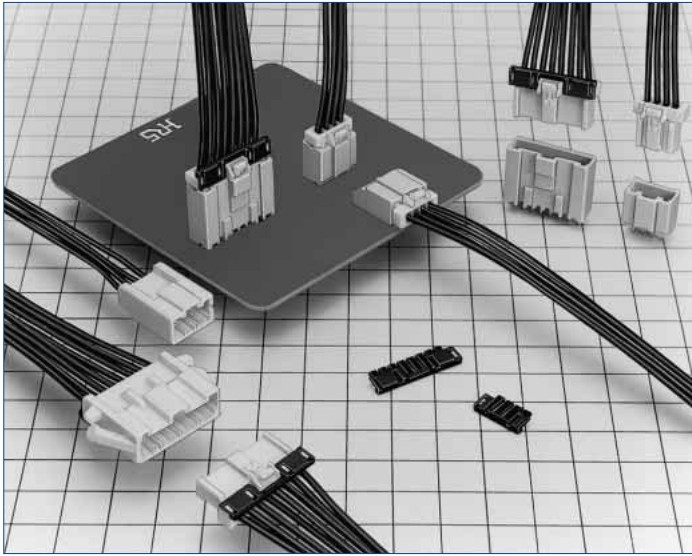


# 2.5mm Pitch Connectors for Full Lock and Discrete Wire Connection

## DF1E Series

UL, C-UL Listed



### Full lock function added

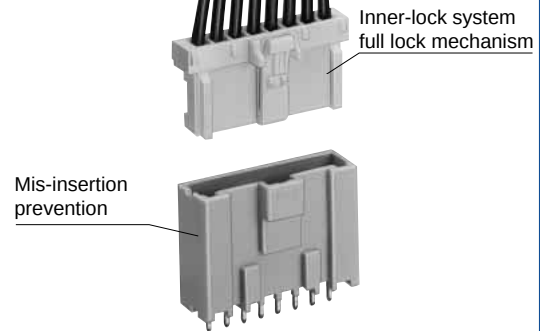


Fig.1

## ■ Features

### 1. Full Lock Function Added

The inner lock system adopts a full lock mechanism. This mechanism prevents disengagement to occur due to an unexpected external shock. (Fig.1)

### 2. Increase in Crimping Contact Fixation Force and Semi-insertion Prevention

The double lock is activated for the use method to give a stress to the cable, to increase crimping contact fixation force, and to prevent the semi-insertion of the crimping contact. (Fig.2)

### 3. Mold Lance Adopted

Since the contact lance may be deformed involving in the contact after the crimping process, the mold lance has been adopted.

### 4. Mis-insertion Prevention

Equipped with the mechanism to completely prevent reverse insertion and insertion between dissimilar contacts. (Fig.1)

### 5. Means to Prevent Solder Crack

The glass enforcement resin is adopted for the pin header to prevent a solder crack to occur due to heat compression.

### 6. Correspond to Potting

Corresponding to potting, the pin header is provided for product variations.

Corresponding to potting up to 8mm and mounting height 19.8mm (no retainer), the low profile is achieved.

### 7. Production Facility Cost Reduction

The female crimping contact uses the DF1B series crimping contact, which has been conventionally marketed. Investment for new facilities isn't needed. However, if the retainer is installed in the cable with 22 AWG or more wire, use the DF1E crimping contact. The female crimping contact for in-line is used together with the DF1B applicator. Therefore, no investment is needed for new facilities.

### Double lock engaged

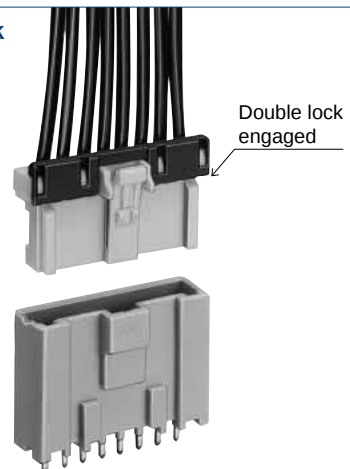


Fig.2

### 8. Various Applications

With the same series, various applications can be used for the board solder dip type and in-line.

### 9. Listed by UL, C-UL

### 10. Glow wire compliance (Compliant with IEC 60695-2-11)

## Products Specifications

|        |                                                                                                         |                                                                                            |                                                                                                |
|--------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Rating | Current rating Note 1.<br>AWG#20 to 24 : 3A<br>26 : 2A<br>28 : 1A<br>30 : 0.5A<br>Voltage rating 250VAC | Operating Temperature Range : -35 to +85°C Note 2.<br>Operating Moisture Range : 40 to 80% | Storage Temperature Range : -10 to +60°C Note 3.<br>Storage Moisture Range : 40 to 70% Note 3. |
|        |                                                                                                         |                                                                                            |                                                                                                |

| UL, C-UL Rating |                |                                                         |
|-----------------|----------------|---------------------------------------------------------|
| Rating          | Current rating | 20 to 22 AWG : 3A<br>24 to 28 AWG : 1A<br>30 AWG : 0.5A |
|                 | Voltage rating | 30V AC                                                  |

■UL/C-UL File No. and Recognition No.

UL : E52653

C-UL : E52653

| Item                                | Specification                                       | Condition                                                                                                      |
|-------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1. Contact Resistance               | 30mΩ max.                                           | Measured at 20mV max. and 1mA                                                                                  |
| 2. Insulation Resistance            | 1000MΩ min.                                         | 500V DC                                                                                                        |
| 3. Withstanding voltage             | No flashover or insulation breakdown.               | 650V AC/1 minute                                                                                               |
| 4. Single Insertor/Extraction Force | MIN 0.29N, MAX 4.41N                                | Measured at the square steel pin with 0.635±0.002                                                              |
| 5. Durability (Mating/un-mating)    | 30mΩ max                                            | 30 cycles                                                                                                      |
| 6. Vibration                        | No electrical discontinuity of 1μs or more          | Frequency : 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.                     |
| 7. Shock                            | No electrical discontinuity of 1μs or more          | Acceleration of 490 m/s <sup>2</sup> , 11 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis |
| 8. Humidity (Steady state)          | 30mΩ max                                            | 96 hours at temperature of 40±2°C and humidity of 90% to 95%                                                   |
| 9. Temperature Cycle                | 30mΩ max.                                           | (-55°C : 30 minutes-> 5 to 35°C : 5 minutes-> 85°C : 30 minutes-> 5 to 35°C : 5 minutes) 5 cycles              |
| 10. Resistance to Soldering heat    | No deformation of components affecting performance. | Flow : 260°C for 10 seconds                                                                                    |
|                                     |                                                     | Manual soldering : 300°C for 3 seconds                                                                         |

Note 1 : Current rating of header is 3A.

Note 2 : Includes temperature rise caused by current flow.

Note 3 : The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non conducting condition of installed connectors in storage, shipment or during transportation.

