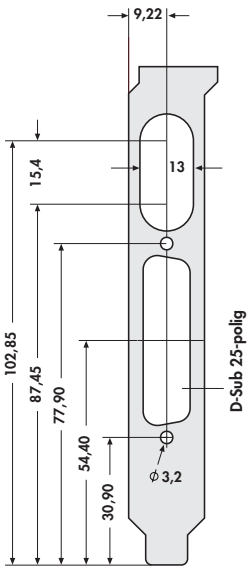
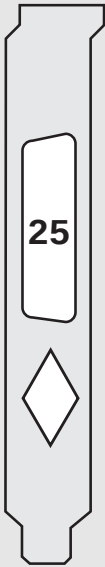
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| PCI 072 O                                                                         |  |  |                                                                                     |
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please indicate: ... fixing tab  
L =bracket with fixing tab  
O =bracket without fixing tab

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Brackets for PC

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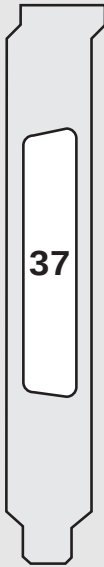
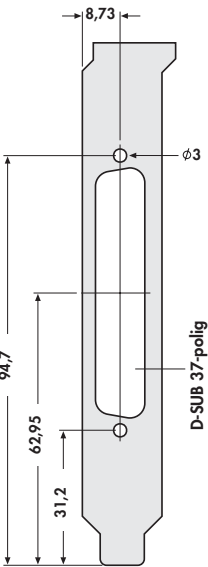
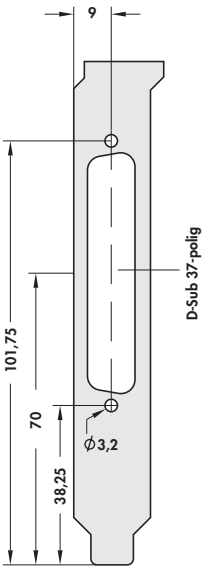
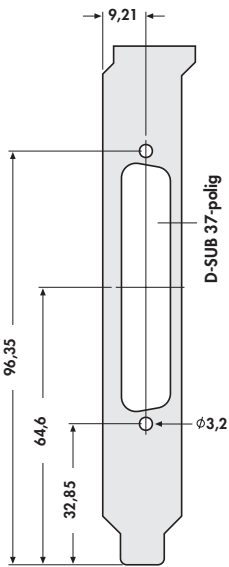
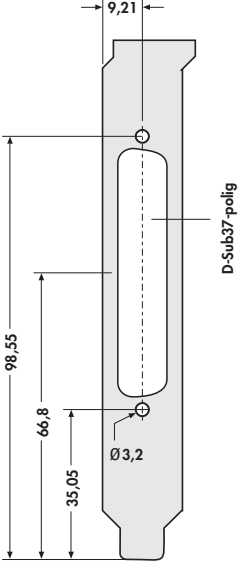
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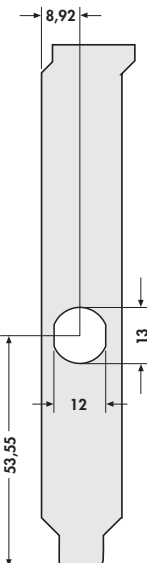
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|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  <p>37</p> | <b>PCI 076 O</b><br>    | <b>PCI 035 ...</b><br> | <b>PCI 077 ...</b><br> |
|                                                                                             | <b>PCI 020 ...</b><br> |                                                                                                          |                                                                                                           |

| PCI 021 O                                                                         |  |  |                                                                                     |
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please indicate: ... fixing tab  
L =bracket with fixing tab  
O =bracket without fixing tab



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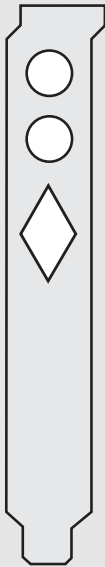
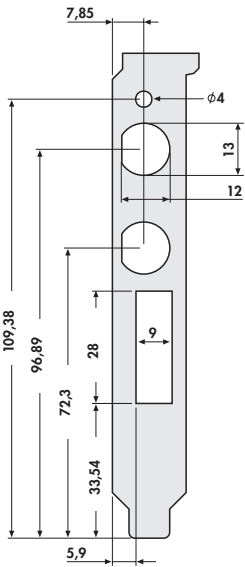
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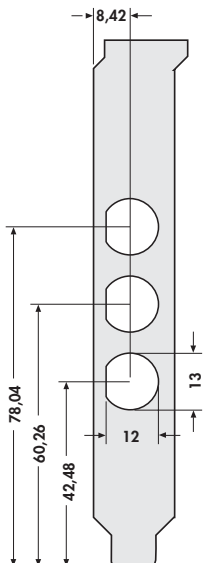
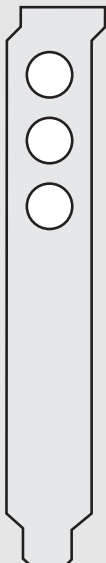
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|                                                                                   | PCI 083 L                                                                         |  |  |
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| PCI 023 ...                                                                       |  |  |                                                                                     |
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please indicate: ... fixing tab  
L = bracket with fixing tab  
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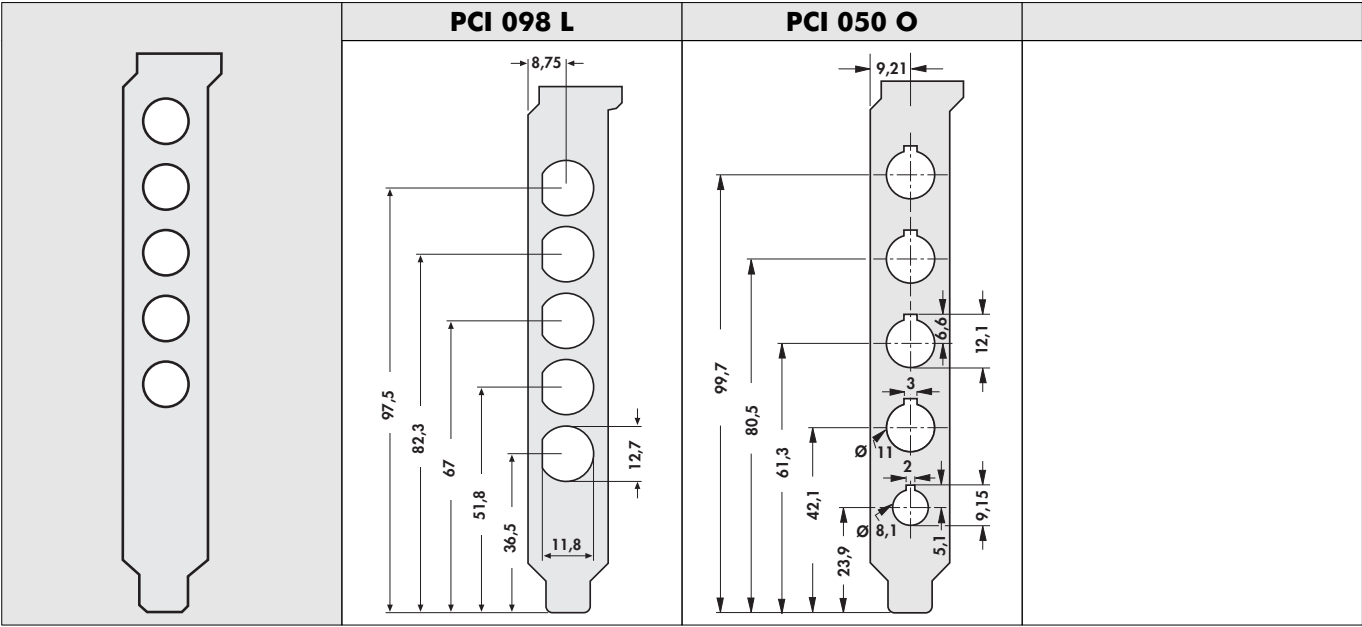
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| PCI 027 L | PCI 105 L | PCI 104 O |  |
|-----------|-----------|-----------|--|
|           |           |           |  |
| PCI 106 L |           |           |  |
|           |           |           |  |

please indicate: ... fixing tab  
L = bracket with fixing tab  
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Brackets for PC

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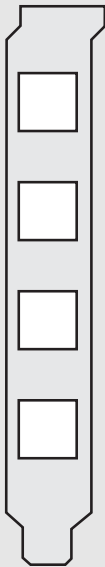
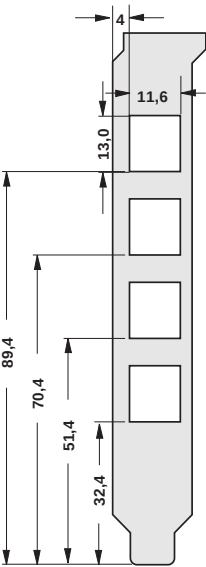
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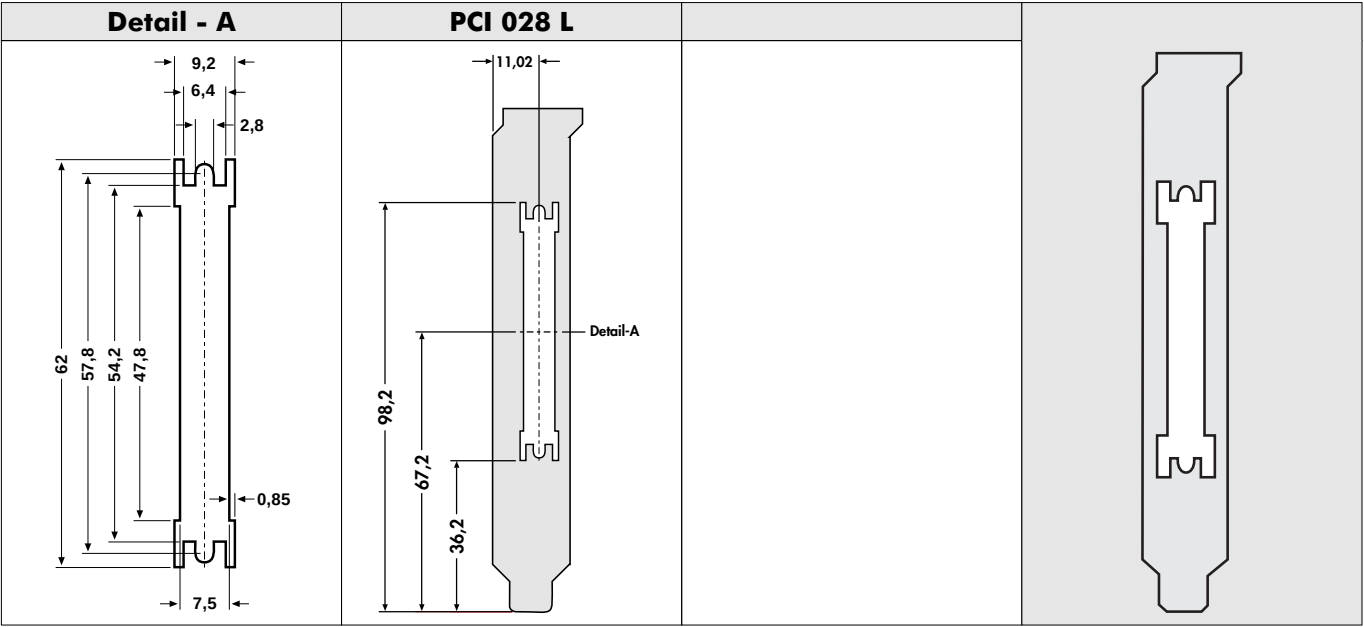
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|                                                                                   | PCI 051 ...                                                                       |  |  |
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please indicate: ... fixing tab  
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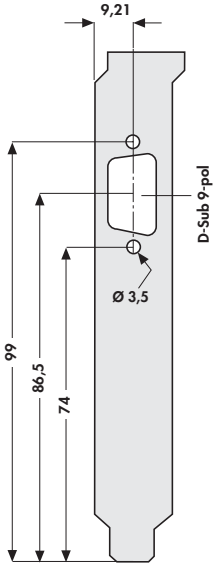
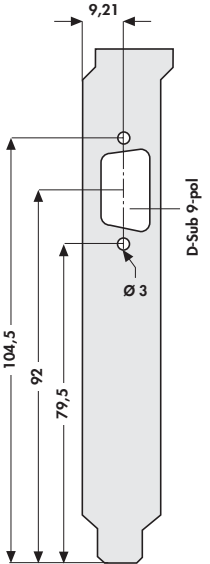
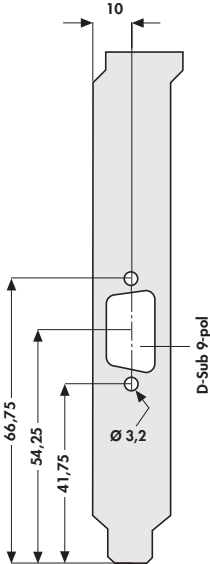
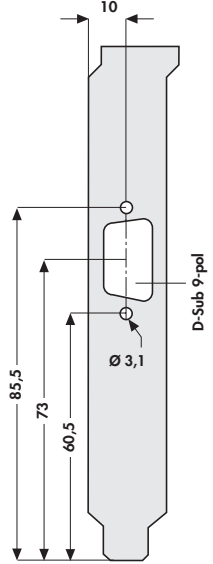
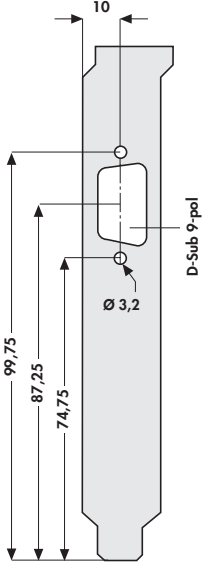
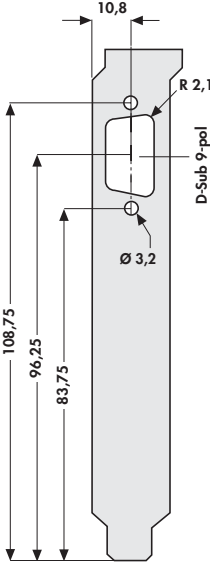
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| <br><b>9</b>        | <b>KHPC 002 O</b> | <b>KHPC 092 ...</b> | <b>KHPC 003 ...</b> |
|                     | <br><b>9,2</b>    | <br><b>9,2</b>      |                     |
| <b>KHPC 007 O</b>   | <b>KHPC 011 O</b> | <b>KHPC 004 O</b>   | <b>KHPC 013 O</b>   |
| <br><b>9,21</b>     | <br><b>9,21</b>   | <br><b>9,21</b>     | <br><b>9,21</b>     |
| <b>KHPC 010 ...</b> | <b>KHPC 093 L</b> | <b>KHPC 094 O</b>   | <b>KHPC 096 O</b>   |
| <br><b>9,21</b>     | <br><b>9,21</b>   | <br><b>9,21</b>     | <br><b>9,21</b>     |

