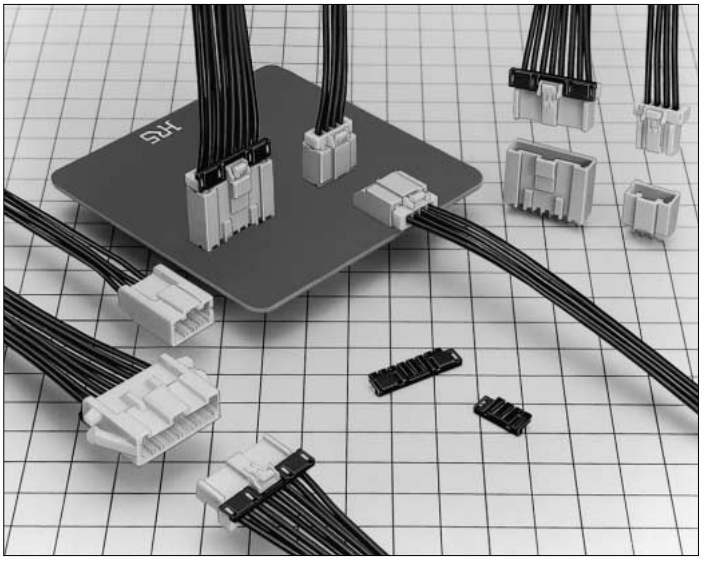
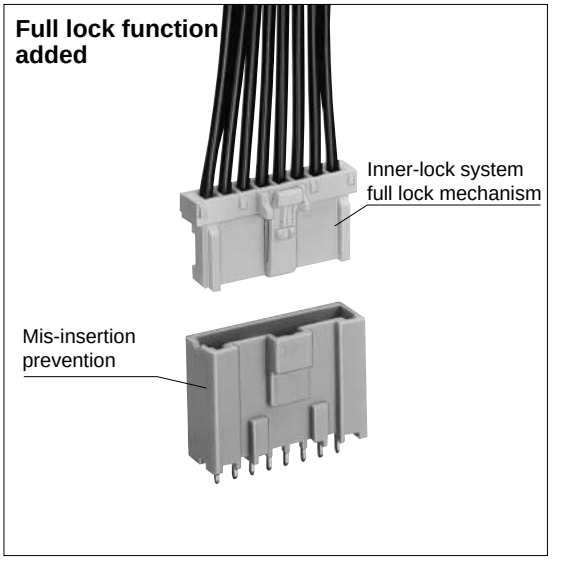
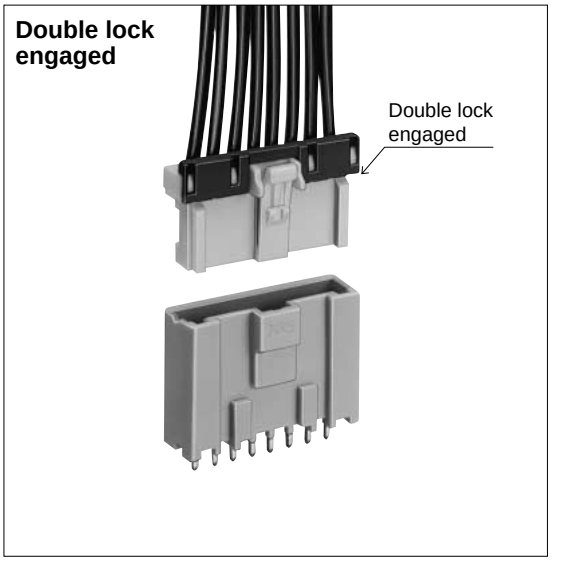
# 2.5mm Pitch Connector for Full Lock and Discrete Wire Connection

DF1E Series






## ■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.

### 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.

### 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.

### 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 AWG#22 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.

### 8. Correspond to Automatic Insertion Machine

The radial tape packaging is provided for 2 to 8 contacts on the straight pin header side, in order to correspond to mass production.

### 9. Various Applications

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

## ■Applications

Electronic equipment, office machines, industrial equipment, and consumer equipment, and so on

## ■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℃ Note 2.<br>Operating Moisture Range : 20 to 80% | Storage Temperature Range : −10 to +60℃ Note 3.<br>Storage Moisture Range : 40 to 70% |

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

■C-UL File No.
UL :E52653

| Item | Specification | Condition |
|---|---|---|
| 1. Contact Resistance | 30m ohms max. | Measured at 20mV max. and 1mA |
| 2. Insulation Resistance | 1000M ohms min. | 500V DC |
| 3. Withstanding voltage | No flashover or insulation breakdown. | 650V AC/1 minute |
| 4. Single Insertor/Extraction Forth | MIN 0.4N, MAX 4.4N | Measured at the square steel pin with 0.635±0.002 |
| 5. Operating Life | 30m ohms 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/s², 11 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis |
| 8. Humidity (Steady state) | 30m ohms max | 96 hours at temperature of 40℃ and humidity of 90% to 95% |
| 9. Temperature Cycle | 30m ohms max. | (-55℃: 30 minutes-> 5 to 35℃: 5 minutes-> 85℃: 30 minutes-> 5 to 35℃: 5 minutes) 5 cicles |
| 10. Resistance to Soldering heat | No deformation of components affecting performance. | Flow: 250℃ for 10 seconds |
| | | Manual soldering: 300℃ for 3 seconds |

Note 1: Includes temperature rise caused by current flow.
Note 2: 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.

## ■Material

| Product | Part | Material | Treatment | Remarks |
|---|---|---|---|---|
| Socket | Insulator | Polyamide | White | UL94V-0 |
| Header | Insulator | Polyamide | Beige | UL94V-0 |
| | Contact | Brass | Solder plating | ———— |
| In-line Plug | Insulator | Polyamide | White | UL94V-0 |
| retainer | Insulator | Polyamide | Black | UL94V-0 |
| Crimping contact | Contact | Phosphor copper | Tin plating | ———— |

Note : The whisker method is implemented for HRS tin plating.