## Materials / Finish

| Product          | Part      | Material        | Finish                    | Remarks |
|------------------|-----------|-----------------|---------------------------|---------|
| Socket           | Insulator | Polyamide       | White                     | UL94V-0 |
|                  | Insulator | Polyamide       | Beige                     | UL94V-0 |
| Header           | Contact   | Brass           | Tin plated or Gold plated | ————    |
|                  | Insulator | Polyamide       | White                     | UL94V-0 |
| In-line Plug     | Insulator | Polyamide       | Black                     | UL94V-0 |
| retainer         | Insulator | Polyamide       | Black                     | UL94V-0 |
| Crimping contact | Contact   | Phosphor copper | Tin plated or Gold plated | ————    |

## ■Product Number Structure

### ●Pin Header

DF1E C - \* P - 2.5 DSA

① ② ③ ④ ⑤ ⑥

|                                                                                                                                                                                                           |                                                                     |         |  |           |   |              |   |              |                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------|--|-----------|---|--------------|---|--------------|-------------------------|
| ① Series Name : DF1E                                                                                                                                                                                      | ③ Number of Contacts : 2 to 15 contacts<br>(note. 2)                |         |  |           |   |              |   |              |                         |
| ② Hold Types (Note. 1)                                                                                                                                                                                    | ④ Connector Type<br>P : Pin Header                                  |         |  |           |   |              |   |              |                         |
| <table border="1"> <tr> <td>Standard Product</td><td>Potting</td></tr> <tr> <td></td><td>With Boss</td></tr> <tr> <td>C</td><td>Without Boss</td></tr> <tr> <td>G</td><td>Without Boss</td></tr> </table> | Standard Product                                                    | Potting |  | With Boss | C | Without Boss | G | Without Boss | ⑤ Contact Pitch : 2.5mm |
| Standard Product                                                                                                                                                                                          | Potting                                                             |         |  |           |   |              |   |              |                         |
|                                                                                                                                                                                                           | With Boss                                                           |         |  |           |   |              |   |              |                         |
| C                                                                                                                                                                                                         | Without Boss                                                        |         |  |           |   |              |   |              |                         |
| G                                                                                                                                                                                                         | Without Boss                                                        |         |  |           |   |              |   |              |                         |
|                                                                                                                                                                                                           | ⑥ Form type<br>DSA : Straight through hole<br>DS : Right Angle Type |         |  |           |   |              |   |              |                         |

Note 1 : The right angle pin header has no symbol.

Note 2 : The potting header has 2 to 10 contacts.

### ●Socket

DF1E - \* S - 2.5 C

① ② ③ ④ ⑤

|                                         |                                    |
|-----------------------------------------|------------------------------------|
| ① Series Name : DF1E                    | ③ Connector type<br>S: Socket      |
| ② Number of Contacts : 2 to 15 contacts | ④ Contact Pitch : 2.5mm            |
|                                         | ⑤ Form Type<br>C : Crimping socket |

### ●In-line Plug

DF1E A - \* EP - 2.5 C

① ② ③ ④ ⑤ ⑥

|                                                                                     |                                         |
|-------------------------------------------------------------------------------------|-----------------------------------------|
| ① Series Name : DF1E                                                                | ③ Number of Contacts : 2 to 10 contacts |
| ② In-line Plug type<br>Blank: With Panel mount Lock<br>A : Without Panel mount Lock | ④ EP : In-line plug                     |
|                                                                                     | ⑤ Contact Pitch : 2.5mm                 |
|                                                                                     | ⑥ Form Type<br>C : Crimping socket      |

### ●Crimping Contact

DF1E - \*\* SCF

① ② ③

|                             |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① Series Name :             | ② Applicable Cable Size                                                                                                                                                                                                                                                                                                                      |
| Socket side : DF1B (Note 1) | 2022 : 20 to 22 AWG                                                                                                                                                                                                                                                                                                                          |
| DF1E (Note 1)               | 2428 : 24 to 28 AWG                                                                                                                                                                                                                                                                                                                          |
| Plug side : DF1E            | 30 : 30 AWG                                                                                                                                                                                                                                                                                                                                  |
|                             | ③ Packaging Type<br>SCF : Female contact/reel/Tin plated<br>SCFA : Female contact/reel/Gold plated<br>SC : Female contact/pack/Tin plated<br>SCA : Female contact/pack/Gold plated<br>PCF : Male contact/reel/Tin plated<br>PCFA : Male contact/reel/Gold plated<br>PC : Male contact/pack/Tin plated<br>PCA : Male contact/pack/Gold plated |

Note 1 : When the retainer is used, use DF1E-2022SC(F)(A), DF1B-2428SC(F)(A), and DF1B-30SC(F)(A) contacts.

When no retainer is used, all DF1B-\*\*SC(F)(A) and DF1E-2022SC(F)(A) contacts can be used.

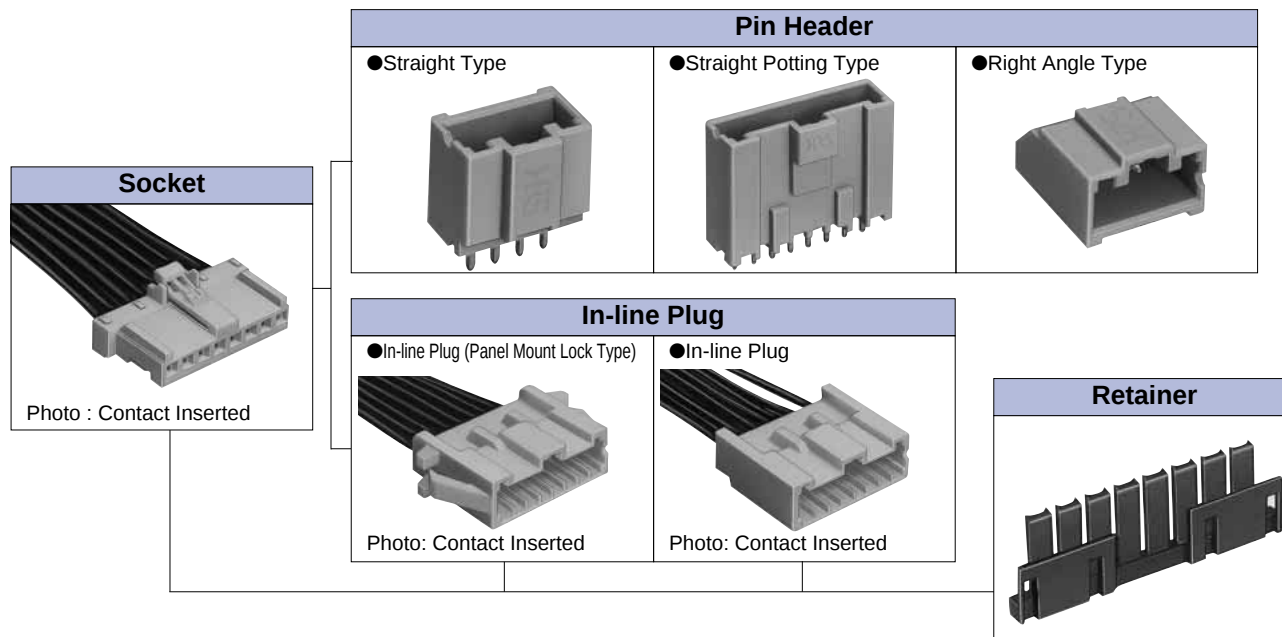
### ●Retainer

DF1E - \* RS/P - 2.5

① ② ③ ④

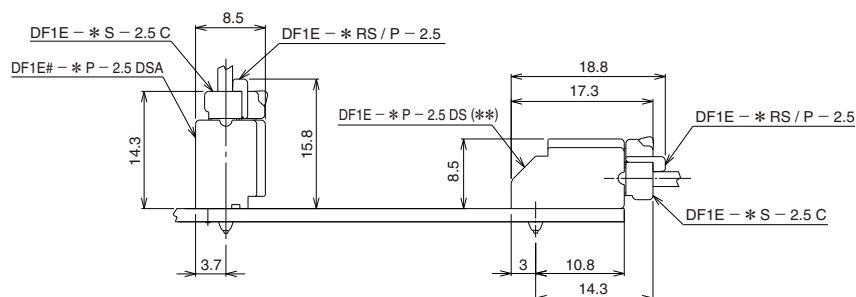
|                                         |                                           |
|-----------------------------------------|-------------------------------------------|
| ① Series Name : DF1E                    | ③ Connector Type<br>RS/P : Retainer       |
| ② Number of Contacts : 2 to 10 contacts | Commonly used for socket and in-line plug |
|                                         | ④ Contacts Pitch:2.5mm                    |