|                                                                                    |                                                                                    |                                                                                     |                                                                                     |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>KHPC 008 O</b>                                                                  | <b>KHPC 014 O</b>                                                                  | <b>KHPC 016 O</b>                                                                   |  |
|   |   |   |                                                                                     |
| <b>KHPC 095 O</b>                                                                  | <b>KHPC 017 ...</b>                                                                | <b>KHPC 102 O</b>                                                                   |                                                                                     |
|  |  |  |                                                                                     |

please indicate: ... fixing tab  
L =bracket with fixing tab  
O =bracket without fixing tab



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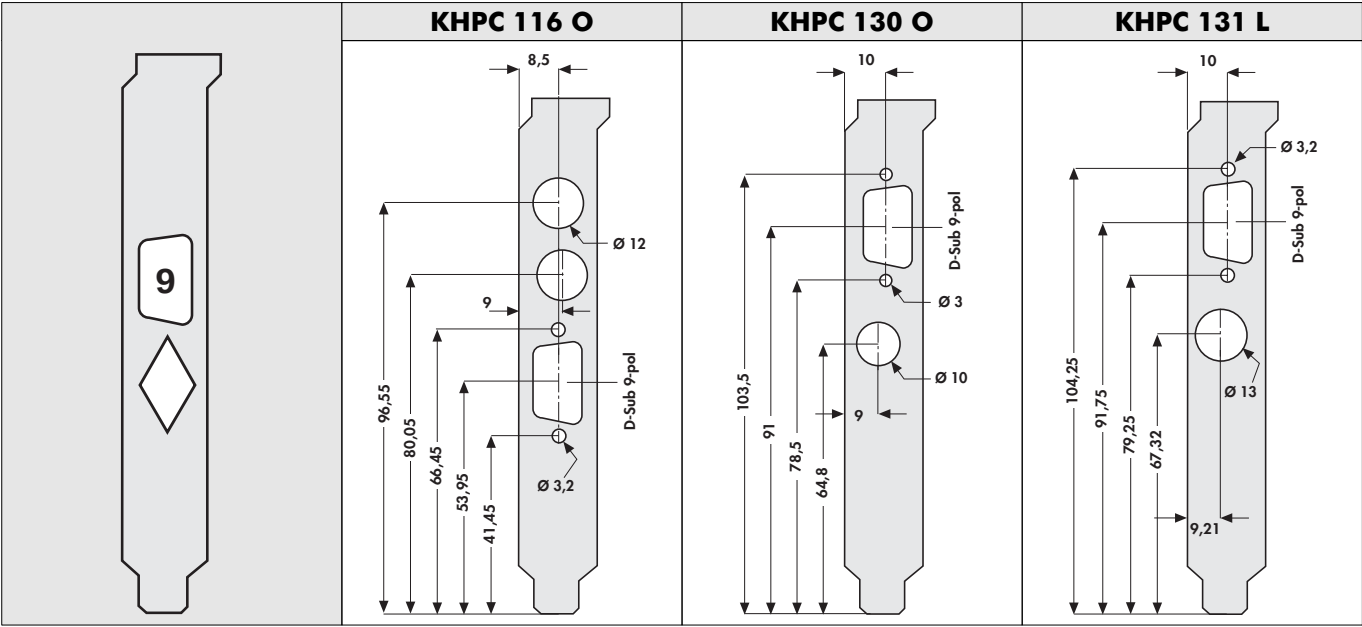
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|--------------------------|--------------------------|--------------------------|--------------------------|
| <p><b>KHPC 144 O</b></p> | <p><b>KHPC 142 O</b></p> | <p><b>KHPC 053 O</b></p> |                          |
| <p><b>KHPC 138 O</b></p> | <p><b>KHPC 006 O</b></p> | <p><b>KHPC 141 O</b></p> | <p><b>KHPC 012 O</b></p> |
| <p><b>KHPC 072 O</b></p> | <p><b>KHPC 150 O</b></p> | <p><b>KHPC 009 O</b></p> | <p><b>KHPC 143 O</b></p> |

please indicate: ... fixing tab  
**L** = bracket with fixing tab  
**O** = bracket without fixing tab

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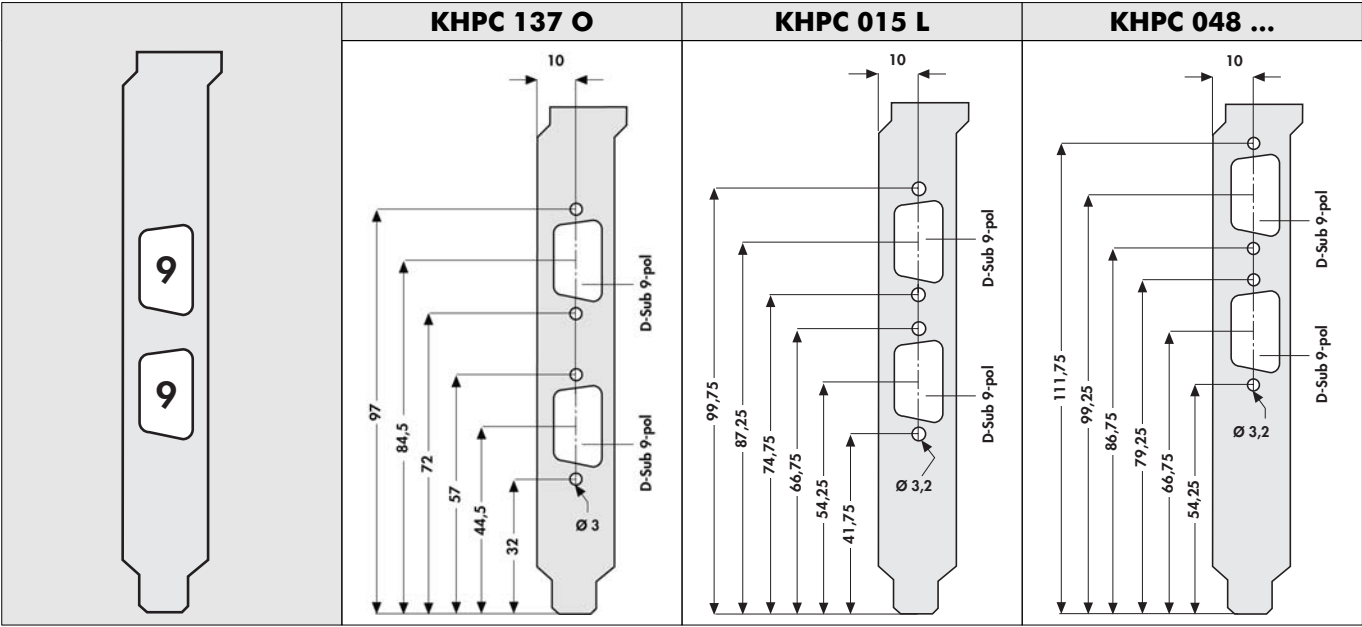
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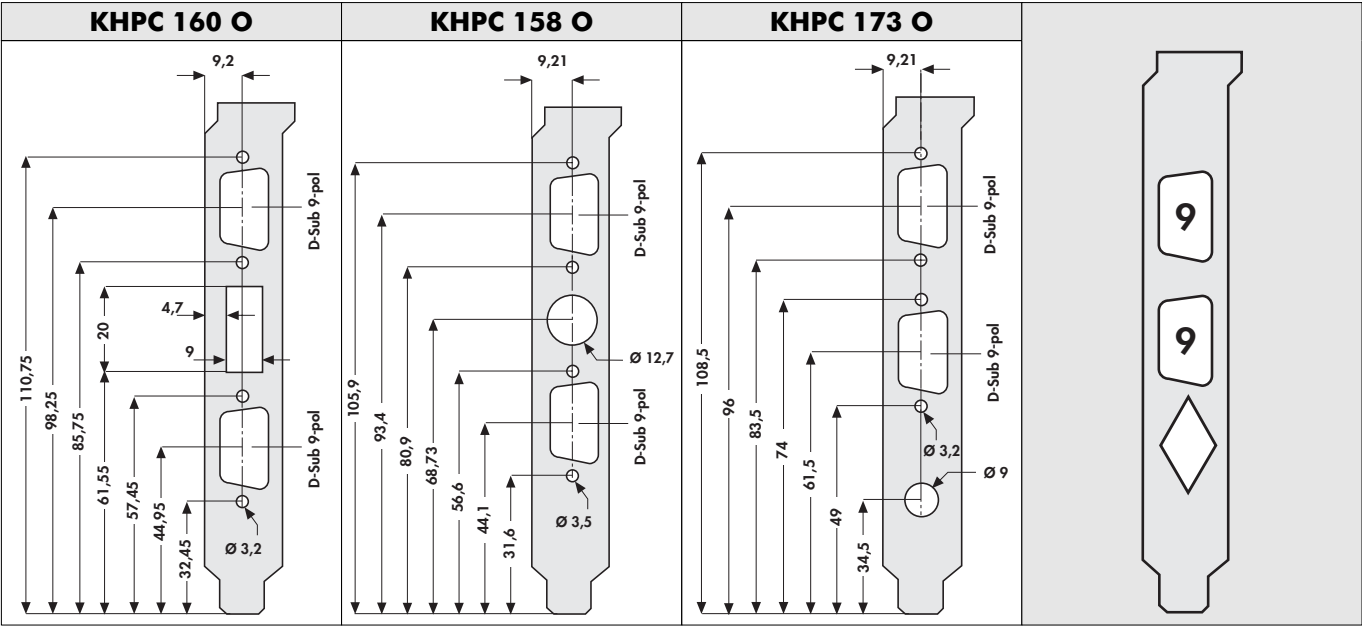
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please indicate: ... fixing tab  
L = bracket with fixing tab  
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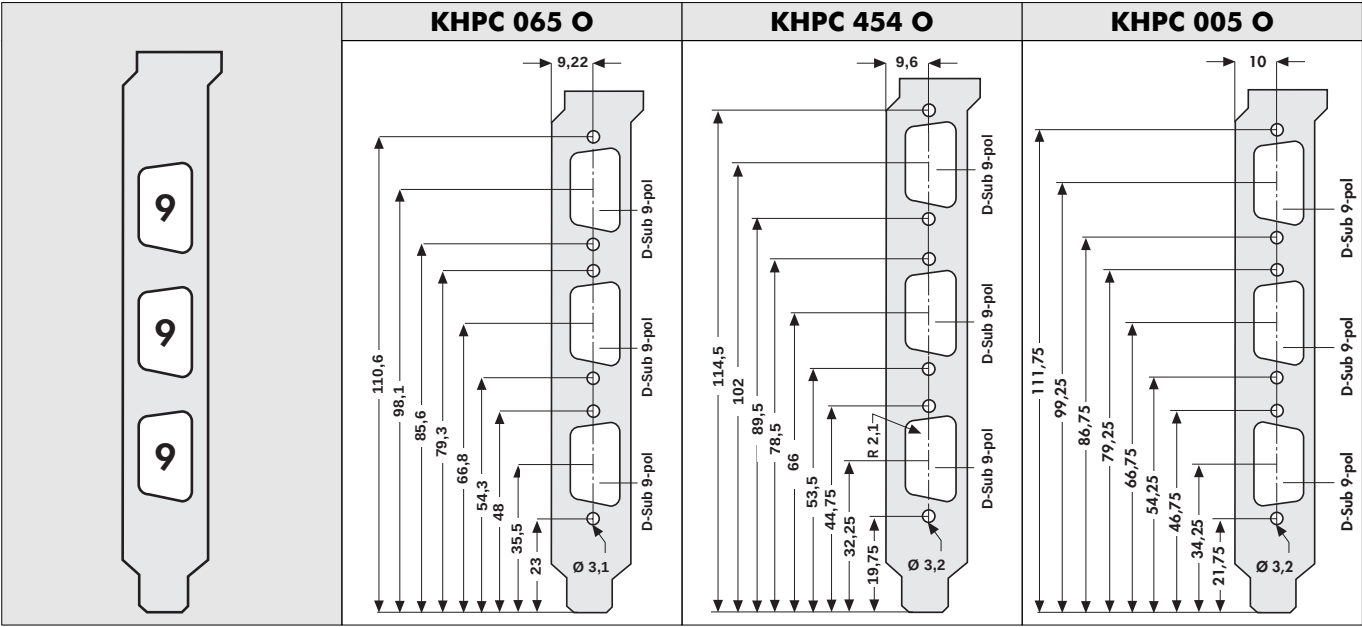
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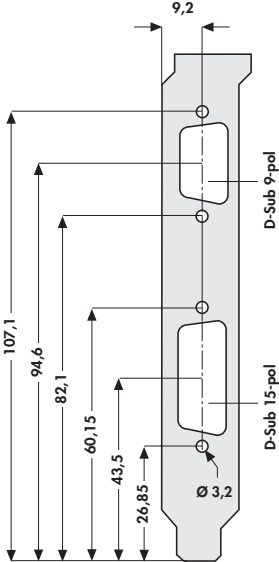
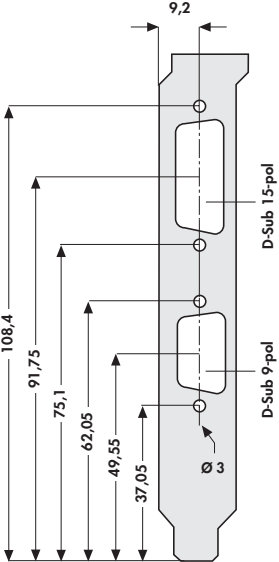
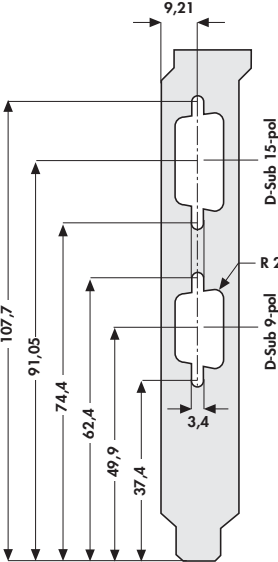
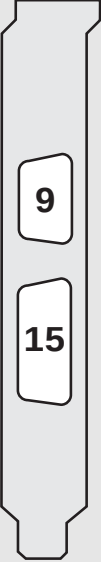
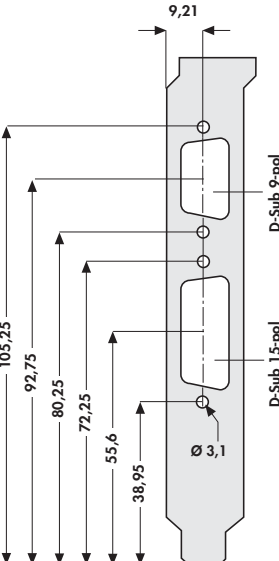
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| <p><b>KHPC 179 O</b></p>   | <p><b>KHPC 177 ...</b></p>  | <p><b>KHPC 178 O</b></p>  |  |
| <p><b>KHPC 076 O</b></p>  |                                                                                                              |                                                                                                             |                                                                                     |