## ■Ordering Information

### ●Pin Header

**DF 1E C - ✻ P - 2.5 DSA**
❶ ❷ ❸ ❹ ❺ ❻ ❼

| | |
|---|---|
| ❶ Series Name : DF | ❹ Number of Contacts : 2 to 15 contacts |
| ❷ Series No. : 1E | ❺ Connector Type<br>P : Pin Header |
| ❸ Hold Types | ❻ Contact Pitch : 2.5mm |
| ❼ Form type<br>DSA : Straight Dip<br>DS : Right Angle Type | |

| Standard Product | | Potting | |
|---|---|---|---|
| | With Boss | | With Boss |
| C | Without Boss | G | Without Boss |

Note 1 : The right angle pin header has no symbol.
Note 2 : The potting header has 2 to 10 contacts.

### ●Socket

**DF 1E - ✻ S - 2.5 C**
❶ ❷ ❸ ❹ ❺ ❻

| | |
|---|---|
| ❶ Series Name : DF | ❹ Connector type<br>S: Socket |
| ❷ Series No. : 1E | ❺ Contact Pitch : 2.5mm |
| ❸ Number of Contacts : 2 to 15 contacts | ❻ Form Type<br>C : Crimping socket |

### ●In-line Plug

**DF 1E A - ✻ EP - 2.5 C**
❶ ❷ ❸ ❹ ❺ ❻ ❼

| | |
|---|---|
| ❶ Series Name : DF | ❹ Number of Contacts : 2 to 10 contacts |
| ❷ Series No. : 1E | ❺ EP : In-line plug |
| ❸ In-line Plug type<br>None: With Panel mount Lock<br>A : Without Panel mount Lock | ❻ Contact Pitch : 2.5mm<br>❼ Form Type<br>C : Crimping socket |

### ●Crimping Contact

**DF 1E - ✻✻ SCF**
❶ ❷ ❸ ❹

| | |
|---|---|
| ❶ Series Name : DF | ❸ Applicable Cable Size<br>2022 : AWG#20 to #22<br>2428 : WG#24 to #28<br>30 : AWG#30 |
| ❷ Series No. :<br>Socket side : 1B (Note 1)<br>1E (Note 1)<br>Plug side : 1E | ❹ Packaging Type<br>SCF : Female contact : Reel<br>SF : Female contact : Bag<br>PCF : Male contact : Reel<br>PC : Male contact : Bag |

Note 1 : When the retainer is used, use DF1E-2022SC(F), DF1B-2428SC(F), and DF1B-30SC(F) contacts.
When no retainer is used, all DF1B-✻✻SC(F) and DF1E-2022SC(F) contacts can be used.

### ●Retainer

**DF 1E - ✻ RS/P - 2.5**
❶ ❷ ❸ ❹ ❺

| | |
|---|---|
| ❶ Series Name : DF | ❹ Connector Type<br>RS/P : Retainer<br>Commonly used for socket and in-line plug |
| ❷ Series No. : 1E | |
| ❸ Number of Contacts : 2 to 10 contacts | ❺ Contacts Pitch:2.5mm |

## ■Application Pattern

**Socket**

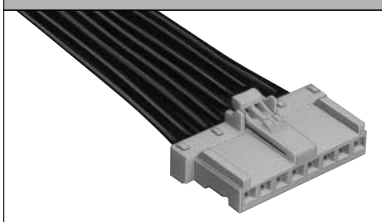
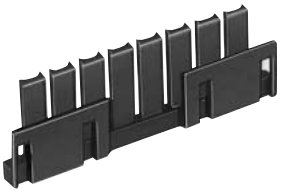


Photo : Contact Inserted

**Retainer**

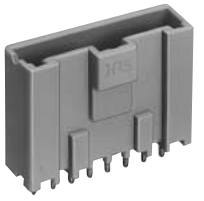


**Pin Header**

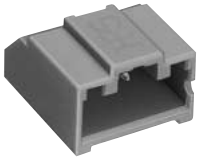
●Straight Type



●Straight Potting Type



●Right Angle Type



**In-line Plug**

●In-line Plug (Panel Mount Lock Type)

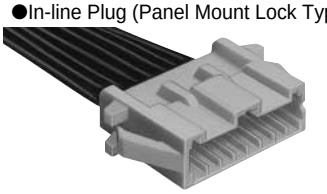


Photo: Contact Inserted

●In-line Plug

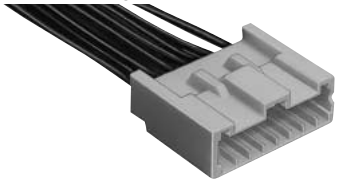
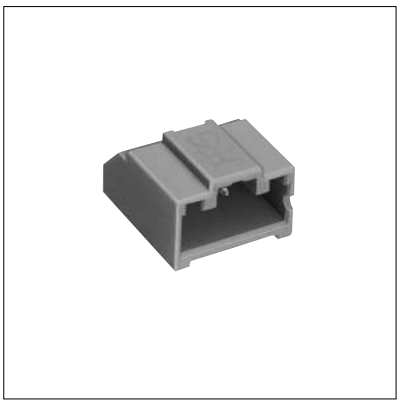
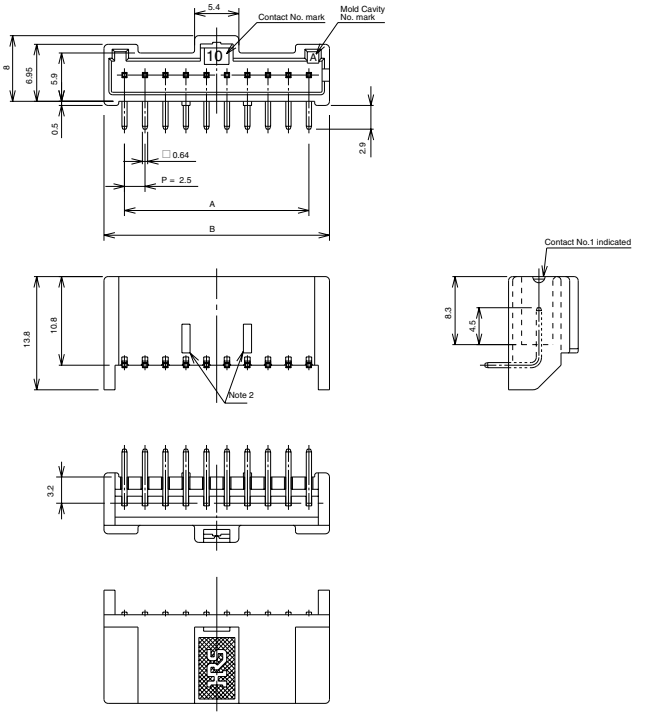