## Application Pattern

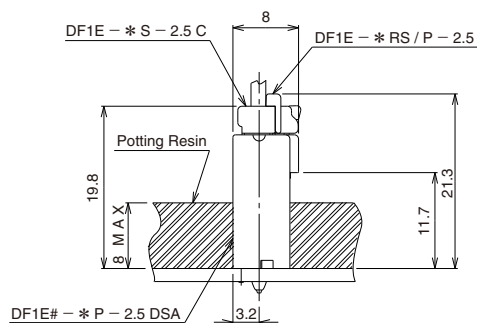


## Mated Dimensions

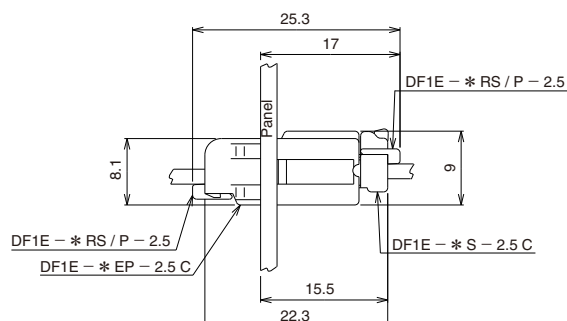
### Standard Header



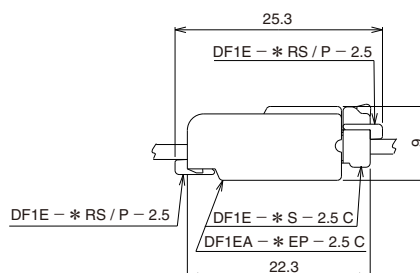
### Header for Potting



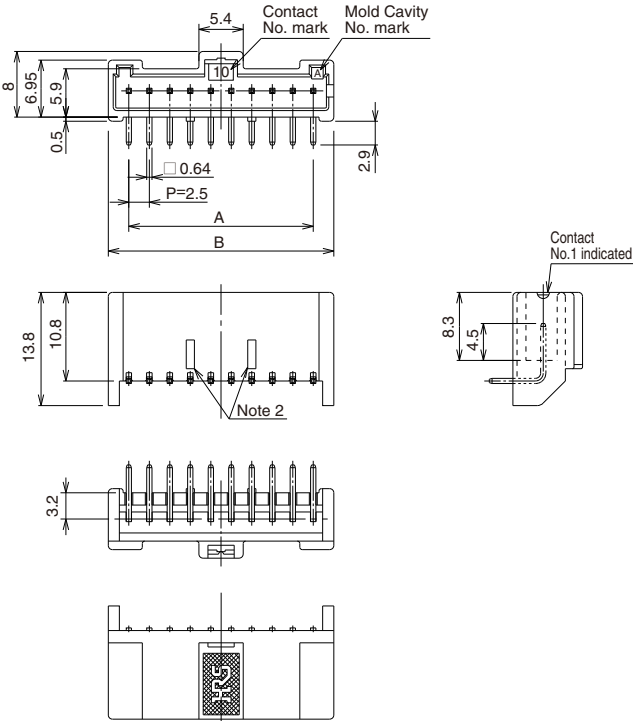
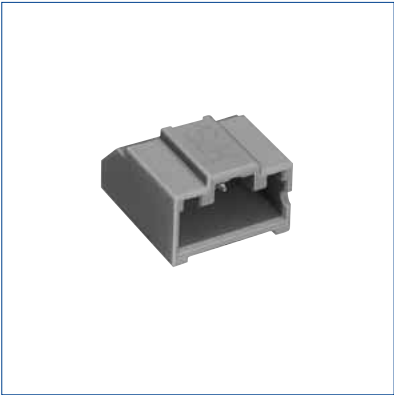
### Panel Mounting Lock In-line Plug



### In-line Plug



Right Angle Pin Header



| Part No.           | HRS No.       | No. of Contacts | A    | B    | RoHS |
|--------------------|---------------|-----------------|------|------|------|
| DF1E- 2P-2.5DS(**) | 541-0985-0 ** | 2               | 2.5  | 7.5  | Yes  |
| DF1E- 3P-2.5DS(**) | 541-0986-3 ** | 3               | 5.0  | 10.0 |      |
| DF1E- 4P-2.5DS(**) | 541-0987-6 ** | 4               | 7.5  | 12.5 |      |
| DF1E- 5P-2.5DS(**) | 541-0988-9 ** | 5               | 10.0 | 15.0 |      |
| DF1E- 6P-2.5DS(**) | 541-0989-1 ** | 6               | 12.5 | 17.5 |      |
| DF1E- 7P-2.5DS(**) | 541-0990-0 ** | 7               | 15.0 | 20.0 |      |
| DF1E- 8P-2.5DS(**) | 541-0991-3 ** | 8               | 17.5 | 22.5 |      |
| DF1E- 9P-2.5DS(**) | 541-0992-6 ** | 9               | 20.0 | 25.0 |      |
| DF1E-10P-2.5DS(**) | 541-0993-9 ** | 10              | 22.5 | 27.5 |      |
| DF1E-11P-2.5DS(**) | 541-0994-1 ** | 11              | 25.0 | 30.0 |      |
| DF1E-12P-2.5DS(**) | 541-0995-4 ** | 12              | 27.5 | 32.5 |      |
| DF1E-13P-2.5DS(**) | 541-0996-7 ** | 13              | 30.0 | 35.0 |      |
| DF1E-14P-2.5DS(**) | 541-0997-0 ** | 14              | 32.5 | 37.5 |      |
| DF1E-15P-2.5DS(**) | 541-0998-2 ** | 15              | 35.0 | 40.0 |      |

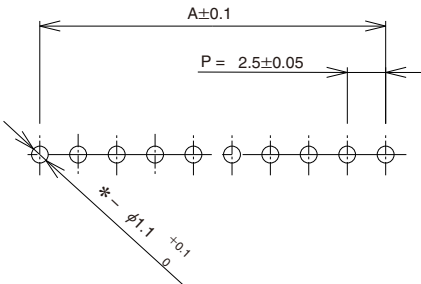
[Specific No.] -\* \*, (\* \*)  
(36) : Gold plated  
(35) : Tin plated

Note 1 : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag. However, the quantity for delivery will be changed according to the Specific No.

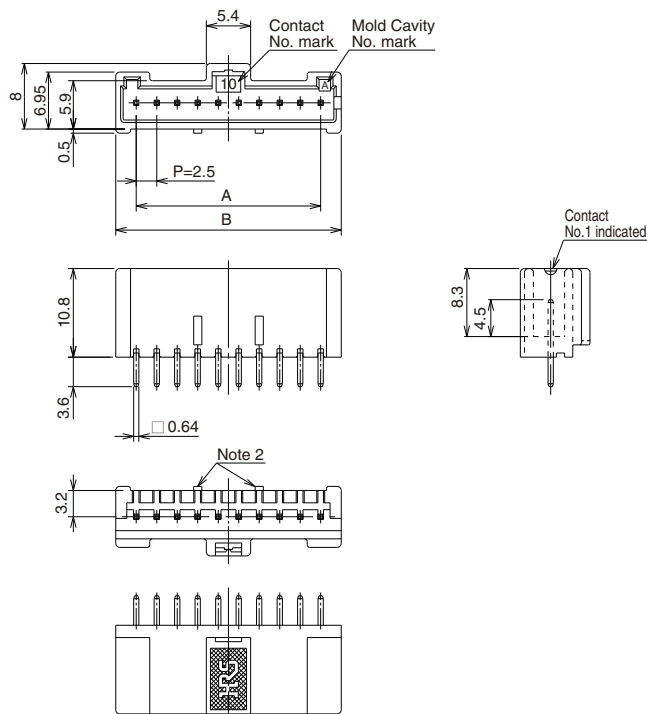
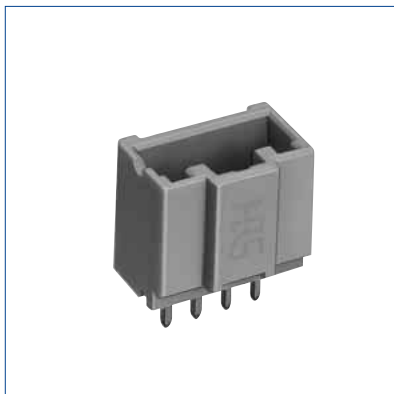
Note 2 : The 2 to 4 contacts differ in two convex portions from those in above figures. The 2 and 3 contacts are not contained, but the 4 contact connector is contained in the center at one point.