please indicate: ... fixing tab  
L = bracket with fixing tab  
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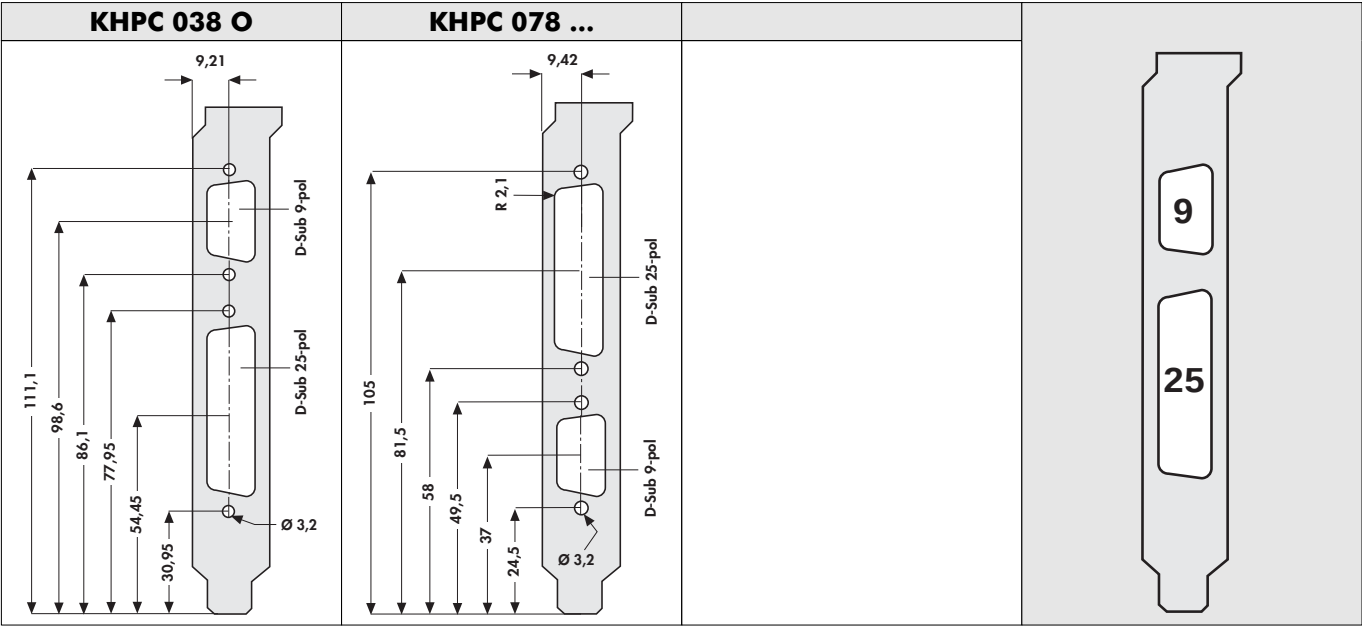
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|                       | <b>KHPC 189 L</b><br> | <b>KHPC 488 O</b><br> | <b>KHPC 040 O</b><br> |
| <b>KHPC 041 O</b><br> | <b>KHPC 185 O</b><br> | <b>KHPC 061 O</b><br> | <b>KHPC 187 O</b><br> |
| <b>KHPC 188 O</b><br> | <b>KHPC 039 O</b><br> | <b>KHPC 037 L</b><br> | <b>KHPC 191 O</b><br> |



please indicate: ... fixing tab  
L = bracket with fixing tab  
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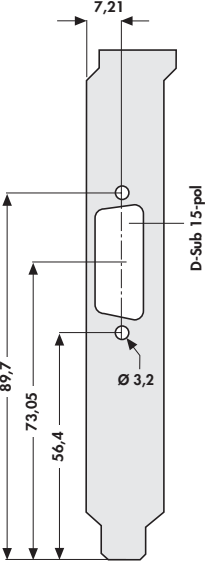
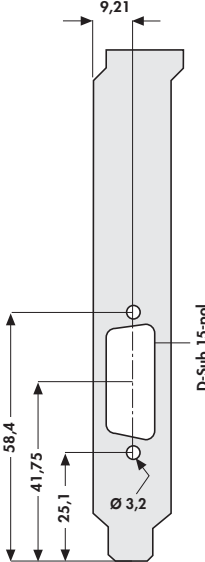
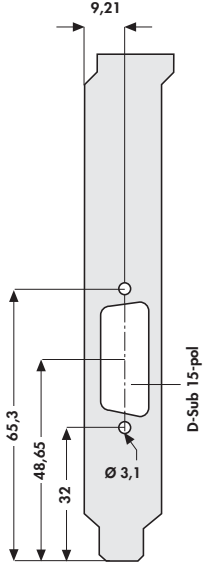
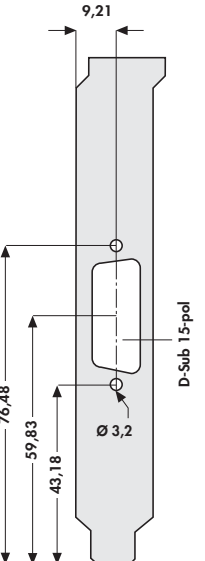
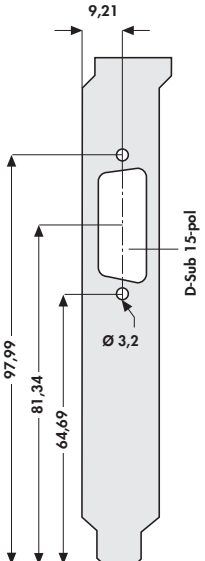
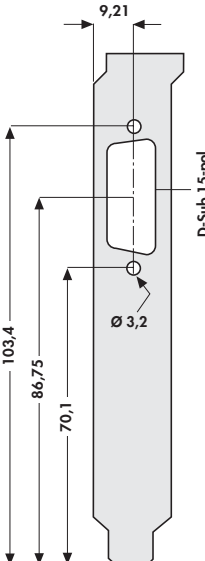
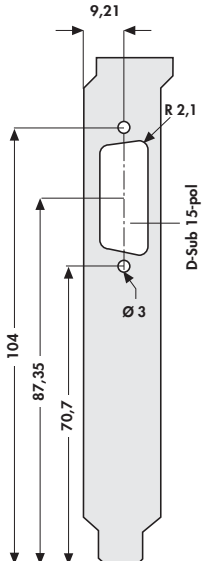
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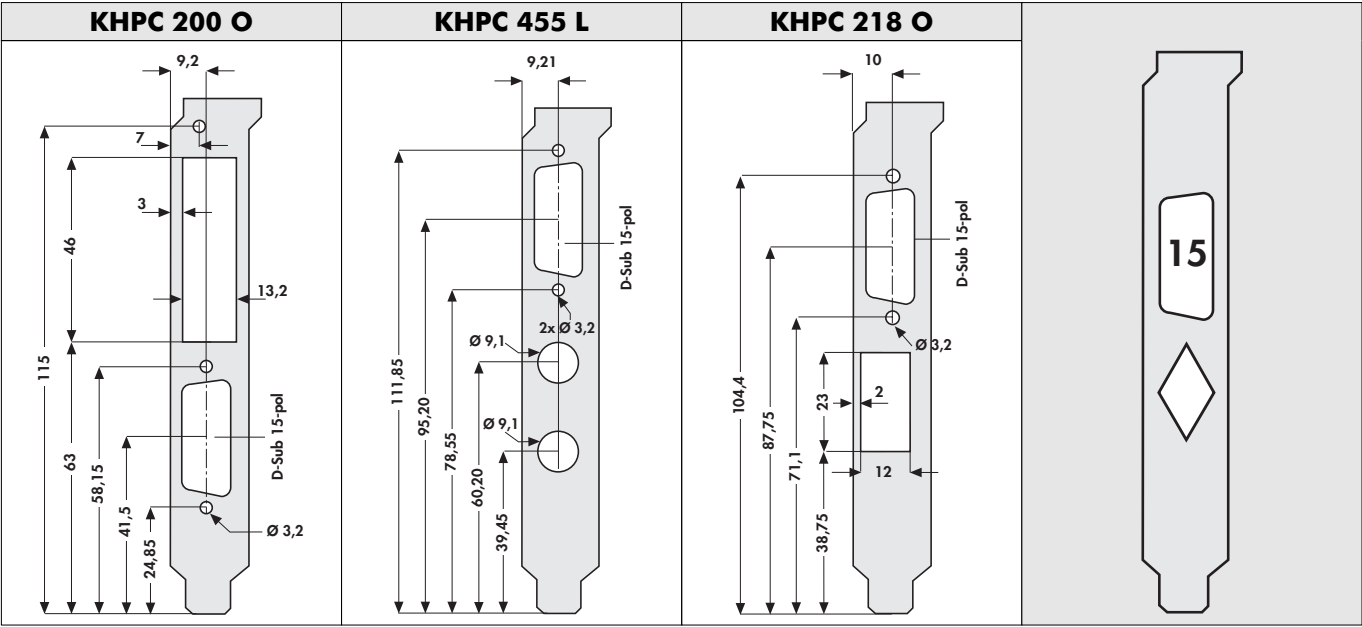
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|                        | <b>KHPC 195 L</b><br>    | <b>KHPC 023 L</b><br>  | <b>KHPC 019 O</b><br>  |
| <b>KHPC 074 O</b><br> | <b>KHPC 073 ...</b><br> | <b>KHPC 024 O</b><br> | <b>KHPC 198 O</b><br> |