Photo: Contact Inserted

## ■Right Angle Pin Header






| Part Number | CL No. | Number of Contacts | A | B |
|---|---|---|---|---|
| DF1E – 2P–2.5DS(**) | 541 – 0985– 0 –** | 2 | 2.5 | 7.5 |
| 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 |

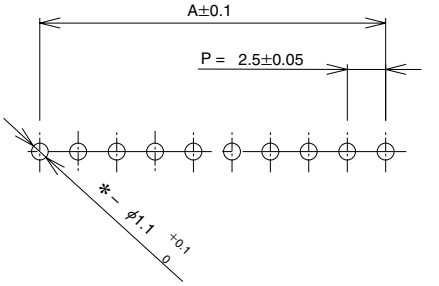
The symbol ** included in HRS No. and the product spec No. indicates the Specific No.

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.

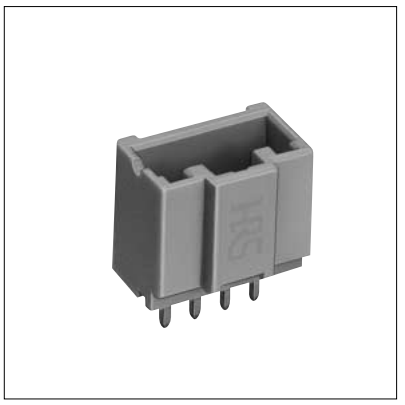
Note 2. : The 2 to 4 contacts differ in two convex portions from those in above figures. The 2 and 3 contacts are not contained, but the 4 contact connector is contained in the center at one point.

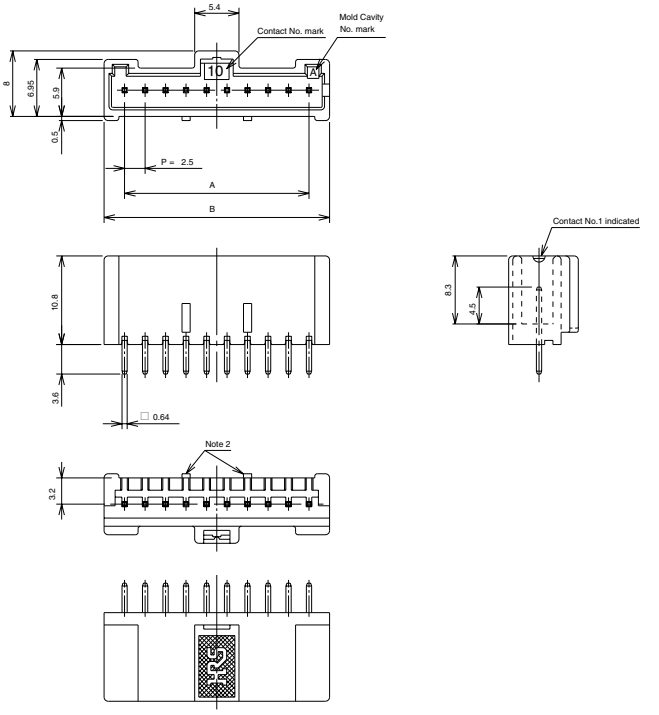
Note 3. : Styles of 2 to 4 contact connectors partially differ from those in above figures.

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



## ■Straight Pin Header






| Part Number | CL No. | Number of Contacts | A | B |
|---|---|---|---|---|
| DF1EC– 2P–2.5DSA(**) | 541– 0867– 4 –** | 2 | 2.5 | 7.5 |
| 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 |

The symbol ** included in HRS No. and the product spec No. indicates the Specific No.

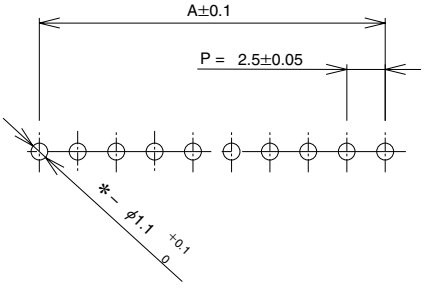
Note 1. : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag. However, the quantity for delivery will be changed according to the Specific No.

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.

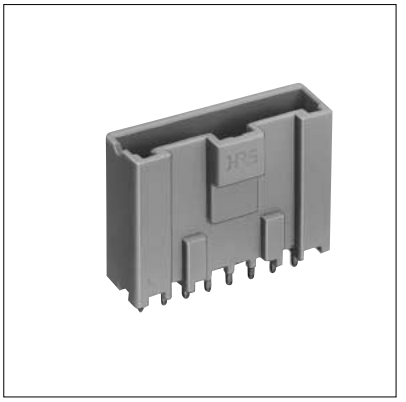
Note 3. : Styles of 2 to 4 contacts partially differ from those in above figures.

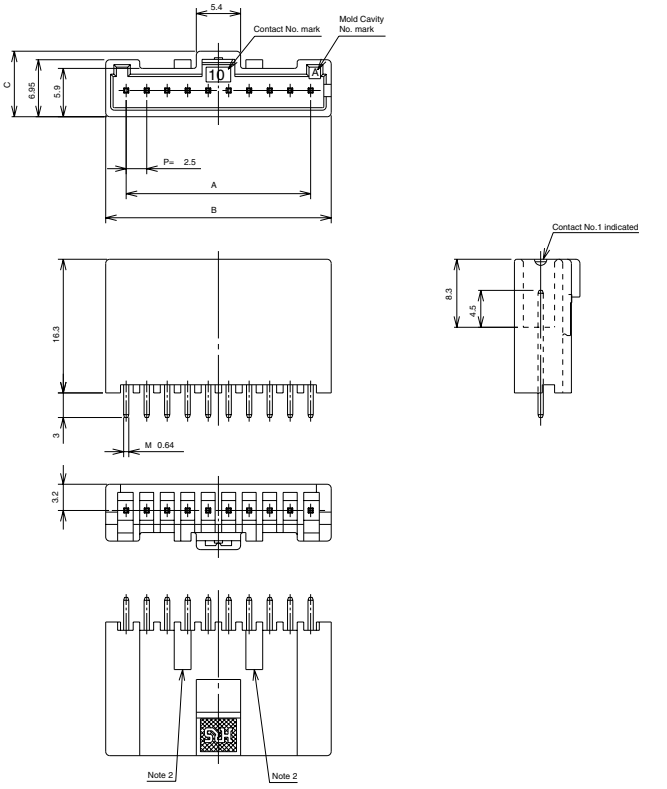
Note 4. : The radial package is prepared for DF1EC-*P-2.5DSA(25).However, 2 to 8 contacts only are provided. (Quantity of packaged 2 and 3 contacts: 1000pcs., 4 to 8 contacts: 400pcs.)