Note 3 : Styles of 2 to 4 contact connectors partially differ from those in above figures.

PCB mounting pattern (Board Thickness t = 1.6 ± 0.1)



## ■Straight Pin Header



| Part No.             | HRS No.       | No. of Contacts | A    | B    | RoHS |
|----------------------|---------------|-----------------|------|------|------|
| DF1EC- 2P-2.5DSA(**) | 541-0867-4 ** | 2               | 2.5  | 7.5  | Yes  |
| DF1EC- 3P-2.5DSA(**) | 541-0868-7 ** | 3               | 5.0  | 10.0 |      |
| DF1EC- 4P-2.5DSA(**) | 541-0869-0 ** | 4               | 7.5  | 12.5 |      |
| DF1EC- 5P-2.5DSA(**) | 541-0870-9 ** | 5               | 10.0 | 15.0 |      |
| DF1EC- 6P-2.5DSA(**) | 541-0871-1 ** | 6               | 12.5 | 17.5 |      |
| DF1EC- 7P-2.5DSA(**) | 541-0872-4 ** | 7               | 15.0 | 20.0 |      |
| DF1EC- 8P-2.5DSA(**) | 541-0873-7 ** | 8               | 17.5 | 22.5 |      |
| DF1EC- 9P-2.5DSA(**) | 541-0874-0 ** | 9               | 20.0 | 25.0 |      |
| DF1EC-10P-2.5DSA(**) | 541-0875-2 ** | 10              | 22.5 | 27.5 |      |
| DF1EC-11P-2.5DSA(**) | 541-0876-5 ** | 11              | 25.0 | 30.0 |      |
| DF1EC-12P-2.5DSA(**) | 541-0877-8 ** | 12              | 27.5 | 32.5 |      |
| DF1EC-13P-2.5DSA(**) | 541-0878-0 ** | 13              | 30.0 | 35.0 |      |
| DF1EC-14P-2.5DSA(**) | 541-0879-3 ** | 14              | 32.5 | 37.5 |      |
| DF1EC-15P-2.5DSA(**) | 541-0880-2 ** | 15              | 35.0 | 40.0 |      |

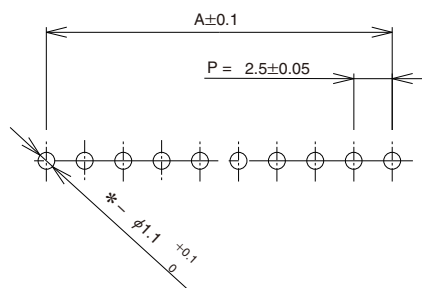
[Specific No.] - \* \*, (\* \*)  
 (36) : Gold plated  
 (35) : Tin plated

Note 1 : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag. However, the quantity for delivery will be changed according to the Specific No.

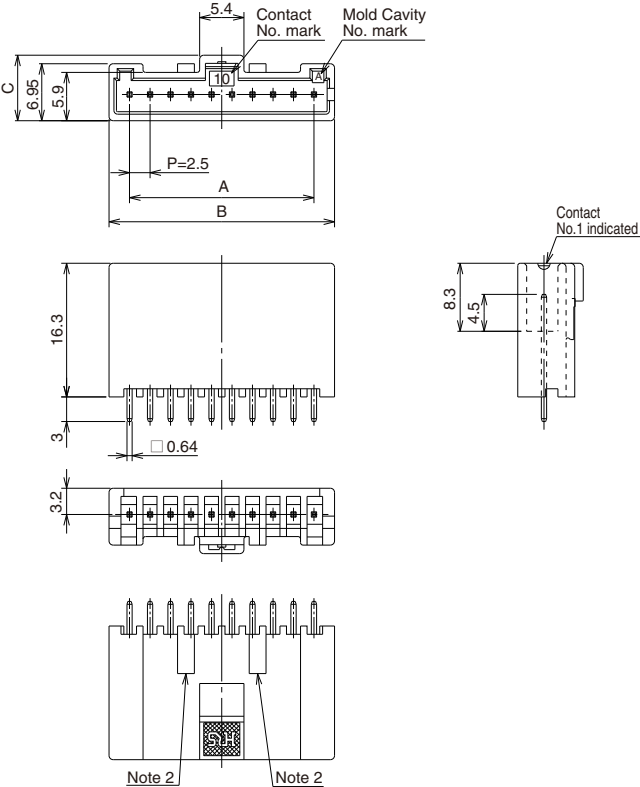
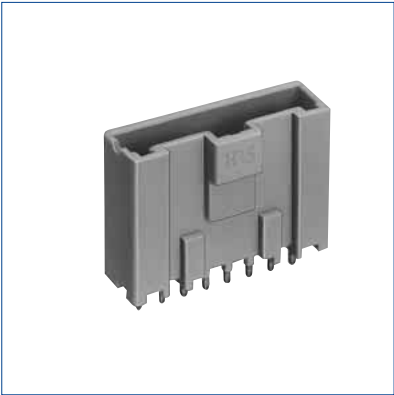
Note 2 : The 2 to 4 contacts differ in two convex portions from those in above figures. The 2 and 3 contacts are not contained, but the 2 and 3 contacts are not contained, and 4 contact is in the center at one point.

Note 3 : Styles of 2 to 4 contacts partially differ from those in above figures.

## ●PCB mounting pattern (Board Thickness $t = 1.6 \pm 0.1$ )



■Straight Pin Header for Potting

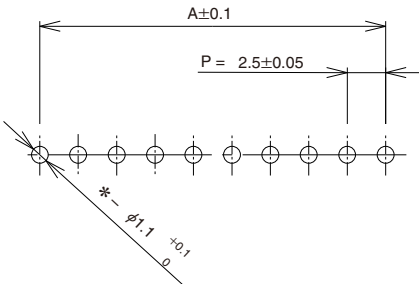


| Part No.             | HRS No.       | No. of Contacts | A    | B    | C   | RoHS |
|----------------------|---------------|-----------------|------|------|-----|------|
| DF1EG- 2P-2.5DSA(**) | 541-0923-3 ** | 2               | 2.5  | 7.5  | 8.0 | Yes  |
| DF1EG- 3P-2.5DSA(**) | 541-0924-6 ** | 3               | 5.0  | 10.0 | 8.0 |      |
| DF1EG- 4P-2.5DSA(**) | 541-0925-9 ** | 4               | 7.5  | 12.5 | 8.0 |      |
| DF1EG- 5P-2.5DSA(**) | 541-0926-1 ** | 5               | 10.0 | 15.0 | 7.8 |      |
| DF1EG- 6P-2.5DSA(**) | 541-0927-4 ** | 6               | 12.5 | 17.5 | 7.8 |      |
| DF1EG- 7P-2.5DSA(**) | 541-0928-7 ** | 7               | 15.0 | 20.0 | 7.8 |      |
| DF1EG- 8P-2.5DSA(**) | 541-0929-0 ** | 8               | 17.5 | 22.5 | 7.8 |      |
| DF1EG- 9P-2.5DSA(**) | 541-0930-9 ** | 9               | 20.0 | 25.0 | 7.8 |      |
| DF1EG-10P-2.5DSA(**) | 541-0931-1 ** | 10              | 22.5 | 27.5 | 7.8 |      |
| DF1EG-11P-2.5DSA(**) | 541-0932-4 ** | 11              | 25.0 | 30.0 | 7.8 |      |