please indicate: ... fixing tab  
L = bracket with fixing tab  
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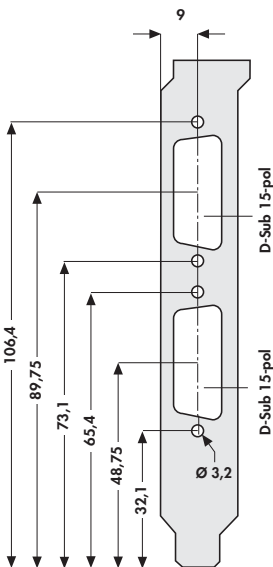
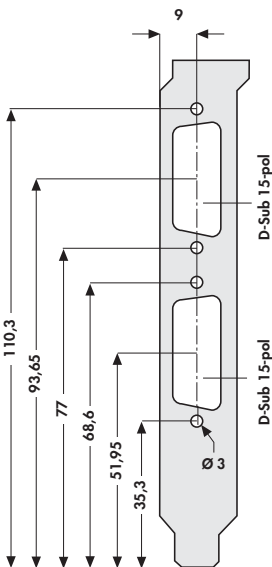
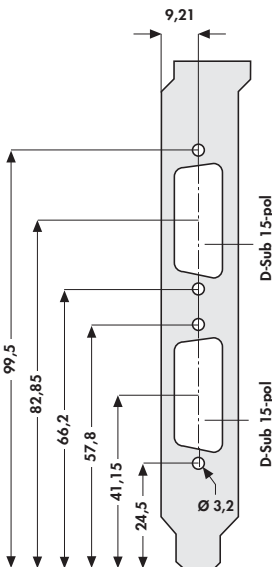
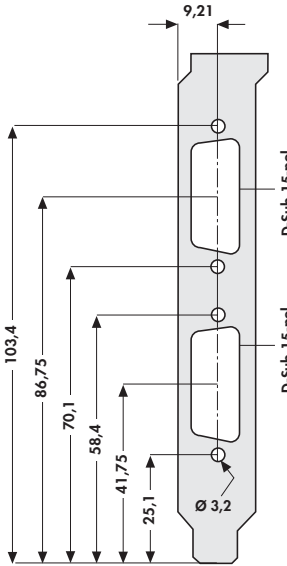
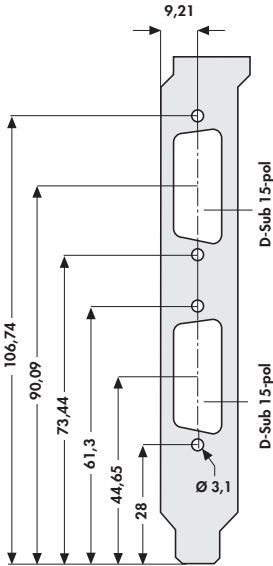
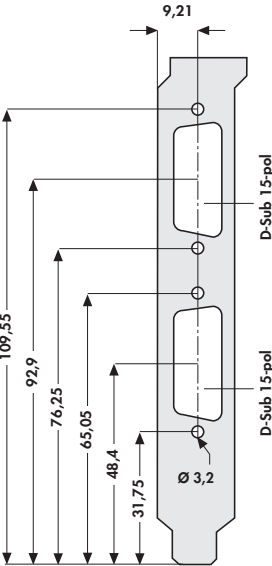
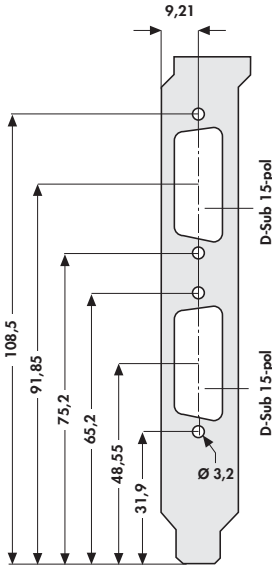
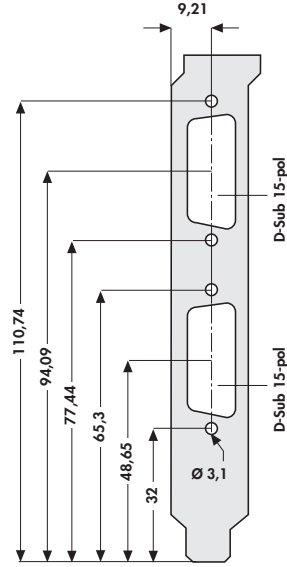
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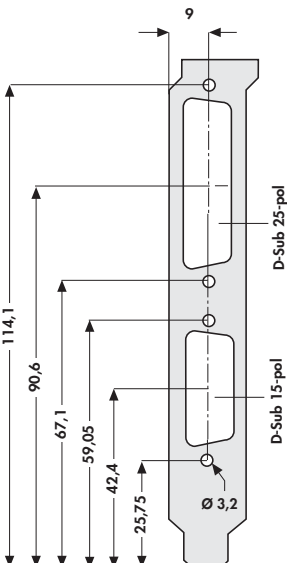
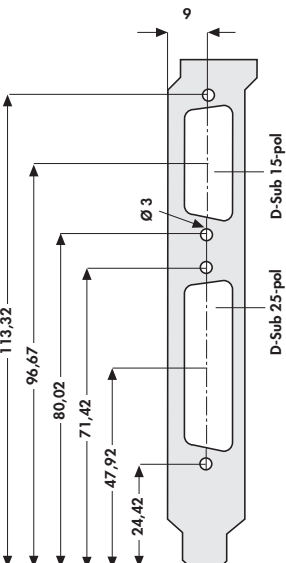
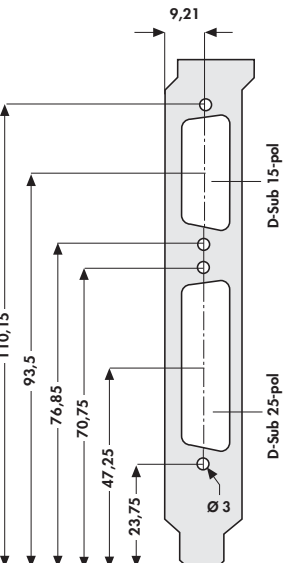
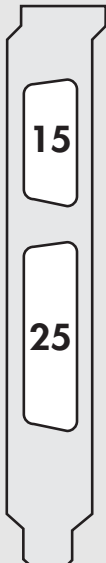
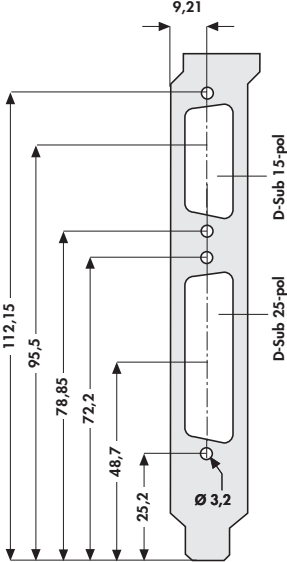
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|  | <b>KHPC 230 O</b><br>   | <b>KHPC 231 O</b><br> | <b>KHPC 223 O</b><br> |                                                                                                           |
|                                                                                   | <b>KHPC 022 L</b><br>  | <b>KHPC 225 O</b><br> | <b>KHPC 069 O</b><br> | <b>KHPC 229 O</b><br> |
|                                                                                   | <b>KHPC 018 O</b><br> |                                                                                                         |                                                                                                          |                                                                                                           |

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| <p><b>KHPC 241 O</b></p>   | <p><b>KHPC 042 O</b></p>  | <p><b>KHPC 242 O</b></p>  |  |
| <p><b>KHPC 075 O</b></p>  |                                                                                                            |                                                                                                             |                                                                                     |

please indicate: ... fixing tab  
L = bracket with fixing tab  
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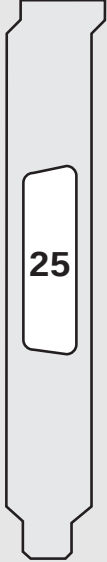
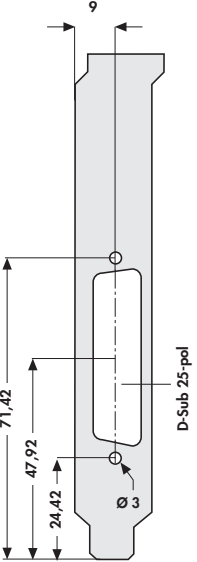
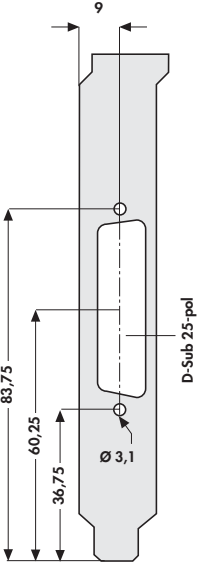
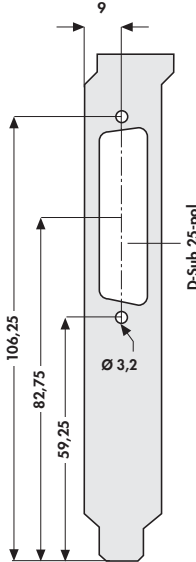
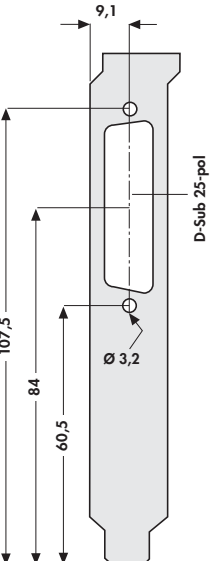
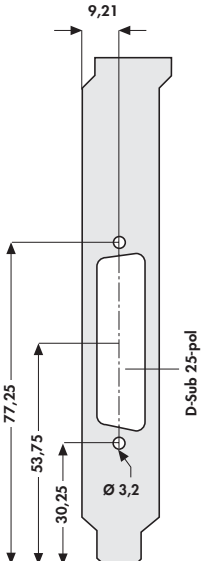
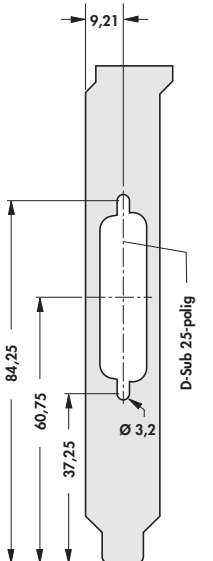
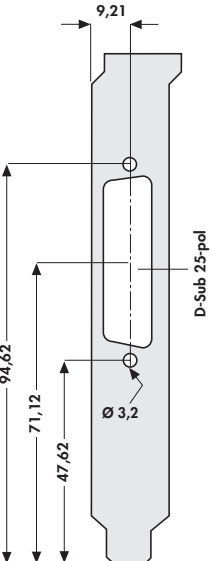
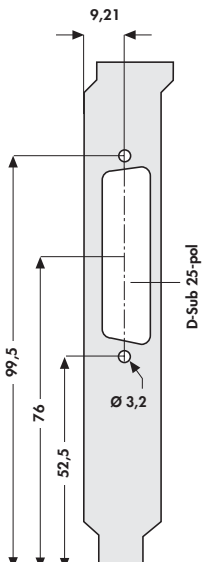
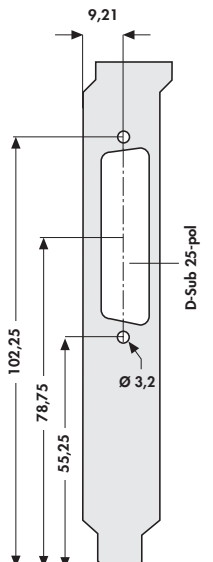
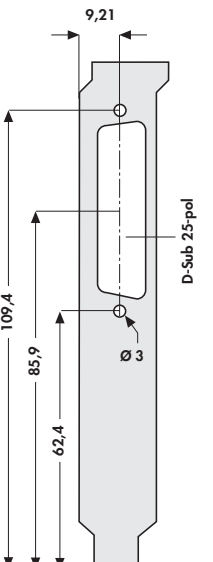
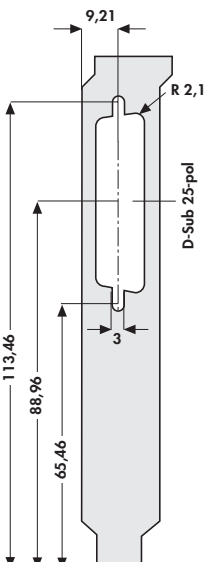
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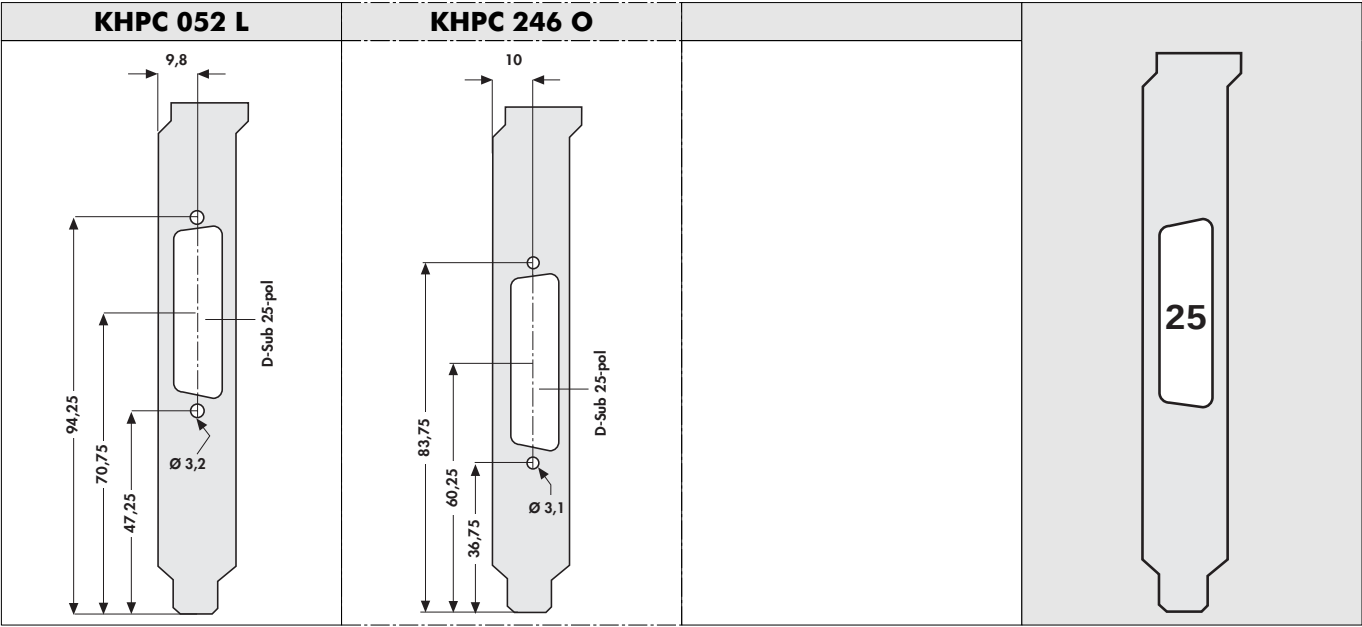
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|  <p><b>25</b></p>           | <p><b>KHPC 243 O</b></p>    | <p><b>KHPC 070 O</b></p>    | <p><b>KHPC 027 O</b></p>     |
| <p><b>KHPC 054 O</b></p>   | <p><b>KHPC 028 O</b></p>   | <p><b>KHPC 491 O</b></p>   | <p><b>KHPC 026 ...</b></p>  |
| <p><b>KHPC 252 O</b></p>  | <p><b>KHPC 255 O</b></p>  | <p><b>KHPC 257 O</b></p>  | <p><b>KHPC 258 L</b></p>   |