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



## ■Straight Pin Header for Potting






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

The symbol ** included in HRS No. and the product spec No. indicates the Specific No.

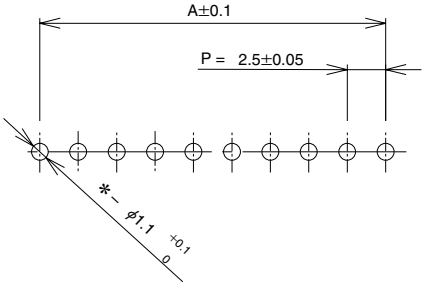
Note 1. : A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the product per bag. However, the quantity for delivery will be changed according to spec number.

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.

Note 4. : The radial tape packaging is prepared for DF1EG-*P-2.5DSA(25).However, 2 to 8 contacts are available. (Quantity of packaged 2 and 3 contacts : 1000pcs., 4 to 8 contacts: 400pcs.)

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



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

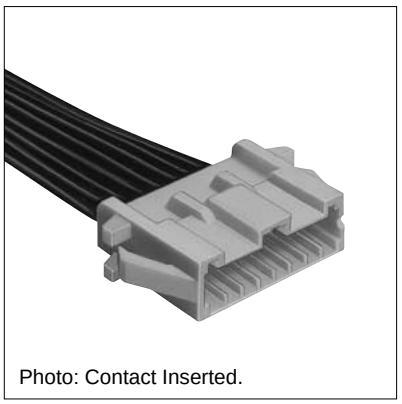
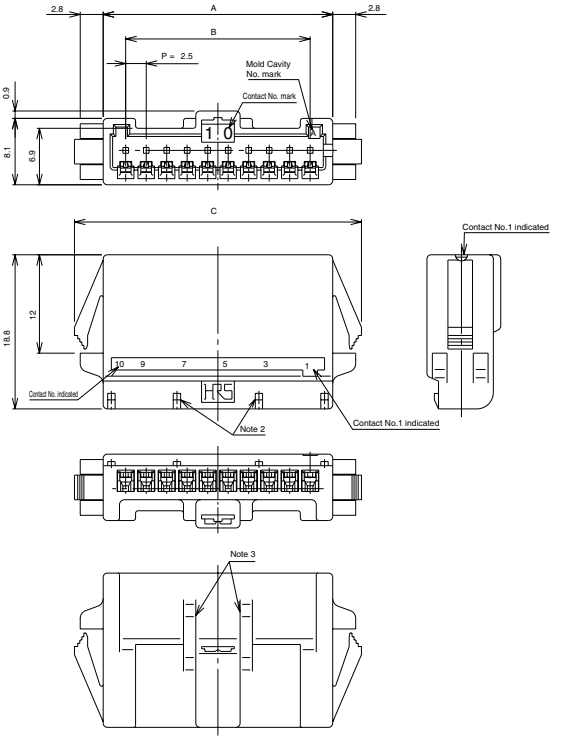


Photo: Contact Inserted.




| Part Number | CL No. | Number of Contacts | A | B | C | D | E |
|---|---|---|---|---|---|---|---|
| DF1E– 2EP–2.5C(**) | 541– 0943– 0 –** | 2 | 8.0 | 2.5 | 15.0 | 8.4 | 12.5 |
| DF1E– 3EP–2.5C(**) | 541– 0944– 3 –** | 3 | 10.5 | 5.0 | 17.5 | 10.9 | 15.0 |
| DF1E– 4EP–2.5C(**) | 541– 0945– 6 –** | 4 | 13.0 | 7.5 | 20.0 | 13.4 | 17.5 |
| DF1E– 5EP–2.5C(**) | 541– 0946– 9 –** | 5 | 15.5 | 10.0 | 22.5 | 15.9 | 20.0 |
| DF1E– 6EP–2.5C(**) | 541– 0947– 1 –** | 6 | 18.0 | 12.5 | 25.0 | 18.4 | 22.5 |
| DF1E– 7EP–2.5C(**) | 541– 0948– 4 –** | 7 | 20.5 | 15.0 | 27.5 | 20.9 | 25.0 |
| DF1E– 8EP–2.5C(**) | 541– 0949– 7 –** | 8 | 23.0 | 17.5 | 30.0 | 23.4 | 27.5 |
| DF1E– 9EP–2.5C(**) | 541– 0950– 6 –** | 9 | 25.5 | 20.0 | 32.5 | 25.9 | 30.0 |
| DF1E–10EP–2.5C(**) | 541– 0951– 9 –** | 10 | 28.0 | 22.5 | 35.0 | 28.4 | 32.5 |

The symbol ** included in HRS No. and the product spec No. indicates the Specific No.

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.

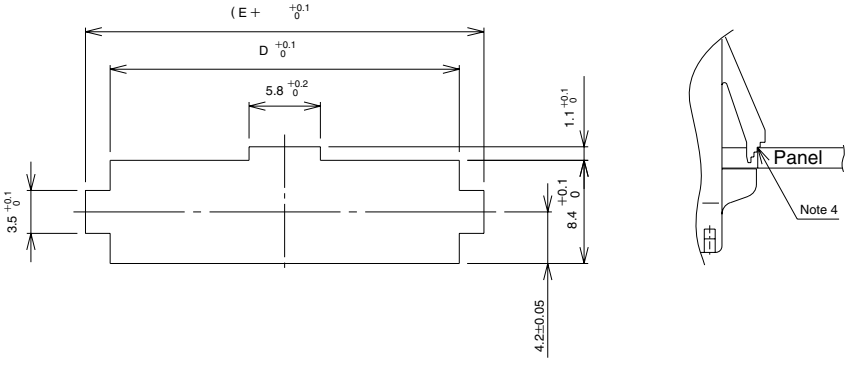
Note 5. : Panel fixation is loosened. (May be enlarged according to the panel board thickness.)