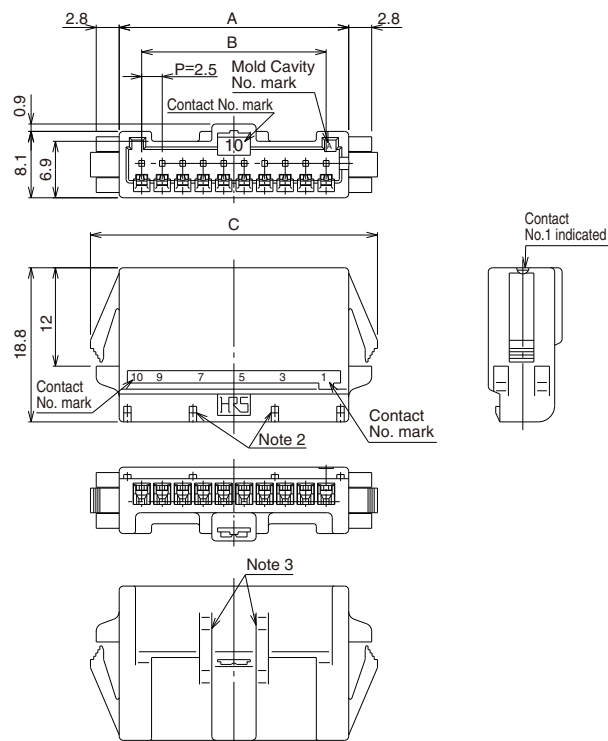
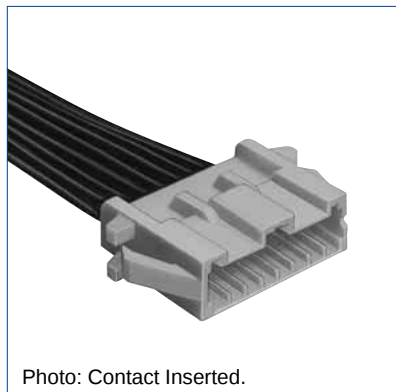
[Specific No.] -\* \*, (\* \*)  
(35) : Tin plated

- Note 1 : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the product per bag. However, the quantity for delivery will be changed according to spec number.
- Note 2 : The 2 to 6 and 9 to 10 contact connectors differ in two convex portions from those in above figures. The 2 to 5 and 9 to 10 contacts are not contained, but the 6 contact is bonded to the convex portion at both ends.
- Note 3 : Styles of 2 to 4 contact may partially differ from the above figures.

●PCB mounting pattern (Board Thickness t = 1.6 ± 0.1)



## In-line Plug (Panel Mount Lock Type)



| Part No.       | HRS No.    | No. of Contacts | A    | B    | C    | D    | E    | RoHS |
|----------------|------------|-----------------|------|------|------|------|------|------|
| DF1E- 2EP-2.5C | 541-0943-0 | 2               | 8.0  | 2.5  | 15.0 | 8.4  | 11.9 | Yes  |
| DF1E- 3EP-2.5C | 541-0944-3 | 3               | 10.5 | 5.0  | 17.5 | 10.9 | 14.4 |      |
| DF1E- 4EP-2.5C | 541-0945-6 | 4               | 13.0 | 7.5  | 20.0 | 13.4 | 16.9 |      |
| DF1E- 5EP-2.5C | 541-0946-9 | 5               | 15.5 | 10.0 | 22.5 | 15.9 | 19.4 |      |
| DF1E- 6EP-2.5C | 541-0947-1 | 6               | 18.0 | 12.5 | 25.0 | 18.4 | 21.9 |      |
| DF1E- 7EP-2.5C | 541-0948-4 | 7               | 20.5 | 15.0 | 27.5 | 20.9 | 24.4 |      |
| DF1E- 8EP-2.5C | 541-0949-7 | 8               | 23.0 | 17.5 | 30.0 | 23.4 | 26.9 |      |
| DF1E- 9EP-2.5C | 541-0950-6 | 9               | 25.5 | 20.0 | 32.5 | 25.9 | 29.4 |      |
| DF1E-10EP-2.5C | 541-0951-9 | 10              | 28.0 | 22.5 | 35.0 | 28.4 | 31.9 |      |

Note 1 : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag. However, the quantity for delivery will be changed according to the Specific No.

Note 2 : In regard to 2 to 5 contacts, the retainer fixed convex portions are located at both ends.

Note 3 : In regard to 2 to 7 contacts, 2 convex portions are different from those in the above figures.

Note 4 : Use the no radius side at the panel edge in the looking area.

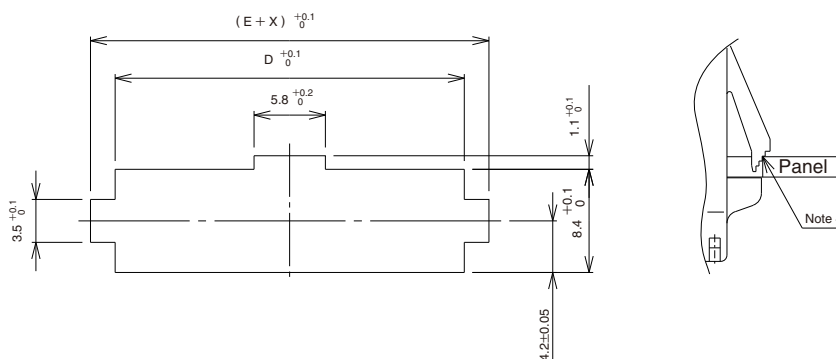
Note 5 : Panel fixation is loosened. (May be enlarged according to the panel board thickness.)

Note 6 : Styles of 2 to 4 contact partially differ from those in the above figures.

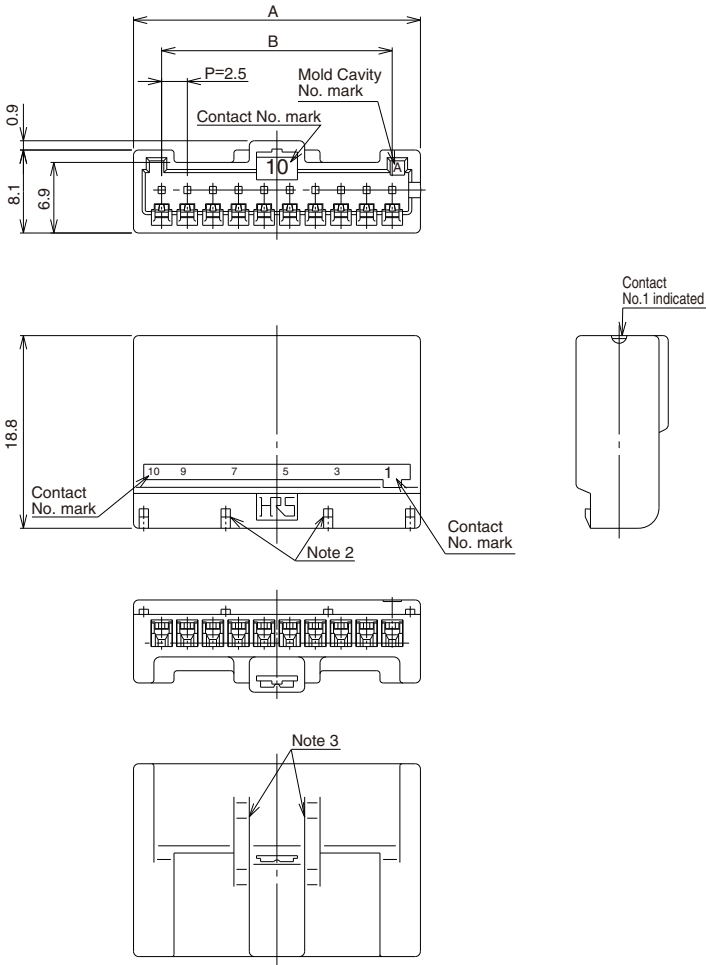
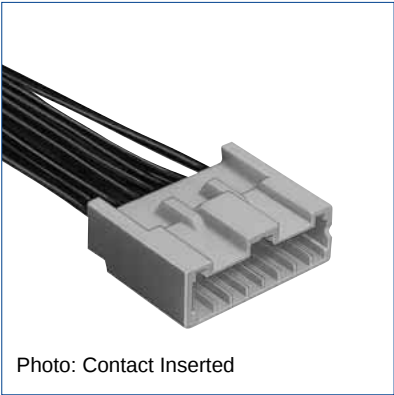
\* Refer to page B156 for the retainer.