please indicate: ... fixing tab  
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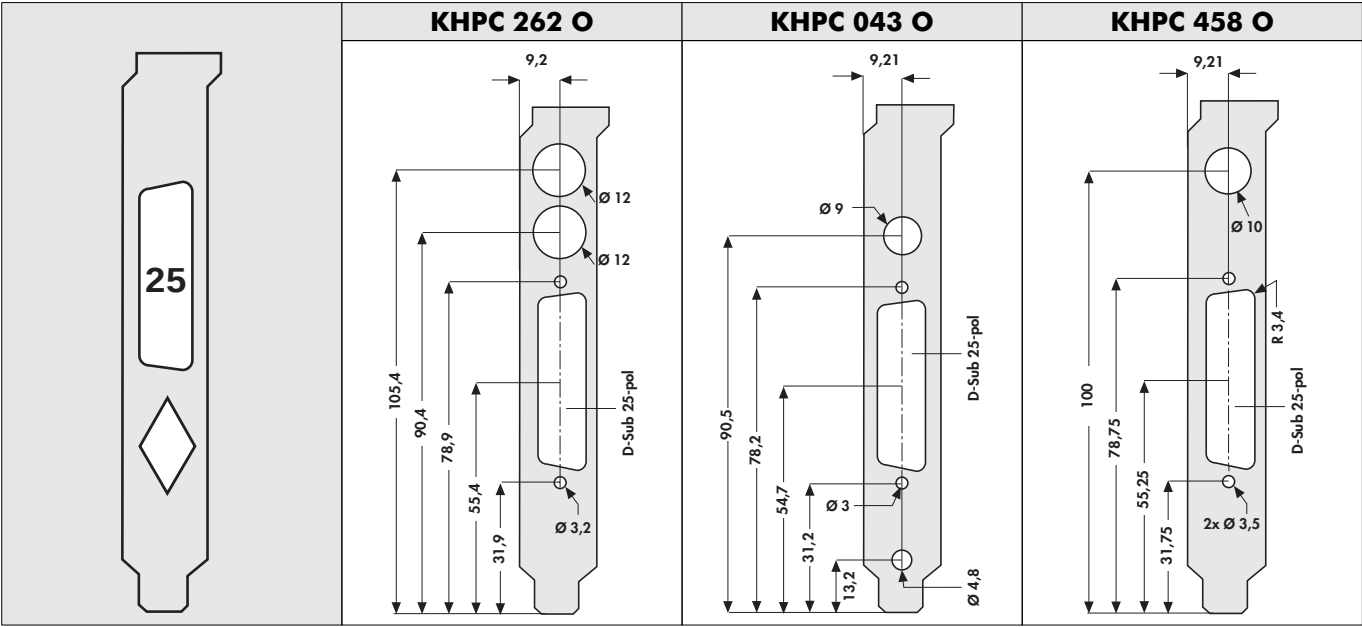
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| <p><b>KHPC 058 O</b></p>   | <p><b>KHPC 035 O</b></p> | <p><b>KHPC 277 O</b></p> | <p><b>37</b></p>         |
| <p><b>KHPC 267 ...</b></p> | <p><b>KHPC 033 O</b></p> | <p><b>KHPC 269 O</b></p> | <p><b>KHPC 270 O</b></p> |
| <p><b>KHPC 271 O</b></p>   | <p><b>KHPC 274 O</b></p> | <p><b>KHPC 278 O</b></p> | <p><b>KHPC 034 O</b></p> |

please indicate: ... fixing tab  
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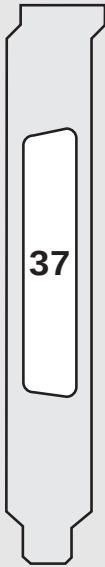
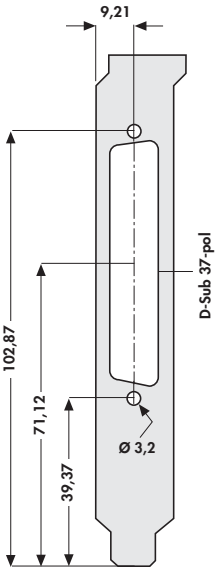
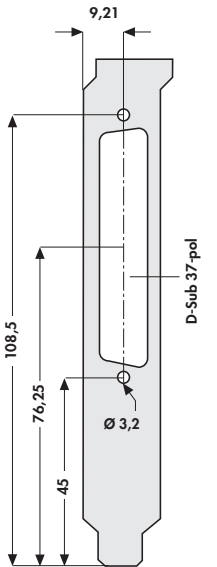
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|                                                                                   | KHPC 031 ...                                                                      | KHPC 032 O                                                                         |  |
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| KHPC 295 O |  | KHPC 029 O |  |
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please indicate: ... fixing tab  
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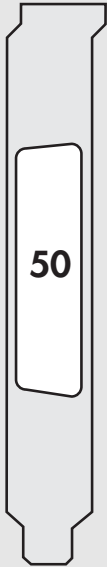
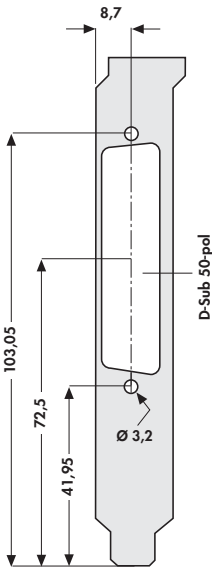
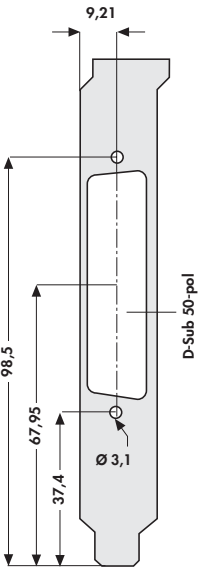
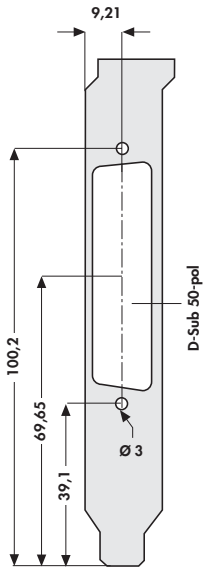
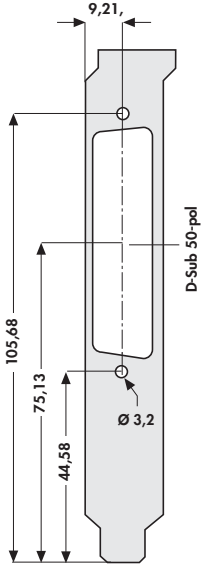
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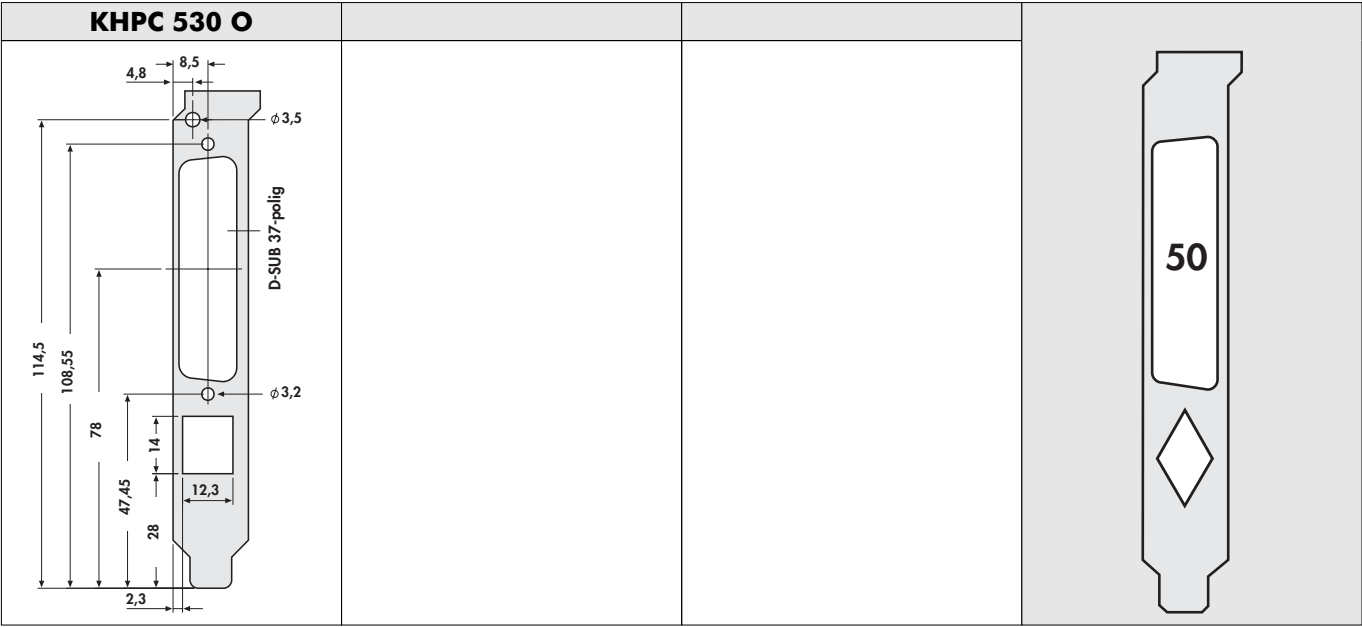
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|                                                                                    | KHPC 036 ...                                                                      | KHPC 051 O                                                                         | KHPC 083 O                                                                          |
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| KHPC 308 L                                                                         |                                                                                   |                                                                                    |                                                                                     |
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please indicate: ... fixing tab  
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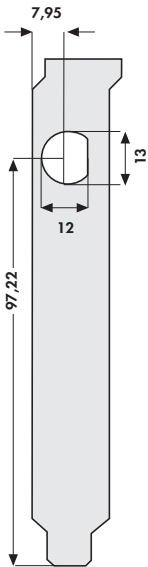
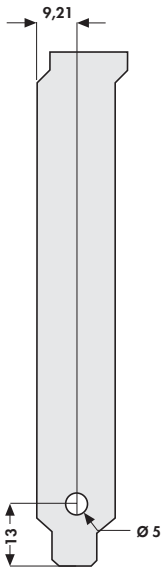
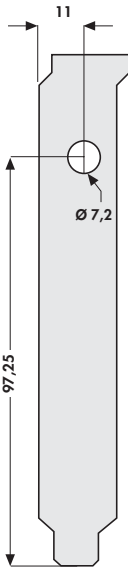
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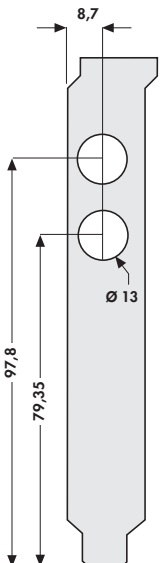
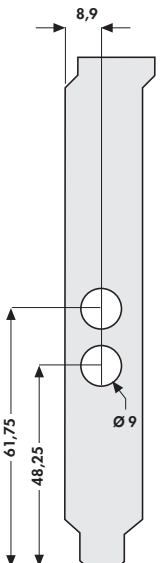
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|  | KHPC 312 O                                                                        | KHPC 310 L                                                                         | KHPC 313 L                                                                          |
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| KHPC 325 O                                                                        | KHPC 320 L                                                                        |                                                                                     |
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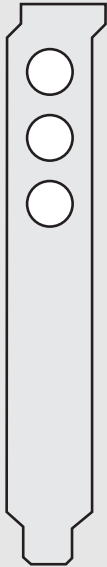
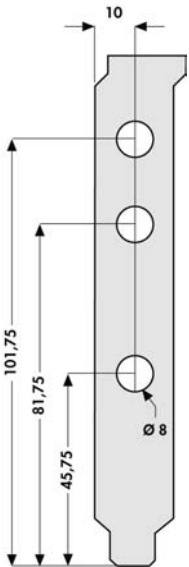
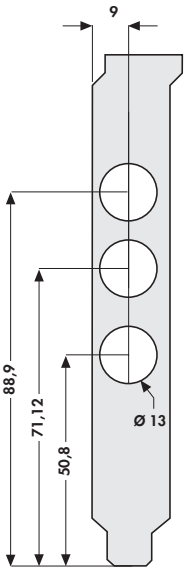
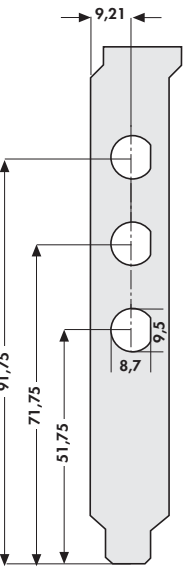
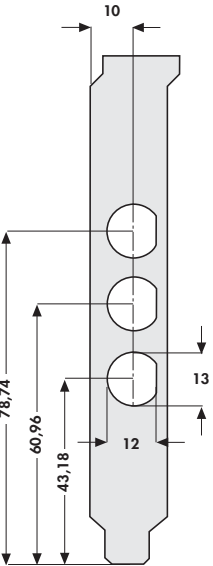
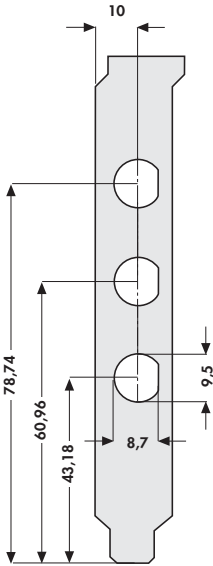
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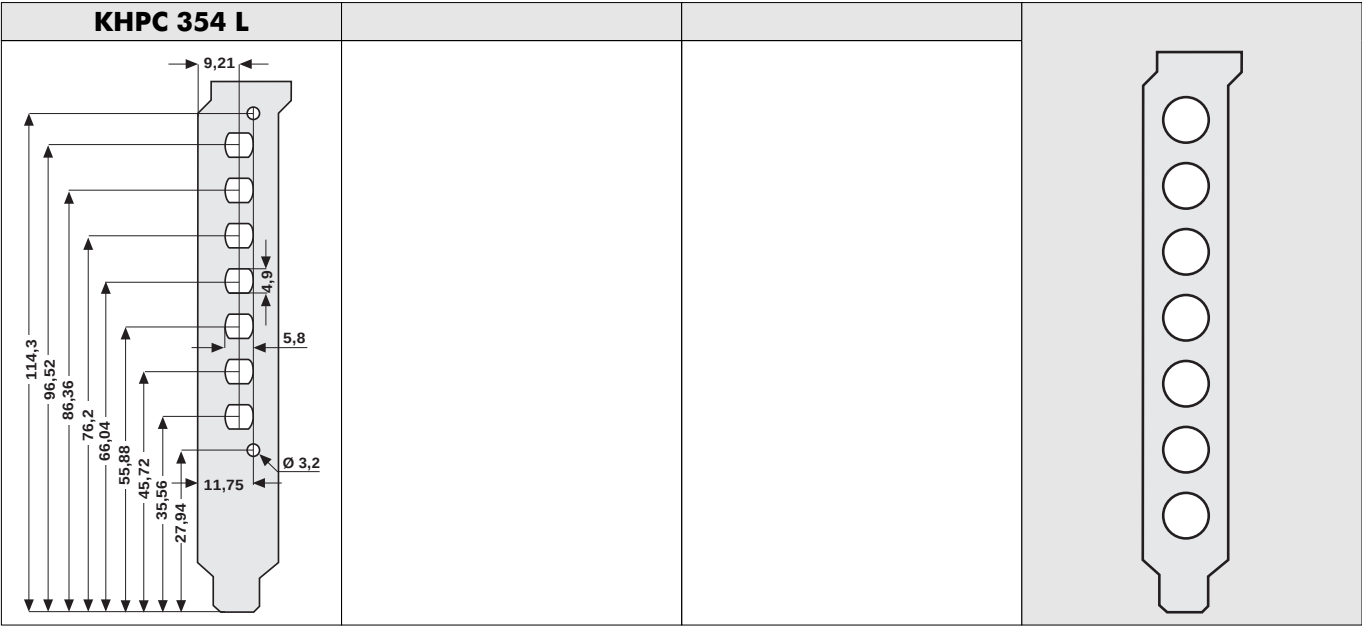
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|  | <b>KHPC 333 L</b><br>  | <b>KHPC 335 L</b><br> | <b>KHPC 463 O</b><br> |
|                                                                                   | <b>KHPC 044 L</b><br> | <b>KHPC 332 L</b><br> |                                                                                                          |