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

* Refer to page B122 for the retainer.

## ◆Panel Cutouts

| 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

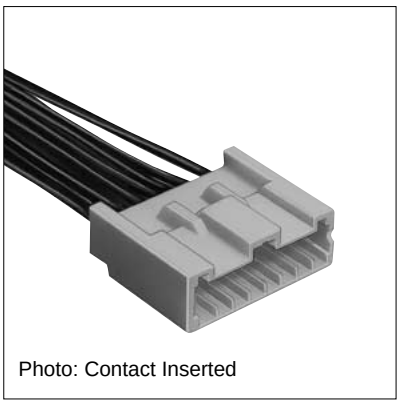
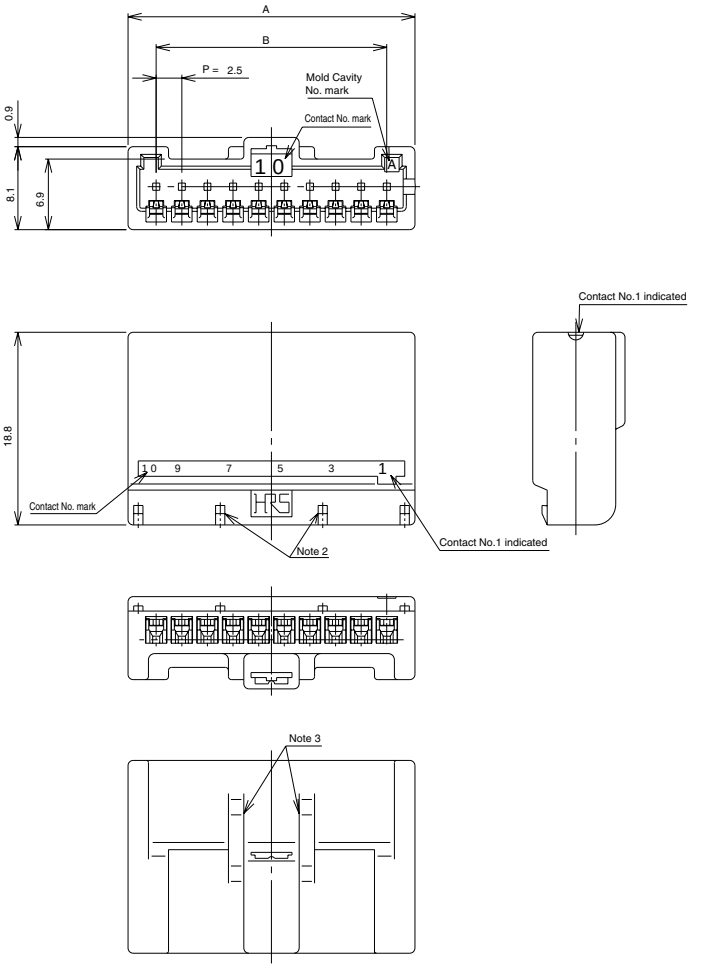


Photo: Contact Inserted




| Part Number | CL No. | Number of Contacts | A | B |
|---|---|---|---|---|
| DF1EA – 2EP–2.5C(✻✻) | 541 – 0957 – 5 – ✻✻ | 2 | 8.0 | 2.5 |
| 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 |

The symbol ✻✻ included in HRS No. and the product spec No. indicate a Specific No.

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 B122 for retainer.

## ■Socket

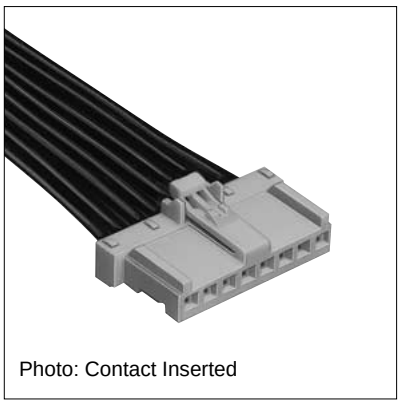
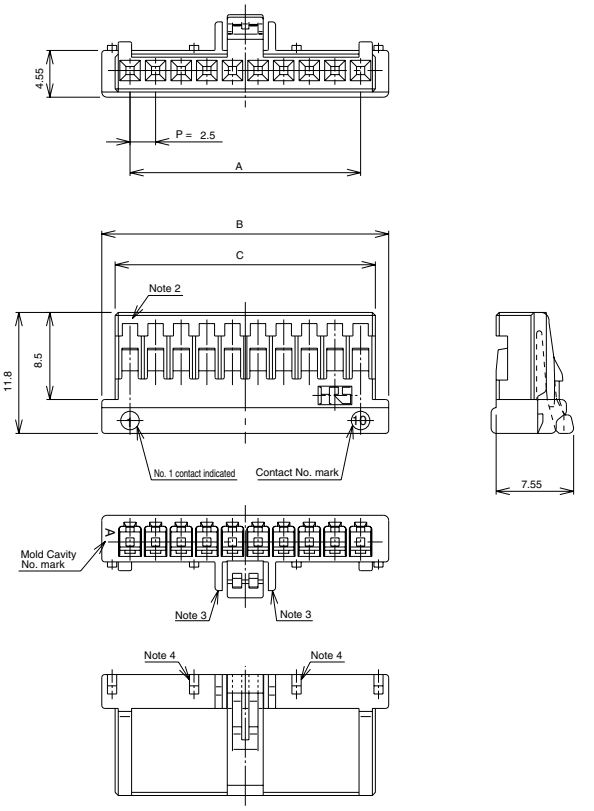


Photo: Contact Inserted




| Part Number | CL No. | Number of Contacts | A | B | C |
|---|---|---|---|---|---|
| DF1E – 2S–2.5C(**) | 541 – 0811 – 0 – ** | 2 | 2.5 | 8.0 | 5.4 |
| 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 –13D–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 |

The symbol ** included in HRS No. and the product spec No. indicate a Specific No.

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.

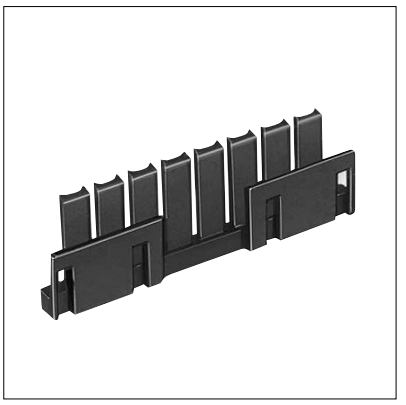
Note 2. : The 2 contact connector is equipped with the convex portion to prevent false-insertion.

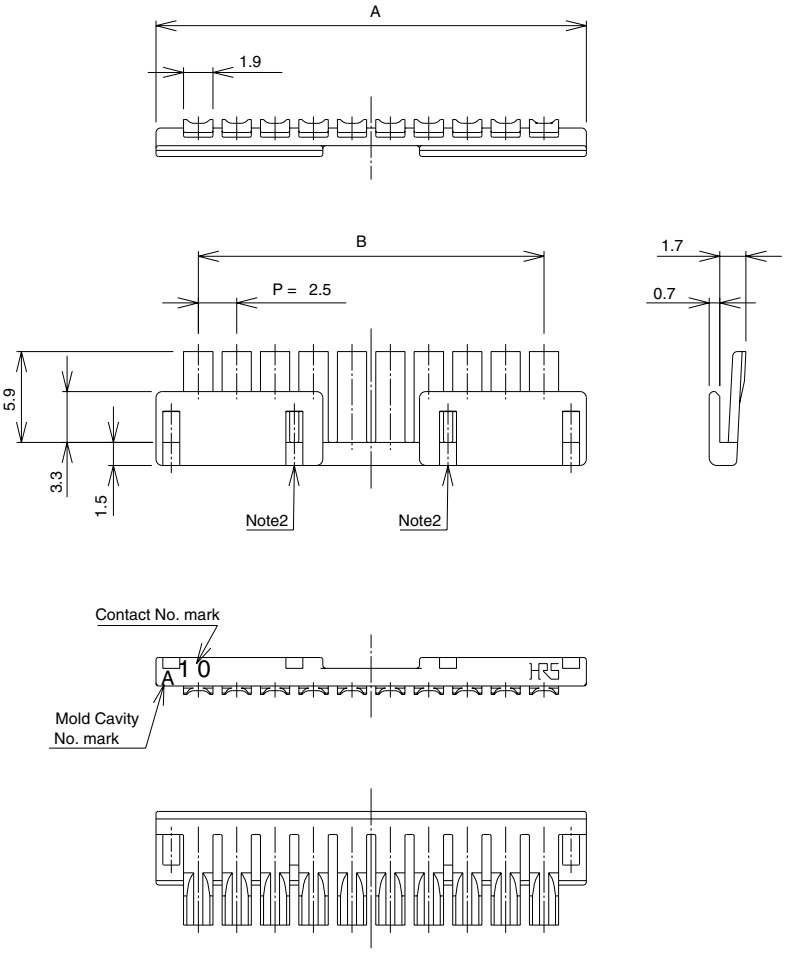
Note 3. : The 2 consult Has no wall on the locking side

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

* Refer to page B122 for the retainer.

## ■Retainer






| Part Number | CL No. | Number of Contacts | A | B |
|---|---|---|---|---|
| DF1E – 2RS/P–2.5(**) | 541 – 0971 – 6 | 2 | 8.0 | 2.5 |
| 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 |

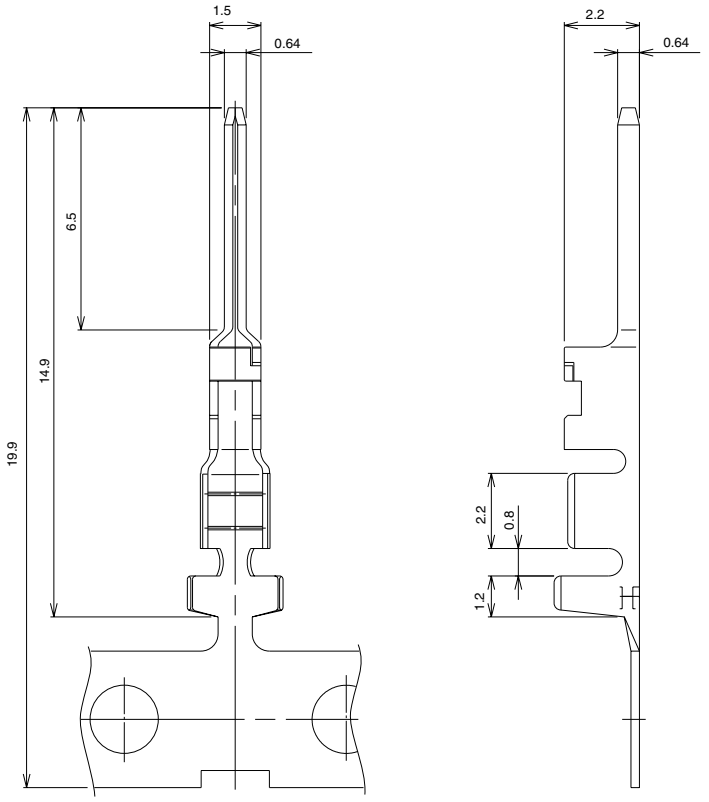
The symbol ** included in HRS No. and the product spec No. indicates the Specific No.

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 relay plug.

## ■Plug Crimping Contact




### ●Applicable Cable (Tin plating annealed copper wire)

| Conductor Size (Wire construction) |
|---|
| AWG # 20 (21 cores./0.18mm) |
| AWG # 22 (17 cores./0.16mm) |
| AWG # 24 (11 cores./0.16mm) |
| AWG # 26 ( 7 cores./0.16mm) |
| AWG # 28 ( 7 cores./0.127mm) |
| AWG # 30 ( 7 cores./0.1mm) |

### ●Recommended Cable

UL1061, UL1007

### ●Strip Length

3.0 to 3.7mm

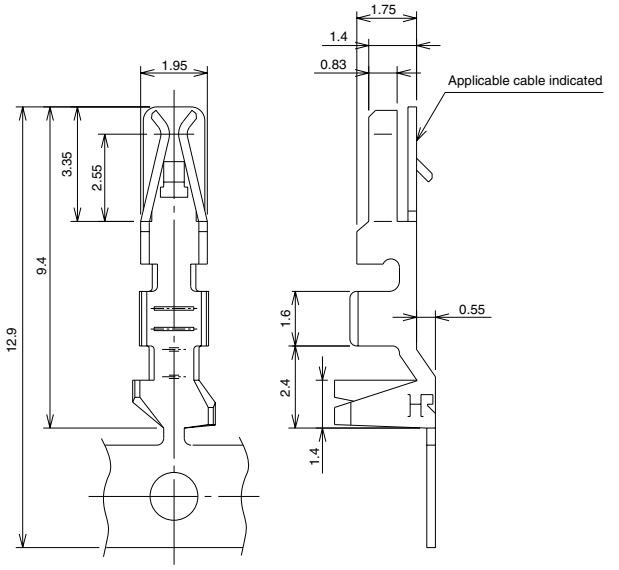
Note : If other cables are used instead of the applicable cable, contact Hirose sales department.

| Part Number | CL No. | Applicable Cable Indication | Applicable Cable | | Packaging Type | Quantity |
|---|---|---|---|---|---|---|
| | | | AWG | Jacket Diameter | | |
| DF1E – 2022PCF | 541 – 0937 – 8 | 20<br>22 | AWG # 20<br>AWG # 22 | 1.2 to 1.9mm | Reel | 10,000 |
| DF1E – 2022PC | 541 – 0938 – 0 | | | | Bag | 100 |
| DF1E – 2428PCF | 541 – 0939 – 3 | 24<br>28 | AWG # 24<br>AWG # 28 | 0.9 to 1.5mm | Reel | 10,000 |
| DF1E – 2428PC | 541 – 0940 – 2 | | | | Bag | 100 |
| DF1E – 30PCF | 541 – 0941 – 5 | 30 | AWG # 30 | 0.6 to 1.2mm | Reel | 10,000 |
| DF1E – 30PC | 541 – 0942 – 8 | | | | Bag | 100 |

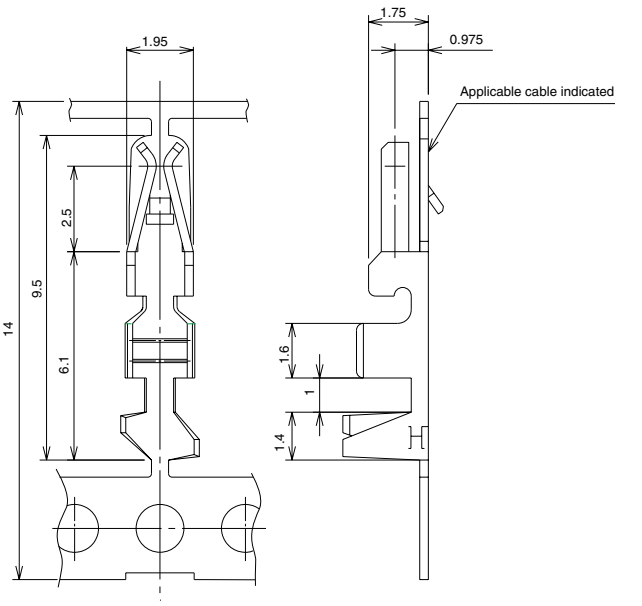
● Crimping Contact Extraction Tool DF-C-PO(B)

# ■Socket Crimping Contact

**●DF1E-2022SCF**




**●DF1B－＊＊＊＊SCF**




**●Applicable Cable (Tin plating annealed copper wire)**

| Conductor Size (Wire construction) |
|---|
| AWG # 20 (21 cores./0.18mm) |
| AWG # 22 (17 cores./0.16mm) |
| AWG # 24 (11 cores./0.16mm) |
| AWG # 26 ( 7 cores./0.16mm) |
| AWG # 28 ( 7 cores./0.127mm) |
| AWG # 30 ( 7 cores./0.1mm) |

**●Recommended Cable**

UL1061, UL1007

**●Strip Length**

2.0mm to 2.5mm

Note : If other cables are used instead of the applicable cable, consult Hirose sales department.

| Part Number | CL No. | Applicable Cable Indication | Applicable Cable | | Packaging Type | Quantity |
|---|---|---|---|---|---|---|
| | | | AWG | Jacket Diameter | | |
| DF1E – 2022SCF | 541 – 0999 – 5 | 20<br>22 | AWG # 20<br>AWG # 22 | 1.2 to 1.9mm | Reel | 10,000 |
| DF1E – 2022SC | 541 – 1000 – 2 | | | | Bag | 100 |
| DF1B – 2022SCF | 541 – 0223 – 1 | 20<br>22 | AWG # 20<br>AWG # 22 | 1.2 to 1.9mm | Reel | 10,000 |
| DF1B – 2022SC | 541 – 0224 – 4 | | | | Bag | 100 |
| DF1B – 2428SCF | 541 – 0678 – 1 | 24<br>28 | AWG # 24<br>AWG # 28 | 0.9 to 1.5mm | Reel | 10,000 |
| DF1B – 2428SC | 541 – 0679 – 4 | | | | Bag | 100 |
| DF1B – 30SCF | 541 – 0682 – 9 | 30 | AWG # 30 | 0.6 to 1.2mm | Reel | 10,000 |
| DF1B – 30SC | 541 – 0683 – 1 | | | | Bag | 100 |

● Crimping Contact Extraction Tool DF-C-PO(B)