## Panel Cutout

| Panel Thickness | X   |
|-----------------|-----|
| 1.7 to 2.0      | 1.5 |
| 1.3 to 1.6      | 1.0 |
| 0.9 to 1.2      | 0.5 |
| 0.7 to 0.8      | 0.0 |



In-line Plug



| Part No.        | HRS No.    | No. of Contacts | A    | B    | RoHS |
|-----------------|------------|-----------------|------|------|------|
| DF1EA- 2EP-2.5C | 541-0957-5 | 2               | 8.0  | 2.5  | Yes  |
| DF1EA- 3EP-2.5C | 541-0958-8 | 3               | 10.5 | 5.0  |      |
| DF1EA- 4EP-2.5C | 541-0959-0 | 4               | 13.0 | 7.5  |      |
| DF1EA- 5EP-2.5C | 541-0960-0 | 5               | 15.5 | 10.0 |      |
| DF1EA- 6EP-2.5C | 541-0961-2 | 6               | 18.0 | 12.5 |      |
| DF1EA- 7EP-2.5C | 541-0962-5 | 7               | 20.5 | 15.0 |      |
| DF1EA- 8EP-2.5C | 541-0963-8 | 8               | 23.0 | 17.5 |      |
| DF1EA- 9EP-2.5C | 541-0964-0 | 9               | 25.5 | 20.0 |      |
| DF1EA-10EP-2.5C | 541-0965-3 | 10              | 28.0 | 22.5 |      |

Note 1 : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag. However, the quantity for delivery will be changed according to the Specific No.

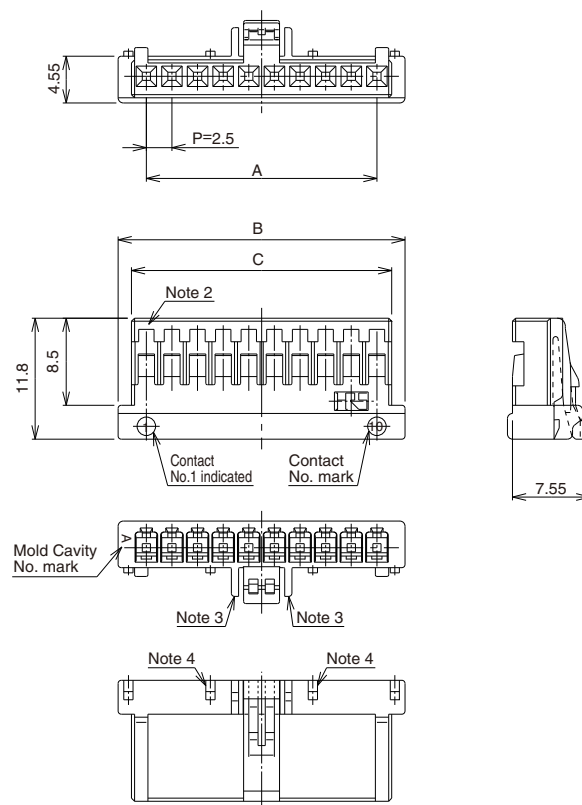
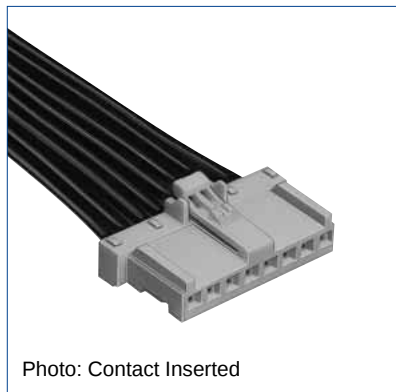
Note 2 : In regard to 2 to 5 contacts, the retainer fixed convex portions are located at both ends.

Note 3 : 2 to 7 contacts do not contain two convex portions, which is different from the above figure.

Note 4 : Styles of 2 to 4 contacts partially differ from the above figures.

\* Refer to page B156 for retainer.

## Socket



| Part No.      | HRS No.    | No. of Contacts | A    | B    | C    | RoHS |
|---------------|------------|-----------------|------|------|------|------|
| DF1E- 2S-2.5C | 541-0811-0 | 2               | 2.5  | 8.0  | 5.4  | Yes  |
| DF1E- 3S-2.5C | 541-0812-2 | 3               | 5.0  | 10.5 | 7.9  |      |
| DF1E- 4S-2.5C | 541-0813-5 | 4               | 7.5  | 13.0 | 10.4 |      |
| DF1E- 5S-2.5C | 541-0814-8 | 5               | 10.0 | 15.5 | 12.9 |      |
| DF1E- 6S-2.5C | 541-0815-0 | 6               | 12.5 | 18.0 | 15.4 |      |
| DF1E- 7S-2.5C | 541-0816-3 | 7               | 15.0 | 20.5 | 17.9 |      |
| DF1E- 8S-2.5C | 541-0817-6 | 8               | 17.5 | 23.0 | 20.4 |      |
| DF1E- 9S-2.5C | 541-0818-9 | 9               | 20.0 | 25.5 | 22.9 |      |
| DF1E-10S-2.5C | 541-0819-1 | 10              | 22.5 | 28.0 | 25.4 |      |
| DF1E-11S-2.5C | 541-0820-0 | 11              | 25.0 | 30.5 | 27.9 |      |
| DF1E-12S-2.5C | 541-0821-3 | 12              | 27.5 | 33.0 | 30.4 |      |
| DF1E-13S-2.5C | 541-0822-6 | 13              | 30.0 | 35.5 | 32.9 |      |
| DF1E-14S-2.5C | 541-0823-9 | 14              | 32.5 | 38.0 | 35.4 |      |
| DF1E-15S-2.5C | 541-0824-1 | 15              | 35.0 | 40.5 | 37.9 |      |

Note 1 : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag. However, the quantity for delivery will be changed according to spec number.

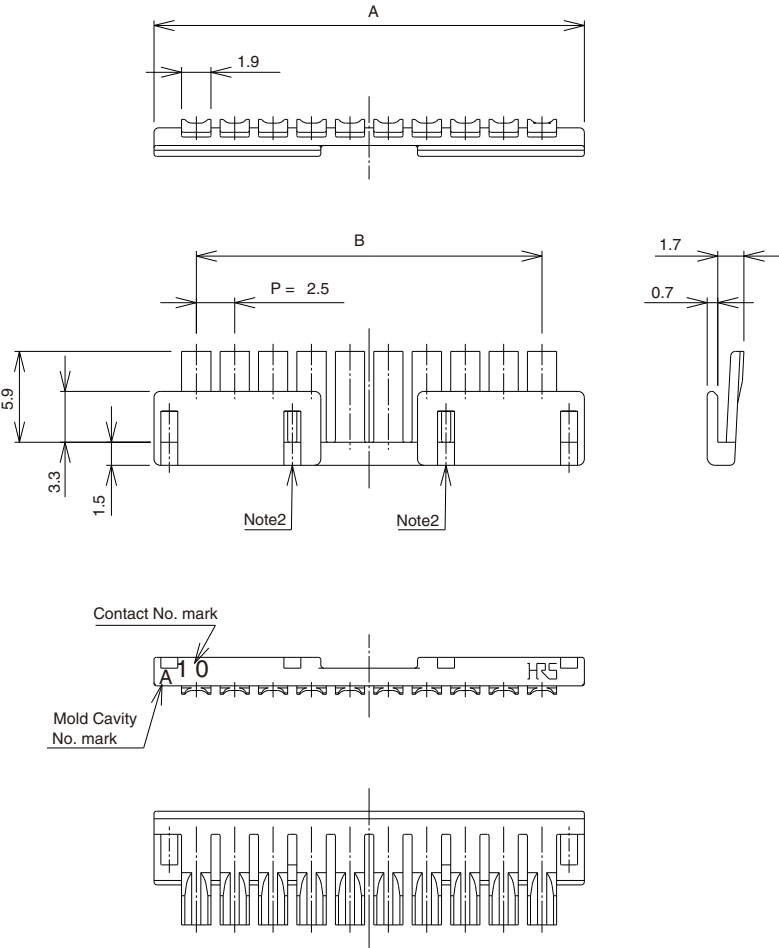
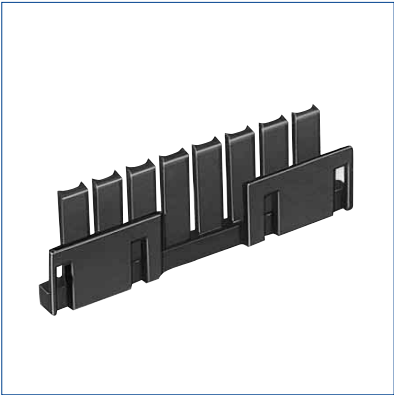
Note 2 : The 2 contact connector is equipped with the convex portion to prevent false-insertion.