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|  | KHPC 055 L | KHPC 377 L   | KHPC 389 O |
|--|------------|--------------|------------|
|  |            |              |            |
|  | KHPC 390 L | KHPC 394 ... | KHPC 380 L |
|  |            |              |            |
|  | KHPC 371 L | KHPC 367 L   | KHPC 365 L |
|  |            |              |            |
|  | KHPC 085 L | KHPC 384 L   |            |
|  |            |              |            |

| KHPC 062 L | KHPC 059 L | KHPC 398 ... |            |
|------------|------------|--------------|------------|
|            |            |              |            |
| KHPC 399 L | KHPC 391 O | KHPC 086 O   | KHPC 366 O |
|            |            |              |            |

please indicate: ... fixing tab  
L = bracket with fixing tab  
O = bracket without fixing tab

A

Brackets for PC

B

C

D

E

F

G

H

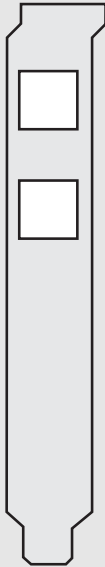
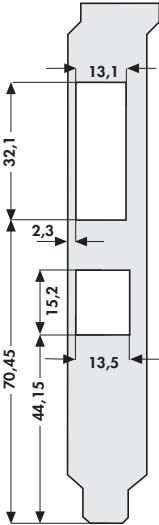
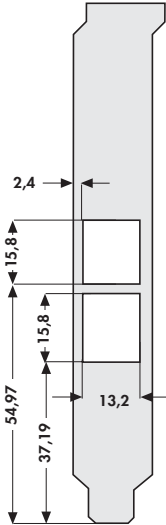
I

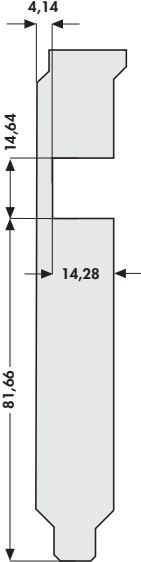
K

L

M

N

|                                                                                   | KHPC 404 L                                                                        | KHPC 407 L                                                                         |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--|
|  |  |  |  |

| KHPC 439 O                                                                        |  |  |                                                                                     |
|-----------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------|
|  |  |  |  |

please indicate: ... fixing tab  
L = bracket with fixing tab  
O = bracket without fixing tab

A

Brackets for PC

B

C

D

E

F

G

H

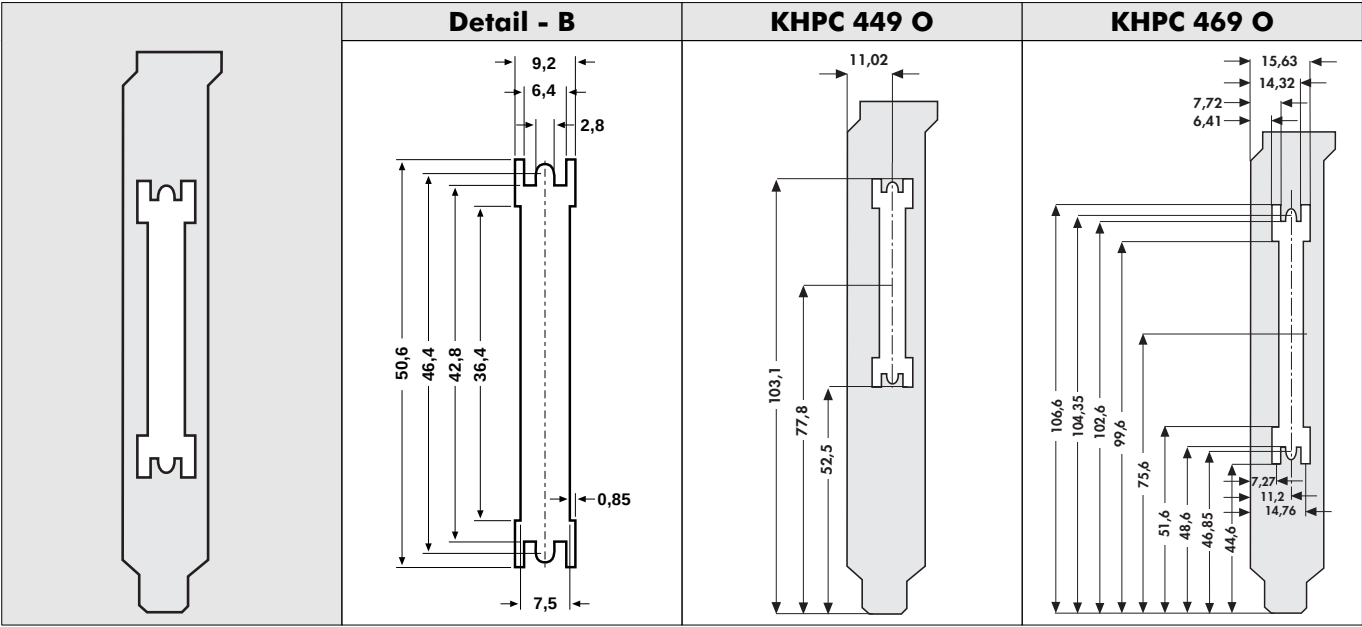
I

K

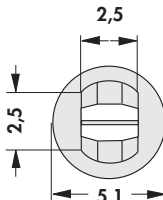
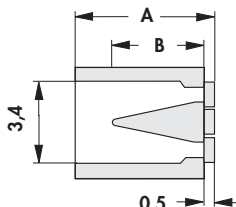
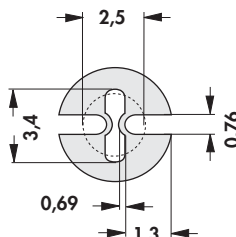
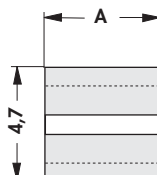
L

M

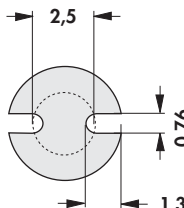
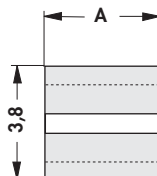
N



universal mount for LED Ø 3 mm and 5 mm, self retaining

|  |   |      |   |           |      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-----------|------|
| art. no.                                                                          | dim. [mm]                                                                          |      | art. no.                                                                            | dim. [mm] |      |
|                                                                                   | A                                                                                  | B    |                                                                                     | A         | B    |
| <b>MAH 31</b>                                                                     | 3.10                                                                               | 1.50 | <b>MAH 71</b>                                                                       | 7.10      | 4.70 |
| <b>MAH 41</b>                                                                     | 4.10                                                                               | 1.50 | <b>MAH 81</b>                                                                       | 8.10      | 4.70 |
| <b>MAH 51</b>                                                                     | 5.10                                                                               | 1.50 | <b>MAH 89</b>                                                                       | 8.90      | 4.70 |
| <b>MAH 61</b>                                                                     | 6.10                                                                               | 1.50 | <b>MAH 99</b>                                                                       | 9.90      | 7.90 |
|  |  |      |  |           |      |
| art. no.                                                                          | dim. [mm]                                                                          |      | art. no.                                                                            | dim. [mm] |      |
|                                                                                   | A                                                                                  |      |                                                                                     | A         |      |
| <b>MAH 401</b>                                                                    | 1.00                                                                               |      | <b>MAH 406</b>                                                                      | 6.00      |      |
| <b>MAH 402</b>                                                                    | 2.00                                                                               |      | <b>MAH 407</b>                                                                      | 7.00      |      |
| <b>MAH 403</b>                                                                    | 3.00                                                                               |      | <b>MAH 408</b>                                                                      | 8.00      |      |
| <b>MAH 404</b>                                                                    | 4.00                                                                               |      | <b>MAH 409</b>                                                                      | 9.00      |      |
| <b>MAH 405</b>                                                                    | 5.00                                                                               |      | <b>MAH 410</b>                                                                      | 10.00     |      |

for LED Ø 3 mm, thin mount

|  |  |           |  |  |  |           |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|--|---------------------------------------------------------------------------------------|--|-----------|--|
| art. no.                                                                            |                                                                                     | dim. [mm] |  | art. no.                                                                              |  | dim. [mm] |  |
|                                                                                     |                                                                                     | A         |  |                                                                                       |  | A         |  |
| MAH 301                                                                             |                                                                                     | 1.00      |  | MAH 306                                                                               |  | 6.00      |  |
| MAH 302                                                                             |                                                                                     | 2.00      |  | MAH 307                                                                               |  | 7.00      |  |
| MAH 303                                                                             |                                                                                     | 3.00      |  | MAH 308                                                                               |  | 8.00      |  |
| MAH 304                                                                             |                                                                                     | 4.00      |  | MAH 309                                                                               |  | 9.00      |  |
| MAH 305                                                                             |                                                                                     | 5.00      |  | MAH 310                                                                               |  | 10.00     |  |

material: PVC blend, black

temperature range: -40 °C ... +85 °C

flammability: UL 94 V-0

Spacers & mounting strips  
LED-hold.for front panel assembly  
Technical data of the LEDs  
Light pipes for SMDs

→ L 2 - 3  
→ L 4  
→ L 12  
→ L 9 - 11

LED-holders for PCB assembly  
Sockets for LED

→ L 5 - 8  
→ F 11 - 12

A

Spacers and mounting strips for LED

for LED Ø 5 mm, self retaining

B

C

D

E

F

G

H

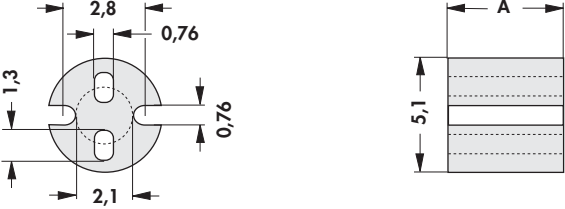
I

K

L

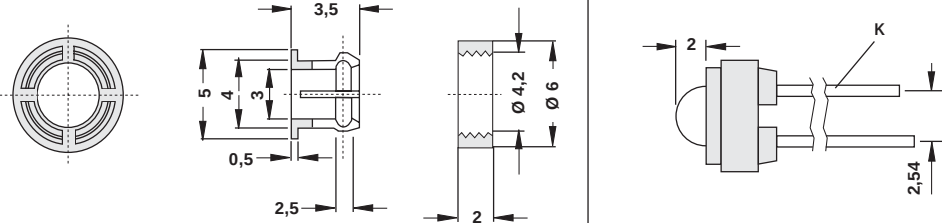
M

N

|  |                |  |                |
|-----------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------|----------------|
| art. no.                                                                          | dim. [mm]<br>A | art. no.                                                                           | dim. [mm]<br>A |
| MAH 501                                                                           | 1.00           | MAH 506                                                                            | 6.00           |
| MAH 502                                                                           | 2.00           | MAH 508                                                                            | 8.00           |
| MAH 503                                                                           | 3.00           | MAH 509                                                                            | 9.00           |
| MAH 504                                                                           | 4.00           | MAH 510                                                                            | 10.00          |
| MAH 505                                                                           | 5.00           |                                                                                    |                |

**material:** PVC blend, black  
**temperature range:** -40 °C ... +85 °C  
**flammability:** UL 94 V-0

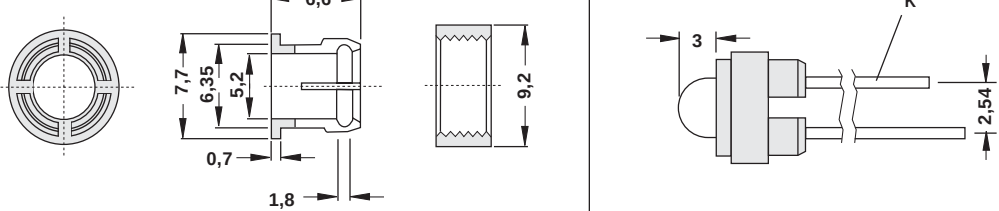
suitable for 3 mm diodes with a collar height of 0.6 mm

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                          | type                                                                               |
| DH 3 V                                                                            | for LED Ø 3 mm                                                                     |

K = cathode

material: glass fibre reinforced polyamide

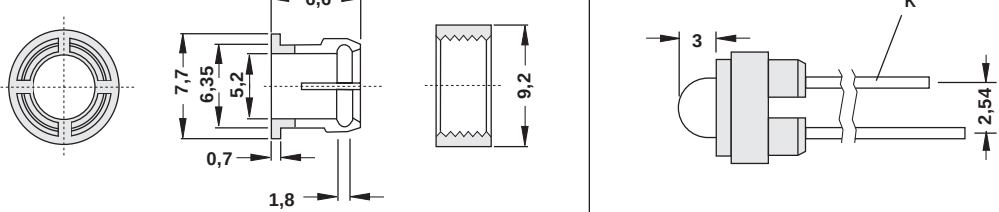
suitable for 5 mm diodes with a collar height of 0.6 mm/1 mm

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                           | type                                                                                |
| DH 5 VC                                                                            | for LED Ø 5 mm                                                                      |

K = cathode

material: glass fibre reinforced polyamide

suitable for 5 mm diodes with a collar height of 0.6 mm/1 mm

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| art. no.                                                                            | type                                                                                 |
| DH 5 SRC                                                                            | for LED Ø 5 mm                                                                       |

material: glass fibre reinforced polyamide



A

LED-holders for PCB assembly

B

C

D

E

F

G

H

I

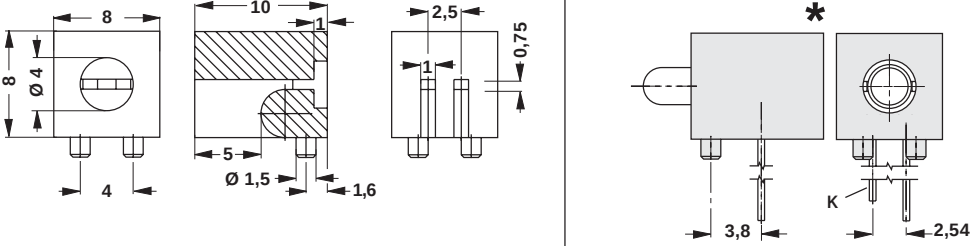
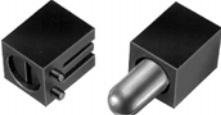
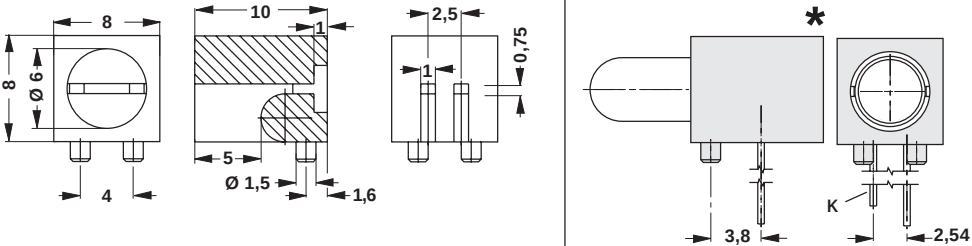
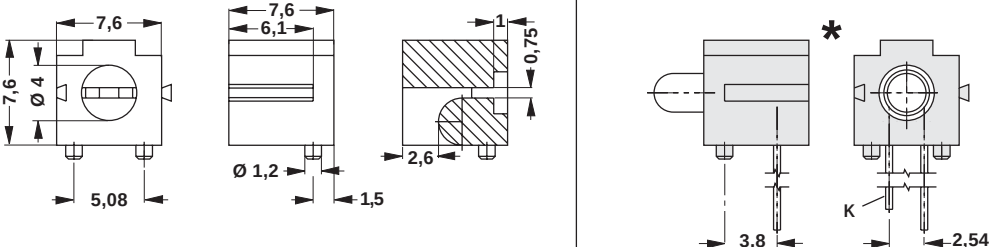
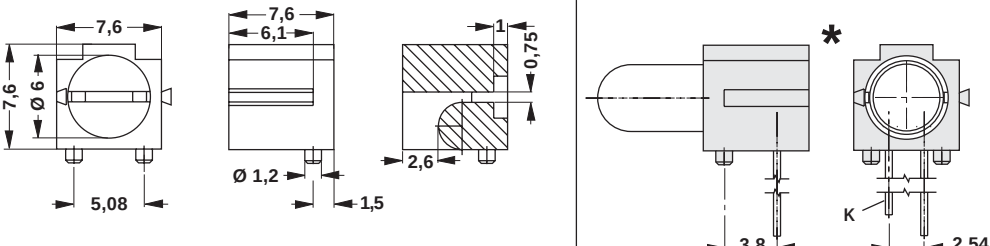
K

L

M

N

LED-holder for LED Ø 3 mm and 5 mm

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| art. no.                                                                            | type                                                                                 |
| DH 3 W                                                                              | for LED Ø 3 mm                                                                       |
|    |    |
| art. no.                                                                            | type                                                                                 |
| DH 5 W                                                                              | for LED Ø 5 mm                                                                       |
|  |   |
| art. no.                                                                            | type                                                                                 |
| DH 3 R                                                                              | for LED Ø 3 mm                                                                       |
|  |  |
| art. no.                                                                            | type                                                                                 |
| DH 5 R                                                                              | for LED Ø 5 mm                                                                       |

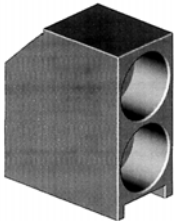
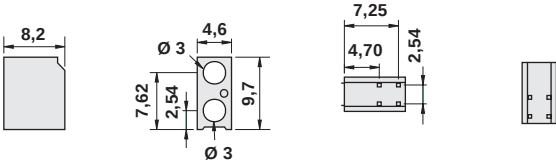
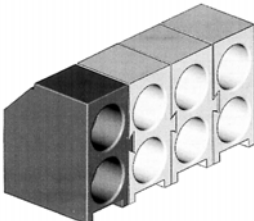
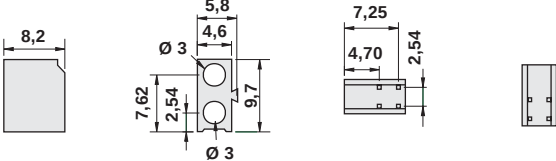
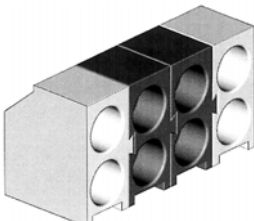
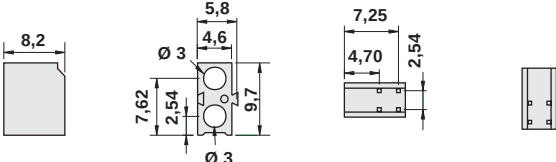
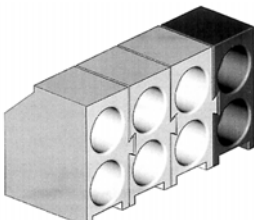
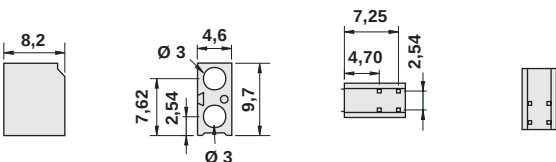
\* = presentation with diode

K = cathode

material: glass fibre reinforced polyamide

LED-holder for LED Ø 3 mm

multiple LED-holders: single holder/can be strung, left/can be strung, middle/can be strung, right

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| art. no.                                                                            | type                                                                                 |
| DDH 3 E                                                                             | for LED Ø 3 mm                                                                       |
|    |    |
| art. no.                                                                            | type                                                                                 |
| DDH 3 L                                                                             | for LED Ø 3 mm                                                                       |
|  |  |
| art. no.                                                                            | type                                                                                 |
| DDH 3 M                                                                             | for LED Ø 3 mm                                                                       |
|  |  |
| art. no.                                                                            | type                                                                                 |
| DDH 3 R                                                                             | for LED Ø 3 mm                                                                       |

material: nylon, black  
temperature range: -20 °C ... +85 °C  
flammability: UL 94 V-0

A

LED-holders for PCB assembly

B

LED-holder for LED Ø 5 mm

multiple LED-holders: single holder/can be strung, left/can be strung, middle/can be strung, right

C

D

E

F

G

H

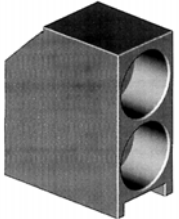
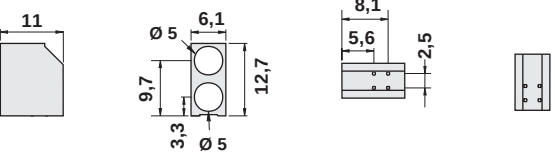
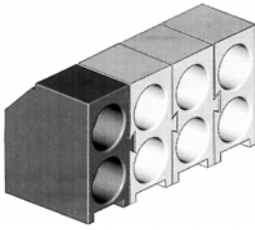
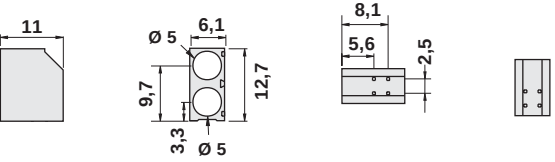
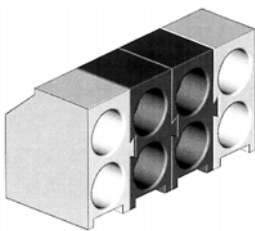
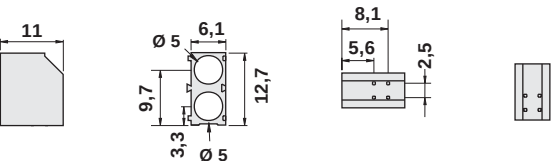
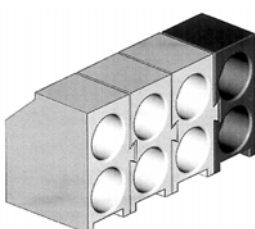
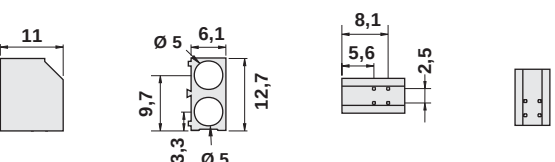
I

K

L

M

N

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| art. no.                                                                            | type                                                                                 |
| DDH 5 E                                                                             | for LED Ø 5 mm                                                                       |
|    |    |
| art. no.                                                                            | type                                                                                 |
| DDH 5 L                                                                             | for LED Ø 5 mm                                                                       |
|  |  |
| art. no.                                                                            | type                                                                                 |
| DDH 5 M                                                                             | for LED Ø 5 mm                                                                       |
|  |  |
| art. no.                                                                            | type                                                                                 |
| DDH 5 R                                                                             | for LED Ø 5 mm                                                                       |

material: nylon, black

temperature range: -20 °C ... +85 °C

flammability: UL 94 V-0

L 7

Screw fastening  
D-Sub cut-out cover  
Spacers & mounting strips  
Technical data of the LEDs

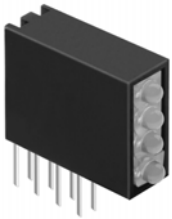
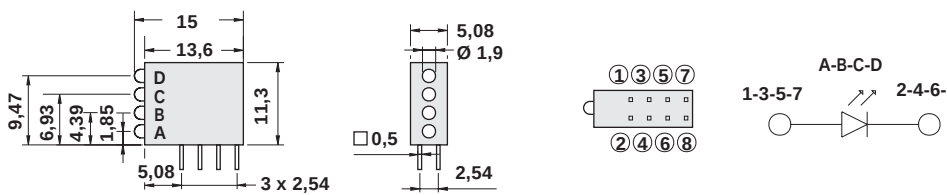
→ I 28  
→ I 27  
→ L 2 - 3  
→ L 12

Sockets for LED  
LED-holders for PCB assembly  
LED-hold.for front panel assembly  
Light pipes for SMDs

→ F 11 - 12  
→ L 5 - 8  
→ L 4  
→ L 9 - 11

Fourfold-LED-holders

standard case, diffuse lens, standard colours, space-saving version, round lens, rectangular lens

|  |  |                 |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------|
| art. no.                                                                          | type                                                                               | emission colour |
| DLH 21 ASEH                                                                       | with LED Ø 2 mm, fourfold                                                          | red             |
| DLH 21 AYEh                                                                       | with LED Ø 2 mm, fourfold                                                          | yellow          |
| DLH 21 AGEH                                                                       | with LED Ø 2 mm, fourfold                                                          | green           |

material: nylon, black  
temperature range: -20 °C ... +85 °C  
flammability: UL 94 V-0

A

Light pipes for SMDs

suitable for common SMD types, 3 mm light pipes, horizontal, ESD-protection from panel to PCB

B

C

D

E

F

G

H

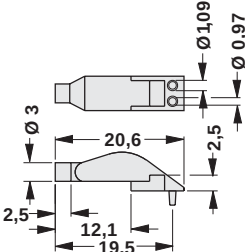
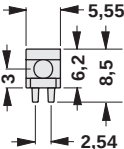
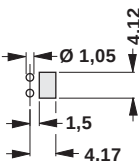
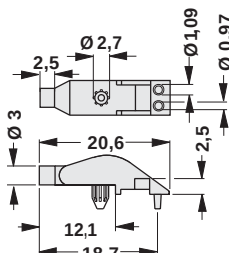
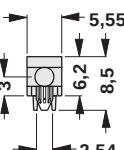
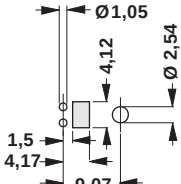
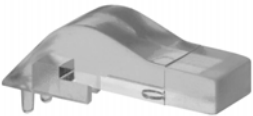
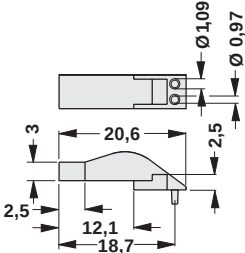
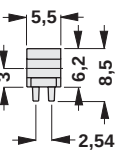
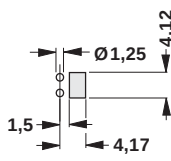
I

K

L

M

N

|                                                                                     |                                                                                    |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |   |    |    |
| art. no.                                                                            | way of fixation                                                                    | diameter of lense                                                                    |                                                                                       |
| LL 30 HRS                                                                           | by alignment pins                                                                  | Ø 3 mm                                                                               |                                                                                       |
|    |   |    |    |
| art. no.                                                                            | way of fixation                                                                    | diameter of lense                                                                    |                                                                                       |
| LL 30 HRP                                                                           | by press-in pins                                                                   | Ø 3 mm                                                                               |                                                                                       |
|  |  |  |  |
| art. no.                                                                            | way of fixation                                                                    | diameter of lense                                                                    |                                                                                       |
| LL 35 HVS                                                                           | by alignment pins                                                                  | rectangle 5.5x3 mm                                                                   |                                                                                       |

material: polycarbonat, clear colour  
temperature range: -30 °C ... +100 °C  
flammability: UL 94 V-0

L 9

Spacers & mounting strips  
Sockets for LED  
LED-holders for PCB assembly  
Technical data of the LEDs

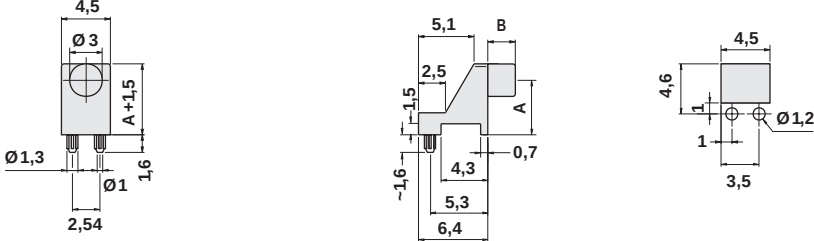
→ L 2 - 3  
→ F 11 - 12  
→ L 5 - 8  
→ L 12

Screw fastening  
D-Sub cut-out cover  
LED-hold.for front panel assembly  
Light pipes for SMDs

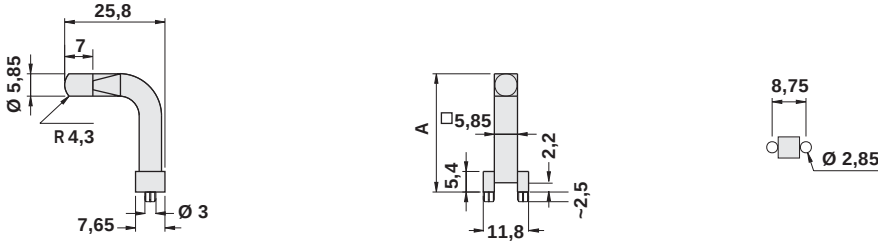
→ I 28  
→ I 27  
→ L 4  
→ L 9 - 11

Light pipes for SMDs

suitable for common SMD types, 3 mm light pipes, horizontal, ESD-protection from panel to PCB

|                                                                                   |                                                                                    |                 |                                       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------|---------------------------------------|
|  |  |                 |                                       |
|                                                                                   | art. no.                                                                           | way of fixation | dim. [mm]<br>A                      B |
| LL 30 WRFP 038                                                                    | by press-in pins                                                                   | 3.80            | 2.50                                  |
| LL 30 WRFP 050                                                                    | by press-in pins                                                                   | 5.00            | 2.50                                  |
| LL 30 WRFP 076                                                                    | by press-in pins                                                                   | 7.60            | 2.50                                  |
| LL 30 WRFP 102                                                                    | by press-in pins                                                                   | 10.20           | 2.50                                  |

panel light pipe, 6 mm lens, suitable for common SMD LEDs, white lens, large angle of radiation

|                                                                                    |                                                                                     |                |  |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------|--|
|  |  |                |  |
| art. no.                                                                           | way of fixation                                                                     | dim. [mm]<br>A |  |
| LL 60 WRB 254                                                                      | by press-in pins                                                                    | 25.40          |  |

material: polycarbonat, clear colour

temperature range: -30 °C ... +100 °C

flammability: UL 94 V-0

A

Light pipes for SMDs

B

C

D

E

F

G

H

I

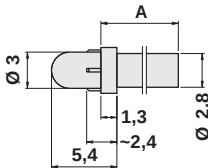
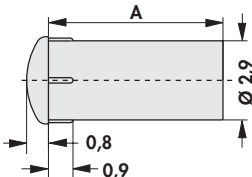
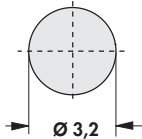
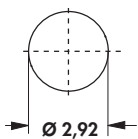
K

L

M

N

panel light pipe 3 mm, ESD protection from panel to PCB

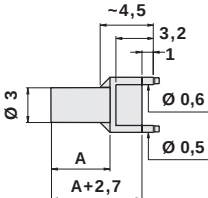
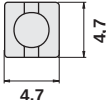
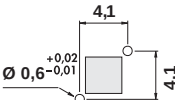
|                                                                                   |  |                                                                                   |  |                                                                                    |  |                                                                                     |  |
|-----------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|
|  |  |  |  |   |  |  |  |
| art. no.                                                                          |  | dim. [mm]                                                                         |  | art. no.                                                                           |  | dim. [mm]                                                                           |  |
|                                                                                   |  | A                                                                                 |  |                                                                                    |  | A                                                                                   |  |
| LL 30 PRB 032                                                                     |  | 3.20                                                                              |  | LL 30 PRB 089                                                                      |  | 8.90                                                                                |  |
| LL 30 PRB 064                                                                     |  | 6.40                                                                              |  |                                                                                    |  |                                                                                     |  |
|  |  |  |  |  |  |  |  |
| art. no.                                                                          |  | dim. [mm]                                                                         |  | art. no.                                                                           |  | dim. [mm]                                                                           |  |
|                                                                                   |  | A                                                                                 |  |                                                                                    |  | A                                                                                   |  |
| LL 30 PRL 032                                                                     |  | 3.20                                                                              |  | LL 30 PRL 127                                                                      |  | 12.70                                                                               |  |
| LL 30 PRL 064                                                                     |  | 6.40                                                                              |  | LL 30 PRL 159                                                                      |  | 15.90                                                                               |  |
| LL 30 PRL 089                                                                     |  | 8.90                                                                              |  |                                                                                    |  |                                                                                     |  |

material: polycarbonat, clear colour

temperature range: -30 °C ... +100 °C

flammability: UL 94 V-0

suitable for common SMD LEDs, vertical, rigid light pipe Ø 3 mm, ESD protection from panel to PCB

|                                                                                     |  |                                                                                     |  |                                                                                       |  |                                                                                       |  |
|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|
|  |  |  |  |  |  |  |  |
| art. no.                                                                            |  | way of fixation                                                                     |  | dim. [mm]                                                                             |  |                                                                                       |  |
|                                                                                     |  |                                                                                     |  | A                                                                                     |  |                                                                                       |  |
| LL 30 VRFS 024                                                                      |  | by alignment pins                                                                   |  | 2.40                                                                                  |  |                                                                                       |  |
| LL 30 VRFS 050                                                                      |  | by alignment pins                                                                   |  | 5.00                                                                                  |  |                                                                                       |  |
| LL 30 VRFS 075                                                                      |  | by alignment pins                                                                   |  | 7.50                                                                                  |  |                                                                                       |  |

material: polycarbonat, clear colour

temperature range: -30 °C ... +100 °C

flammability: UL 94 V-0