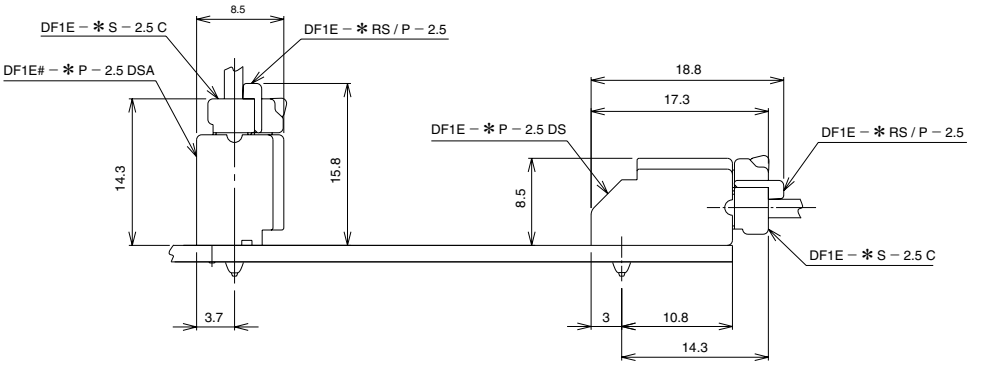
## ◆Crimping Tools

| Item | Part Number | CL No. | Applicable Contact |
|---|---|---|---|
| Applicator | AP105 – DF1E – 2022S | 901 – 4561 – 0 | DF1E – 2022SCF |
| | AP105 – DF1B – 2022S ◎ | 901 – 4510 – 9 | DF1B – 2022SCF |
| | AP105 – DF1B – 2428S ◎ | 901 – 4518 – 0 | DF1B – 2428SCF |
| | AP105 – DF1B – 30S ◎ | 901 – 4517 – 8 | DF1B – 30SCF |
| | AP105 – DF1B – 2022P ◎ | 901 – 4509 – 0 | DF1E – 2022PCF |
| | AP105 – DF1B – 2428P ◎ | 901 – 4521 – 5 | DF1E – 2428PCF |
| | AP105 – DF1B – 30P ◎ | 901 – 4519 – 3 | DF1E – 30PCF |
| Main Press Unit | CM – 105 ◎ | 901 – 0005 – 4 | ——— |
| Manual Crimping Tool | HT102/DF1E – 2022S | 550 – 0277 – 1 | DF1E – 2022SC |
| | DF1B – TA2022SHC ◎ | 550 – 0182 – 7 | DF1B – 2022SC |
| | DF1B – TA2428SHC ◎ | 550 – 0209 – 1 | DF1B – 2428SC |
| | DF1B – TA30SHC ◎ | 550 – 0211 – 3 | DF1B – 30SC |
| | HT102/DF1BE – 2022P | 550 – 0278 – 4 | DF1E – 2022PC |
| | HT102/DF1BE – 2428P | 550 – 0279 – 7 | DF1E – 2428PC |
| | HT102/DF1BE – 30P | 550 – 0280 – 6 | DF1E – 30PCF |
| Contact Extraction Tool | DF – C – PO (B) | 550 – 0179 – 2 | DF1E – 2022SC (F)<br>DF1B – ＊＊＊＊ SC (F)<br>DF1E – ＊＊＊＊ PC (F) |

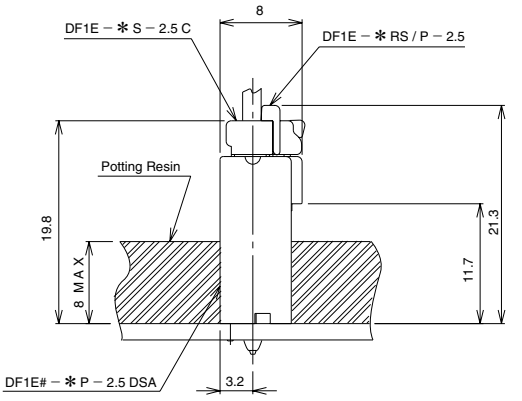
Note 1. : Add "◎" to the last number of the product, in order to use DF1B series tools, which have been conventionally merchandized.
Note 2. : f any trouble has occurred due to other tools, which are not designated by Hirose, Hirose won't guarantee any products.

# ◆Application Pattern

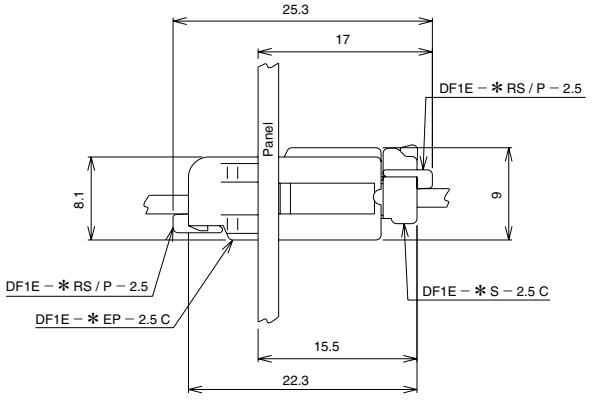
## ●Standard Header



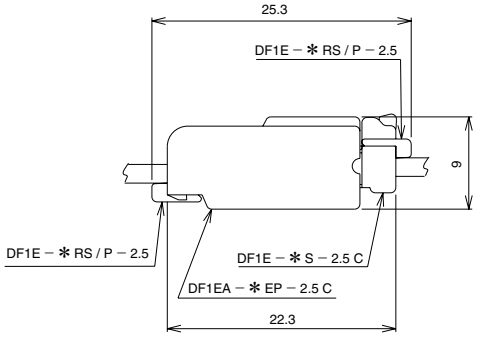

## ●Header for Potting




## ●Panel Mounting Lock In-line Plug




## ●In-line Plug



## ◆Precautions for Use

1. Recommended Soldering Condition : Flow: 250℃ for 3 seconds
   Manual soldering: 290℃ for 2 seconds

2. Cleaning Condition : Refer to Nylon Connector Use Hand book.
   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 Nylon Connector Use Hand book.

4. Cautions : ● To remove the connector, if the connector is forcedly removed, it will cause connector damage. If the connector is hardly removed, slightly push the connector once, and then remove it using the lock.
   ● 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.
   ● If the potting process is implemented, it is desirable to fill the connector with resin, considering the resin surface tensile force.
   ● 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.