Note 3 : The 2 consult Has no wall on the locking side

Note 4 : The 2 to 5 contacts contain the retainer fixed convex portions at both ends.

\* Refer to page B156 for the retainer.

◆Retainer



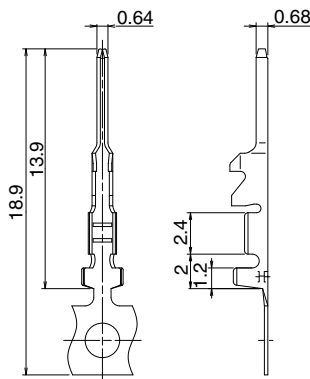
| Part No.        | HRS No.    | No. of Contacts | A    | B    | RoHS |
|-----------------|------------|-----------------|------|------|------|
| DF1E- 2RS/P-2.5 | 541-0971-6 | 2               | 8.0  | 2.5  | Yes  |
| DF1E- 3RS/P-2.5 | 541-0972-9 | 3               | 10.5 | 5.0  |      |
| DF1E- 4RS/P-2.5 | 541-0973-1 | 4               | 13.0 | 7.5  |      |
| DF1E- 5RS/P-2.5 | 541-0974-4 | 5               | 15.5 | 10.0 |      |
| DF1E- 6RS/P-2.5 | 541-0975-7 | 6               | 18.0 | 12.5 |      |
| DF1E- 7RS/P-2.5 | 541-0976-0 | 7               | 20.5 | 15.0 |      |
| DF1E- 8RS/P-2.5 | 541-0977-2 | 8               | 23.0 | 17.5 |      |
| DF1E- 9RS/P-2.5 | 541-0978-5 | 9               | 25.5 | 20.0 |      |
| DF1E-10RS/P-2.5 | 541-0979-8 | 10              | 28.0 | 22.5 |      |

Note 1 : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag. However, the quantity for delivery will be changed according to spec number.

Note 2 : The 2 to 4 contacts contain socket and plug fixed holes at both ends.

\* This retainer can be used together with the socket and In-line plug.

## ◆ Plug Crimping Contact



| Part No.      | HRS No.    | Applicable Cable |                 |           |                         | Packaging     | Finish      | RoHS |
|---------------|------------|------------------|-----------------|-----------|-------------------------|---------------|-------------|------|
|               |            | UL Style         | Jacket Diameter | Wire Size | Stranded Wire Conductor |               |             |      |
| DF1E-2022PCF  | 541-0937-8 | 1007<br>1061     | ϕ1.2 to 1.9mm   | 20 AWG    | 21/0.18                 | 10,000 / reel | Tin plated  | Yes  |
|               |            |                  |                 | 22 AWG    | 17/0.16                 |               |             |      |
| DF1E-2022PC   | 541-0938-0 | 1007             | ϕ1.8mm          | 20 AWG    | 21/0.18                 | 100 / pack    |             |      |
|               |            |                  | ϕ1.6mm          | 22 AWG    | 17/0.16                 |               |             |      |
| DF1E-2428PCF  | 541-0939-3 | 1007<br>1061     | ϕ0.9 to 1.5mm   | 24 AWG    | 11/0.16                 | 10,000 / reel |             |      |
|               |            |                  |                 | 26 AWG    | 7/0.16                  |               |             |      |
|               |            |                  |                 | 28 AWG    | 7/0.127                 |               |             |      |
| DF1E-2428PC   | 541-0940-2 | 1007             | ϕ1.5mm          | 24 AWG    | 11/0.16                 | 100 / pack    |             |      |
|               |            |                  | ϕ1.3mm          | 26 AWG    | 7/0.16                  |               |             |      |
|               |            |                  | ϕ1.2mm          | 28 AWG    | 7/0.127                 |               |             |      |
| DF1E-2022PCFA | 541-1003-0 | 1007<br>1061     | ϕ1.2 to 1.9mm   | 20 AWG    | 21/0.18                 | 10,000 / reel | Gold plated |      |
|               |            |                  |                 | 22 AWG    | 17/0.16                 |               |             |      |
| DF1E-2022PCA  | 541-1004-3 | 1007             | ϕ1.8mm          | 20 AWG    | 21/0.18                 | 100 / pack    |             |      |
|               |            |                  | ϕ1.6mm          | 22 AWG    | 17/0.16                 |               |             |      |
| DF1E-2428PCFA | 541-1005-6 | 1007<br>1061     | ϕ0.9 to 1.5mm   | 24 AWG    | 11/0.16                 | 10,000 / reel |             |      |
|               |            |                  |                 | 26 AWG    | 7/0.16                  |               |             |      |
|               |            |                  |                 | 28 AWG    | 7/0.127                 |               |             |      |
| DF1E-2428PCA  | 541-1006-9 | 1007             | ϕ1.5mm          | 24 AWG    | 11/0.16                 | 100 / pack    |             |      |
|               |            |                  | ϕ1.3mm          | 26 AWG    | 7/0.16                  |               |             |      |
|               |            |                  | ϕ1.2mm          | 28 AWG    | 7/0.127                 |               |             |      |

Note 1 : Crimping Contact Extraction Tool DF-C-PO(B)

Note 2 : Applicable wire with tin plated solid soft conductor.

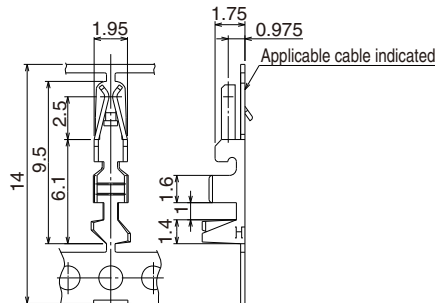
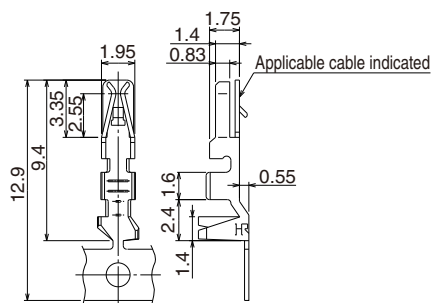
Note 3 : When using other than the recommended wire, contact your nearest Hirose representative.

Note 4 : Strip length : 3.0 to 3.7mm

## Socket Crimping Contact

### ●DF1E-2022SCF (A)

### ●DF1B - \* \* \* \* SCF (A)



| Part No.      | HRS No.    | Applicable Cable |                 |           |                         | Packaging     | Finish     | RoHS |
|---------------|------------|------------------|-----------------|-----------|-------------------------|---------------|------------|------|
|               |            | UL Style         | Jacket Diameter | Wire Size | Stranded Wire Conductor |               |            |      |
| DF1E-2022SCF  | 541-0999-5 | 1007<br>1061     | ϕ1.2 to 1.9mm   | 20 AWG    | 21/0.18                 | 10,000 / reel | Tin plated | Yes  |
|               |            |                  |                 | 22 AWG    | 17/0.16                 |               |            |      |
| DF1E-2022SC   | 541-1000-2 | 1007             | ϕ1.8mm          | 20 AWG    | 21/0.18                 | 100 / pack    |            |      |
|               |            |                  | ϕ1.6mm          | 22 AWG    | 17/0.16                 |               |            |      |
| DF1B-2022SCF  | 541-0223-1 | 1007<br>1061     | ϕ1.2 to 1.9mm   | 20 AWG    | 21/0.18                 | 10,000 / reel |            |      |
|               |            |                  |                 | 22 AWG    | 17/0.16                 |               |            |      |
| DF1B-2022SC   | 541-0224-4 | 1007             | ϕ1.8mm          | 20 AWG    | 21/0.18                 | 100 / pack    |            |      |
|               |            |                  | ϕ1.6mm          | 22 AWG    | 17/0.16                 |               |            |      |
| DF1B-2428SCF  | 541-0678-1 | 1007<br>1061     | ϕ0.9 to 1.5mm   | 24 AWG    | 11/0.16                 | 10,000 / reel |            |      |
|               |            |                  |                 | 26 AWG    | 7/0.16                  |               |            |      |
|               |            |                  |                 | 28 AWG    | 7/0.127                 |               |            |      |
| DF1B-2428SC   | 541-0679-4 | 1007             | ϕ1.5mm          | 24 AWG    | 11/0.16                 | 100 / pack    |            |      |
|               |            |                  | ϕ1.3mm          | 26 AWG    | 7/0.16                  |               |            |      |
|               |            |                  | ϕ1.2mm          | 28 AWG    | 7/0.127                 |               |            |      |
| DF1B-30SCF    | 541-0682-9 | 1007<br>1061     | ϕ0.6 to 1.2mm   | 30 AWG    | 7/0.1                   | 10,000 / reel |            |      |
| DF1B-30SC     | 541-0683-1 | 1007             | ϕ1.1mm          | 30 AWG    | 7/0.1                   | 100 / pack    |            |      |
| DF1E-2022SCFA | 541-1001-5 | 1007<br>1061     | ϕ1.2 to 1.9mm   | 20 AWG    | 21/0.18                 | 10,000 / reel |            |      |
|               |            |                  |                 | 22 AWG    | 17/0.16                 |               |            |      |
| DF1E-2022SCA  | 541-1002-8 | 1007             | ϕ1.8mm          | 20 AWG    | 21/0.18                 | 100 / pack    |            |      |
|               |            |                  | ϕ1.6mm          | 22 AWG    | 17/0.16                 |               |            |      |
| DF1B-2022SCFA | 541-0662-1 | 1007<br>1061     | ϕ1.2 to 1.9mm   | 20 AWG    | 21/0.18                 | 10,000 / reel |            |      |
|               |            |                  |                 | 22 AWG    | 17/0.16                 |               |            |      |
| DF1B-2022SCA  | 541-0663-4 | 1007             | ϕ1.8mm          | 20 AWG    | 21/0.18                 | 100 / pack    |            |      |
|               |            |                  | ϕ1.6mm          | 22 AWG    | 17/0.16                 |               |            |      |
| DF1B-2428SCFA | 541-0680-3 | 1007<br>1061     | ϕ0.9 to 1.5mm   | 24 AWG    | 11/0.16                 | 10,000 / reel |            |      |
|               |            |                  |                 | 26 AWG    | 7/0.16                  |               |            |      |
|               |            |                  |                 | 28 AWG    | 7/0.127                 |               |            |      |
| DF1B-2428SCA  | 541-0681-6 | 1007             | ϕ1.5mm          | 24 AWG    | 11/0.16                 | 100 / pack    |            |      |
|               |            |                  | ϕ1.3mm          | 26 AWG    | 7/0.16                  |               |            |      |
|               |            |                  | ϕ1.2mm          | 28 AWG    | 7/0.127                 |               |            |      |
| DF1B-30SCFA   | 541-0684-4 | 1007<br>1061     | ϕ0.6 to 1.2mm   | 30 AWG    | 7/0.1                   | 10,000 / reel |            |      |
| DF1B-30SCA    | 541-0685-7 | 1007             | ϕ1.1mm          | 30 AWG    | 7/0.1                   | 100 / pack    |            |      |

Note 1 : Crimping Contact Extraction Tool DF-C-PO(B)

Note 2 : Applicable wire with tin plated solid soft conductor.

Note 3 : When using other than the recommended wire, contact your nearest Hirose representative.

Note 4 : Strip length : 2.0 to 2.5mm

## ◆Crimping Tools

| Item                    | Part No.           | HRS No.    | Applicable Contact                                                          |
|-------------------------|--------------------|------------|-----------------------------------------------------------------------------|
| Applicator              | AP105-DF1E-2022S   | 901-4561-0 | DF1E-2022SCF<br>DF1E-2022SCFA                                               |
|                         | AP105-DF1B-2022S ◎ | 901-4510-9 | DF1B-2022SCF<br>DF1B-2022SCFA                                               |
|                         | AP105-DF1B-2428S ◎ | 901-4518-0 | DF1B-2428SCF<br>DF1B-2428SCFA                                               |
|                         | AP105-DF1B-30S ◎   | 901-4517-8 | DF1B-30SCF<br>DF1B-30SCFA                                                   |
|                         | AP105-DF1B-2022P ◎ | 901-4509-0 | DF1E-2022PCF<br>DF1E-2022PCFA                                               |
|                         | AP105-DF1B-2428P ◎ | 901-4521-5 | DF1E-2428PCF<br>DF1E-2428PCFA                                               |
| Main Press Unit         | CM-105C ◎          | 901-0001-0 | —                                                                           |
| Manual Crimping Tool    | HT102/DF1E-2022S   | 550-0277-1 | DF1E-2022SC                                                                 |
|                         | DF1B-TA2022SHC ◎   | 550-0182-7 | DF1B-2022SC<br>DF1B-2022SCA                                                 |
|                         | DF1B-TA2428SHC ◎   | 550-0209-1 | DF1B-2428SC<br>DF1B-2428SCA                                                 |
|                         | DF1B-TA30SHC ◎     | 550-0211-3 | DF1B-30SC<br>DF1B-30SCA                                                     |
|                         | HT102/DF1BE-2022P  | 550-0278-4 | DF1E-2022PC                                                                 |
|                         | HT102/DF1BE-2428P  | 550-0279-7 | DF1E-2428PC                                                                 |
| Contact Extraction Tool | DF-C-PO (B)        | 550-0179-2 | DF1E-2022SC (F) (A)<br>DF1B- * * * * SC (F) (A)<br>DF1E- * * * * PC (F) (A) |

Note 1 : Add "◎" to the last number of the product, in order to use DF1B series tools, which have been conventionally merchandized.

Note 2 : If any trouble has occurred due to other tools, which are not designated by Hirose, Hirose won't guarantee any products.

Note 3 : For the crimping process, refer to "crimping quality standards" and "crimping condition".

## ◆Precautions

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Recommended Soldering Condition | Flow : 260°C for 10 seconds<br>Manual soldering : 300°C for 3 seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2. Cleaning Condition              | Refer to Wire-to-Board Connector Use Hand book.<br>However, if the connector is cleaned by the potting header, the detergent remains within the connector, which will cause malfunction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3. Connection Condition            | Refer to Wire-to-Board Connector Use Hand book.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. Cautions                        | <ul style="list-style-type: none"> <li>● To remove the connector, if the connector is forcibly removed, it will cause connector damage. If the connector is hardly removed, slightly push the connector once, and then remove it using the lock.</li> <li>● In some method for laying the cable within equipment, a tension may be applied to the cable so as to remove the contact. In this case, it is recommended to use the retainer.</li> <li>● Incomplete insertion of the contact can be prevented by mounting a retainer; however, mounting of a retainer might not be possible when the contact protrudes beyond the socket. Insert the contact securely and then mount the retainer.</li> <li>● If the potting process is implemented, it is desirable to fill the connector with resin, considering the resin surface tensile force.</li> <li>● The color phase of this product may be slightly different from that of the forming product according to the manufacturing lot and future storage conditions, however the difference doesn't affect the performance.</li> </ul> |
| 5. Precautions                     | Refer to Wire-to-Board Connector Use Hand book.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |