

7.92mm Contact Pitch High-Current Connectors for Internal Power Supplies (UL, C-UL and TÜV Listed)

DF22 Series

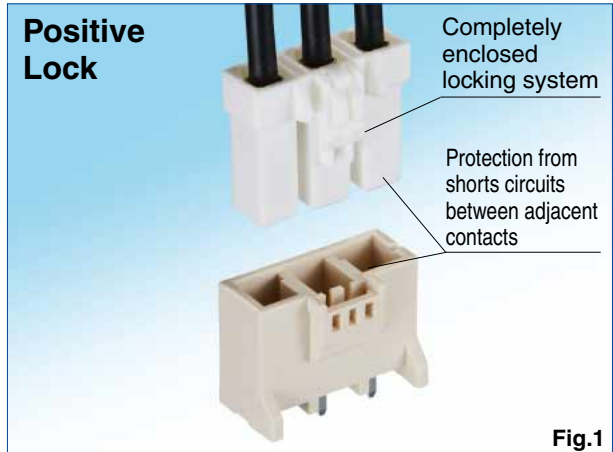
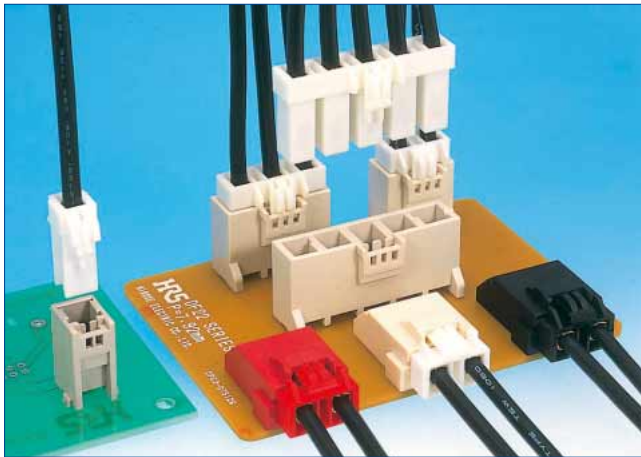


Fig.1

■ Features

1. Rated up to 30A

Single position connector can carry current of 30A with 10 AWG conductor. Please refer to Table #1 for current ratings for multi-position connectors using other conductor sizes.

2. Positive Locking Function

Reliable interior lock protects mated connectors from accidental disconnection. (Fig.1)

3. Prevention of Incorrect Connections

To prevent incorrect connection when using multiple connectors having the same Number of contacts, 3 product types having different mating configurations are available. (Fig.2)

4. Molded-in contact retention tabs

Handling of terminated contacts during the crimping is easier and avoids entangling of wires, since there are no protruding metal tabs.

5. Prevention of incorrect board placement

Built-in posts assure correct connector placement and orientation on the board.

6. Supports resin sealing

Allows potting up to 10mm.

7. Prevention of Short Circuits Between Adjacent Contacts

Each Contact is completely surrounded by the housing wall electrically isolating it from adjacent contacts.

8. Increased Retention Force of Crimped Contacts

Improved pull-out force design.

9. Full Line of Crimp Socket Contacts

Hirose has released DF22C-*S-7.92C which has easy to push/release latch design. and DF22B-*S-7.92C/DF22C-*S-7.92C which has improved electrical insulation properties.

10. In-line Connections

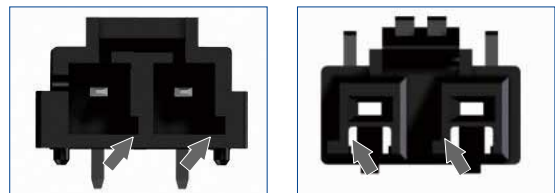
Wire-to-wire connection is also available. Space is saved with 2-row (2x2) layout for 4 pos.

11. UL, C-UL, and TÜV Certified.

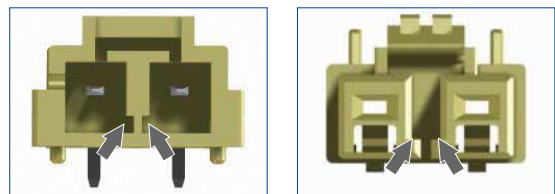
12. Glow Wire compliance (Compliant with IEC 60695-2-11)

Keying for multiple use

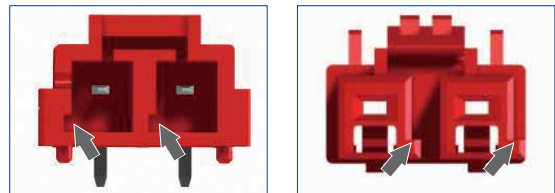
●R Type (Guide key : right side, Color : black)



●Standard Type (Guide key : inside, Color : natural)



●L Type (Guide key : left side, Color : red)



*The image on the left show header (the board dip side), the image on the right show the socket (cable side).

*The guide key position is indicated in position facing the mating surface of the header.

Fig.2

Product Specifications

| | | | | | | | | | | |
|----------------|----------------------------|-----------------|--------|--------|--------|--|--|------------------------|--------------------------|---------------------|
| Ratings | Current rating (Note 1) | No. of contacts | 10 AWG | 12 AWG | 14 AWG | 16 AWG | Operating temperature range | -35°C to 85°C (Note 2) | | |
| | | 1 | 30A | 25A | 20A | 15A | | | Operating humidity range | 20% to 80% |
| | | 2 | 25A | 20A | 18A | 15A | Storage temperature range | -10°C to 60°C (Note 3) | | |
| | | 3 | 25A | 20A | 18A | 15A | | | Storage humidity range | 40% to 70% (Note 3) |
| | | 4 | 22A | 18A | 15A | 13A | | | | |
| | 5 | 22A | 18A | 15A | 13A | UL/C-UL/TÜV File No. and Recognition No. | UL : E52653 C-UL : E52653 TÜV : R9950703 | | | |
| Voltage rating | Specification | | | AC/DC | 1000V | | | | | |
| | UL/C-UL | | | AC/DC | 600V | | | | | |
| | TÜV | | | AC/DC | 600V | | | | | |

| Item | Specifications | Conditions |
|--|--|---|
| 1. Contact Resistance | No more than 5mΩ | Measured at 1mA and no higher than 20mV |
| 2. Insulation Resistance | No less than 1,000MΩ | Measured at DC=1000V |
| 3. Withstand Voltage | No flashover or breakdown | AC 2500 V is applied for one minute. |
| 4. Contact Insertion and Extraction Forces | 0.3N min., 5N max | Measured with a steel pin of 1.6 x 0.8 ± 0.002 thickness |
| 5. Durability | Contact resistance : no more than 10mΩ | 30 mating cycles |
| 6. Vibration Resistance | No electrical discontinuity of 1μs or greater | Frequency 10-55 Hz, half amplitude 0.75 mm, 10 times in each of the three directions |
| 7. Shock Resistance | No electrical discontinuity of 1μs or greater | Accelerated velocity : 490 m/s ² for 11 ms, half-sine wave in 3 directions, 3 times for each direction |
| 8. Moisture-Resistance | Contact resistance : no more than 10mΩ | Temperature : 40 ± 2°C ; humidity : 90 to 95%, left as it is for 96 hours |
| 9. Temperature cycles | Contact resistance : no more than 10mΩ | (-55°C : 30 minutes → 5 to 35°C : 5 minutes → 85°C : 30 minutes → 5 to 35°C : 5 minutes) for 5 cycles |
| 10. Solder heat Resistance | The resin parts should withstand the temperature and resist melting. | Flow : 250°C, 10 sec Hand soldering : temperature of soldering iron at 300°C for 3 seconds |

Note 1 : Current rating of header is 30A (1 pos.), 25A (2 to 3 pos.) and 22A (4 to 5 pos.)

Note 2 : Includes temperature rise caused by current flow.

Note 3 : The storage condition refers to long-term storage of the product on the shelf before assembly. Please use the operating temperature for temporary storage such as pre-assembly and during shipping.

Materials / Finish

| Product | Part | Material | Finish | Remarks |
|----------------|-----------|--------------------------------|----------------------------------|---------|
| Sockets | Insulator | Polyamide | Color : Natural white (Note) | UL94V-0 |
| Crimp contacts | Contacts | High conductivity copper alloy | Tin-lead plated or Gold plated | — |
| Headers | Insulator | Polyamide (Glass reinforced) | Color : Natural beige (Note) | UL94V-0 |
| | Contacts | High conductivity copper alloy | Tin-copper plated or Gold plated | — |

Note : Standard Color, colors of the differing coupling forms are black for DF22R and red for DF22L.

Product Number Structure

● Socket, Header

● Contacts

DF22 B L - 2 S - 7.92 C ()**

DF22 A - 1416 SCF A

①

②

③

④

⑤

⑥

⑦

①

⑧

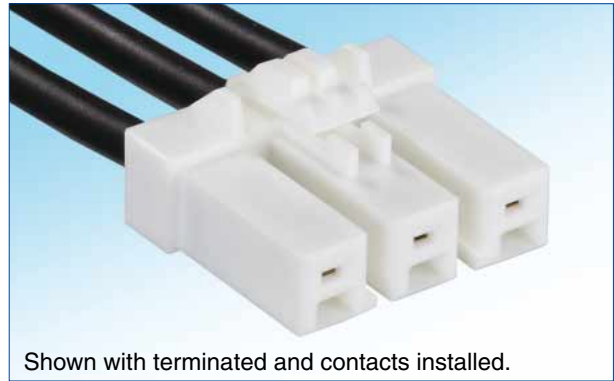
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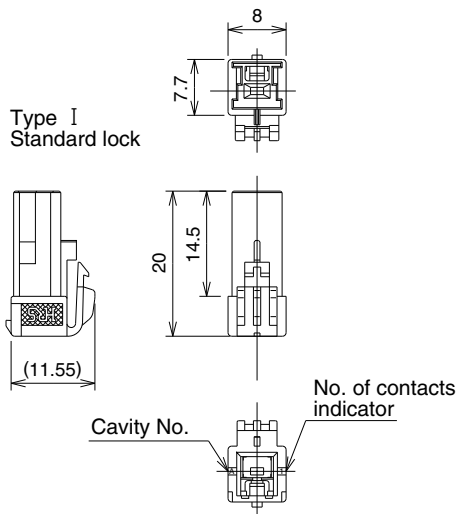
⑪

| | | |
|---|---|---|
| ① Series name : DF22 | ④ Number of contacts : 1 to 5 | ⑧ Applicable Cable Blank : UL1430 A : UL1015 |
| ② Form Type Sockets Blank : Standard height, standard lock (Type I) B : Long type, standard lock (Type III) C : Long type, ergonomic lock (Type IV) In-line Plugs Blank : With panel stop A : Without panel stop | ⑤ Connector type S : Socket DS : Double-row socket P : Header EP : In-line plug DEP : Double-row in-line plug RS/P : Retainer | |
| ③ Guide key type Blank : Inside (Color: natural) R : Right side (Color: black) L : Left side (Color: red) | ⑥ Contact pitch : 7.92 mm | ⑩ Packaging SCF : Socket contacts / reel SC : Socket contacts / pack PCF : In-line plug contacts / reel PC : In-line plug contacts / pack |
| | ⑦ Type of housing C : Crimp housing DSA : Straight header DS : Right-angle header No letter : Retainer | |

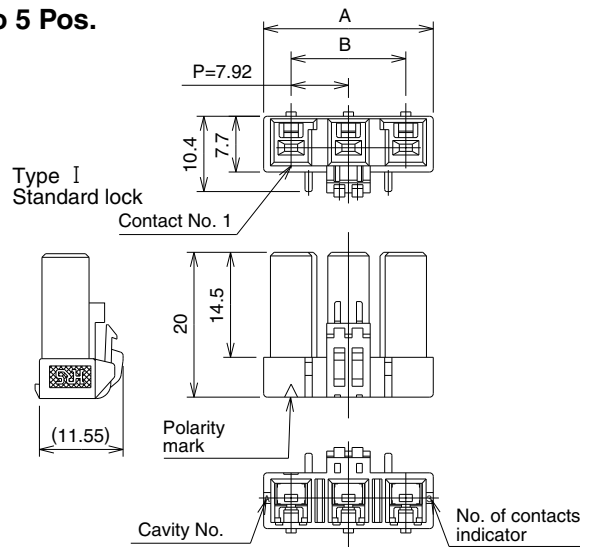
■ Crimp Sockets (Standard Height Type)



1 Pos.



2 to 5 Pos.



■ Type I

Height : Standard type, Standard lock

Note : The part number and HRS No. have changed to reflect the product form change of the 2 to 5 pos. types.

Standard Type (Guide Key : Inside, Color : White) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|-------------------|---------------|-----------------|-------|-------|
| DF22-1S-7.92C(28) | 680-1012-2 28 | 1 | 8.00 | — |
| DF22-2S-7.92C(28) | 680-1004-4 28 | 2 | 15.50 | 7.92 |
| DF22-3S-7.92C(28) | 680-1005-7 28 | 3 | 23.42 | 15.84 |
| DF22-4S-7.92C(28) | 680-1006-0 28 | 4 | 31.34 | 23.76 |
| DF22-5S-7.92C(28) | 680-1007-2 28 | 5 | 39.26 | 31.68 |

R Type (Guide Key : Right Side, Color : Black) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|--------------------|---------------|-----------------|-------|-------|
| DF22R-1S-7.92C(28) | 680-1026-7 28 | 1 | 8.00 | — |
| DF22R-2S-7.92C(28) | 680-1027-0 28 | 2 | 15.50 | 7.92 |
| DF22R-3S-7.92C(28) | 680-1028-2 28 | 3 | 23.42 | 15.84 |
| DF22R-4S-7.92C(28) | 680-1029-5 28 | 4 | 31.34 | 23.76 |
| DF22R-5S-7.92C(28) | 680-1030-4 28 | 5 | 39.26 | 31.68 |

L Type (Guide Key : Left Side, Color : Red) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|--------------------|---------------|-----------------|-------|-------|
| DF22L-1S-7.92C(28) | 680-1031-7 28 | 1 | 8.00 | — |
| DF22L-2S-7.92C(28) | 680-1032-0 28 | 2 | 15.50 | 7.92 |
| DF22L-3S-7.92C(28) | 680-1033-2 28 | 3 | 23.42 | 15.84 |
| DF22L-4S-7.92C(28) | 680-1034-5 28 | 4 | 31.34 | 23.76 |
| DF22L-5S-7.92C(28) | 680-1035-8 28 | 5 | 39.26 | 31.68 |

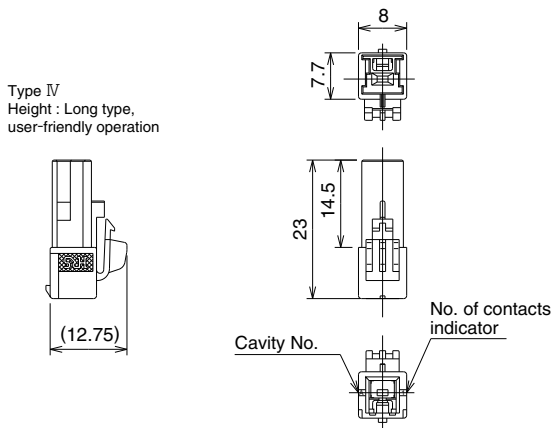
Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.

Note 2 : Every even number position has a different locking design.

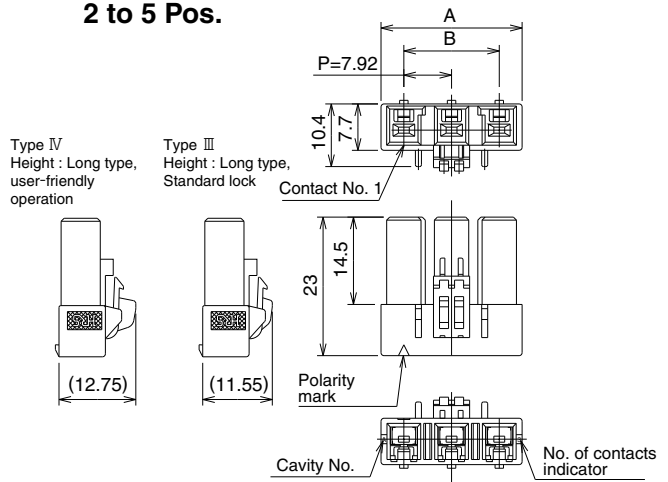
■ Crimp Sockets (Height, Long Type)



1 Pos.



2 to 5 Pos.



■ Type III

Height : Long type, Standard lock

Standard Type (Guide Key : Inside, Color : White) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|----------------|------------|-----------------|-------|-------|
| DF22B-2S-7.92C | 680-1097-5 | 2 | 15.50 | 7.92 |
| DF22B-3S-7.92C | 680-1098-8 | 3 | 23.42 | 15.84 |
| DF22B-4S-7.92C | 680-1099-0 | 4 | 31.34 | 23.76 |
| DF22B-5S-7.92C | 680-1100-8 | 5 | 39.26 | 31.68 |

Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.
Note 2 : Every even number position has a different locking design.

■ Type IV

Height : Long type, Enhanced ergonomic lock

Standard Type (Guide Key : Inside, Color : White) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|----------------|------------|-----------------|-------|-------|
| DF22C-1S-7.92C | 680-1101-0 | 1 | 8.00 | — |
| DF22C-2S-7.92C | 680-1102-3 | 2 | 15.50 | 7.92 |
| DF22C-3S-7.92C | 680-1103-6 | 3 | 23.42 | 15.84 |
| DF22C-4S-7.92C | 680-1104-9 | 4 | 31.34 | 23.76 |

R Type (Guide Key : Right Side, Color : Black) Unit : mm

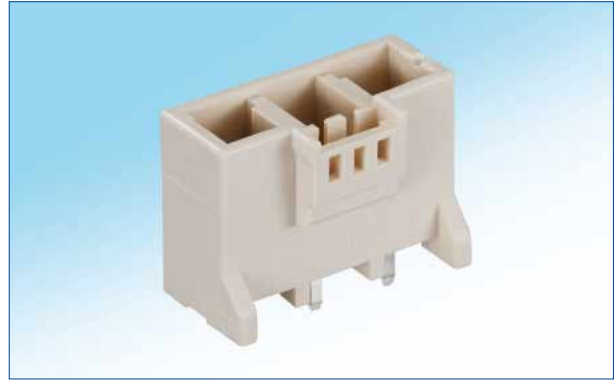
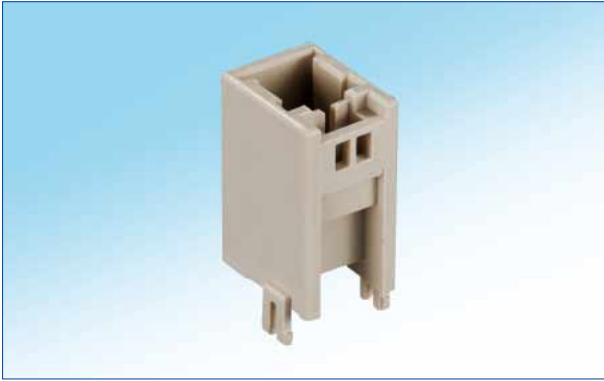
| Part No. | HRS No. | No. of Contacts | A | B |
|-----------------|------------|-----------------|-------|-------|
| DF22CR-3S-7.92C | 680-1130-9 | 3 | 23.42 | 15.84 |

L Type (Guide Key : Left Side, Color : Red) Unit : mm

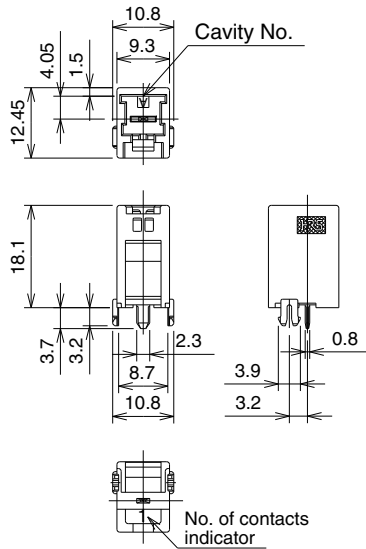
| Part No. | HRS No. | No. of Contacts | A | B |
|-----------------|------------|-----------------|-------|-------|
| DF22CL-1S-7.92C | 680-1133-7 | 1 | 8.00 | — |
| DF22CL-3S-7.92C | 680-1135-2 | 3 | 23.42 | 15.84 |

Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.
Note 2 : Every even number position has a different locking design.

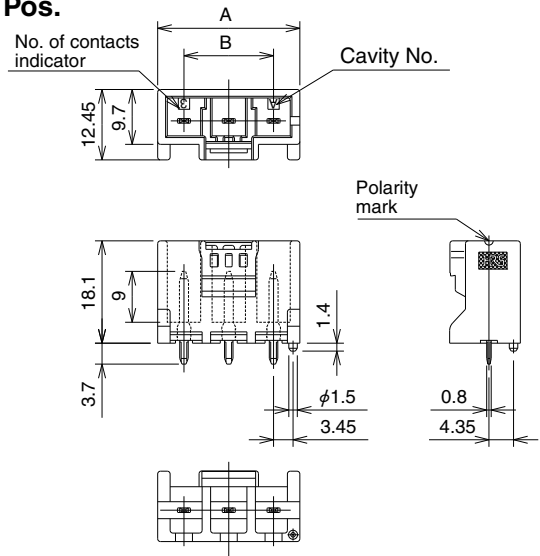
■ Straight Header



1 Pos.



2 to 5 Pos.



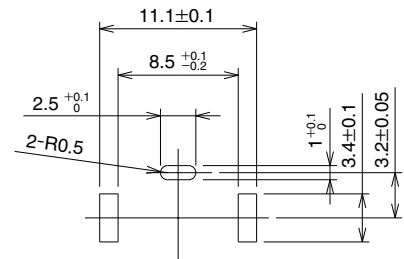
[Specification number]
 (05) : Tin-copper plated bag packaging
 (25) : Tin-copper plated tray packaging (only 1 pos)
 (06) : Gold plated, bag packaging

Standard Type (Guide Key : Inside, Color : Natural Beige) Unit : mm

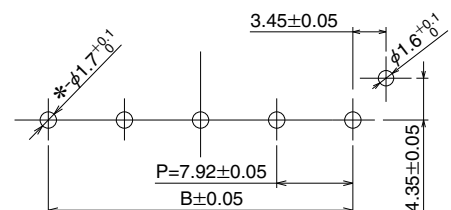
| Part No. | HRS No. | No. of Contacts | A | B | Bag Packaging | Tray Packaging | Tin-copper plated | Gold plated |
|---------------------|---------------|-----------------|-------|-------|---------------|----------------|-------------------|-------------|
| DF22-1P-7.92DSA(**) | 680-1013-5 ** | 1 | — | — | — | ✓ | ✓ | — |
| DF22-2P-7.92DSA(**) | 680-1014-8 ** | 2 | 17.22 | 7.92 | ✓ | — | ✓ | ✓ |
| DF22-3P-7.92DSA(**) | 680-1015-0 ** | 3 | 25.14 | 15.84 | ✓ | — | ✓ | ✓ |
| DF22-4P-7.92DSA(**) | 680-1016-3 ** | 4 | 33.06 | 23.76 | ✓ | — | ✓ | — |
| DF22-5P-7.92DSA(**) | 680-1017-6 ** | 5 | 40.98 | 31.68 | ✓ | — | ✓ | — |

◆ Recommended PCB Layout (Board thickness : 1.6±0.1)

1 Pos.



2 to 5 Pos.



R Type (Guide Key : Right Side, Color : Black) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | Bag Packaging | Tray Packaging | Tin-copper plated | Gold plated |
|----------------------|---------------|-----------------|-------|-------|---------------|----------------|-------------------|-------------|
| DF22R-1P-7.92DSA(**) | 680-1036-0 ** | 1 | — | — | — | ✓ | ✓ | — |
| DF22R-2P-7.92DSA(**) | 680-1037-3 ** | 2 | 17.22 | 7.92 | ✓ | — | ✓ | — |
| DF22R-3P-7.92DSA(**) | 680-1038-6 ** | 3 | 25.14 | 15.84 | ✓ | — | ✓ | — |
| DF22R-4P-7.92DSA(**) | 680-1039-9 ** | 4 | 33.06 | 23.76 | ✓ | — | ✓ | — |
| DF22R-5P-7.92DSA(**) | 680-1040-8 ** | 5 | 40.98 | 31.68 | ✓ | — | ✓ | — |

L Type (Guide Key : Left Side, Color : Red) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | Bag Packaging | Tray Packaging | Tin-copper plated | Gold plated |
|----------------------|---------------|-----------------|-------|-------|---------------|----------------|-------------------|-------------|
| DF22L-1P-7.92DSA(**) | 680-1041-0 ** | 1 | — | — | — | ✓ | ✓ | — |
| DF22L-2P-7.92DSA(**) | 680-1042-3 ** | 2 | 17.22 | 7.92 | ✓ | — | ✓ | — |
| DF22L-3P-7.92DSA(**) | 680-1043-6 ** | 3 | 25.14 | 15.84 | ✓ | — | ✓ | — |
| DF22L-4P-7.92DSA(**) | 680-1044-9 ** | 4 | 33.06 | 23.76 | ✓ | — | ✓ | — |
| DF22L-5P-7.92DSA(**) | 680-1045-1 ** | 5 | 40.98 | 31.68 | ✓ | — | ✓ | — |

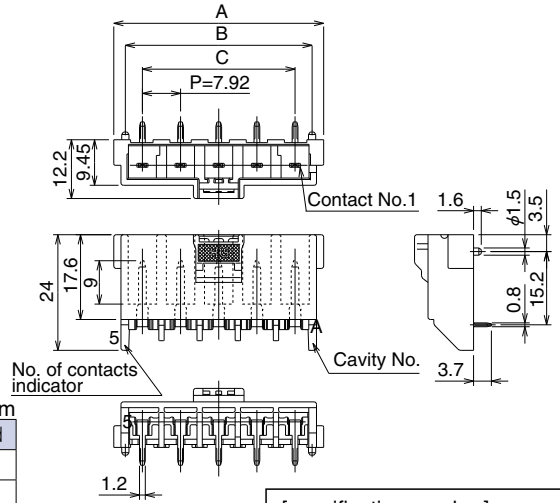
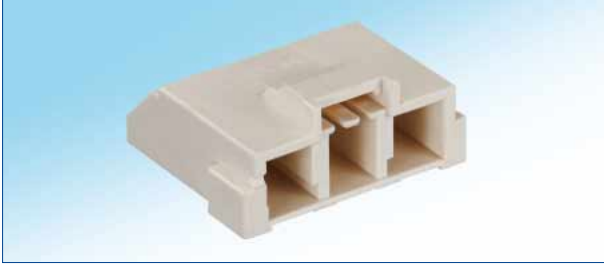
Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.

Note 2 : Tray packaging (150 pcs/tray). Order by number of 150.

Note 3 : Every even number position has a different locking design.

Note 4 : Please contact Hirose representative if you have request for non-standard Au plating.

Right Angle Header



Standard Type (Guide Key : Inside, Color : Natural Beige) Unit : mm

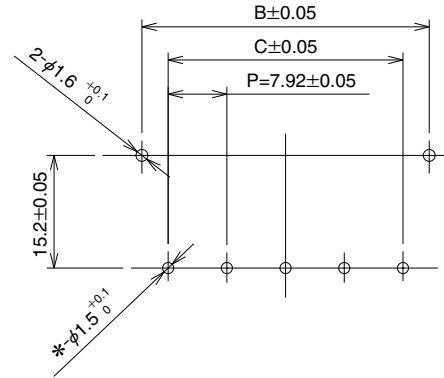
| Part No. | HRS No. | No. of Contacts | A | B | C | Tin-copper plated | Gold plated |
|--------------------|---------------|-----------------|-------|-------|-------|-------------------|-------------|
| DF22-2P-7.92DS(**) | 680-1008-5 ** | 2 | 19.80 | 15.00 | 7.92 | (35) | (36) |
| DF22-3P-7.92DS(**) | 680-1009-8 ** | 3 | 27.72 | 22.92 | 15.84 | (05) | (06) |
| DF22-4P-7.92DS(**) | 680-1010-7 ** | 4 | 35.64 | 30.84 | 23.76 | (05) | — |
| DF22-5P-7.92DS(**) | 680-1011-0 ** | 5 | 43.56 | 38.76 | 31.68 | (05) | (06) |

[specification number]
 (05), (35) : Tin-copper plated
 (06), (36) : Gold plated

R Type (Guide Key : Right Side, Color : Black) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | C | Tin-copper plated | Gold plated |
|---------------------|---------------|-----------------|-------|-------|-------|-------------------|-------------|
| DF22R-2P-7.92DS(**) | 680-1018-9 ** | 2 | 19.80 | 15.00 | 7.92 | (05) | — |
| DF22R-3P-7.92DS(**) | 680-1019-1 ** | 3 | 27.72 | 22.92 | 15.84 | (05) | (06) |
| DF22R-4P-7.92DS(**) | 680-1020-0 ** | 4 | 35.64 | 30.84 | 23.76 | (05) | — |
| DF22R-5P-7.92DS(**) | 680-1021-3 ** | 5 | 43.56 | 38.76 | 31.68 | (05) | — |

Recommended PCB Layout (Board thickness : 1.6±0.1)



L Type (Guide Key : Left Side, Color : Red) Unit : mm

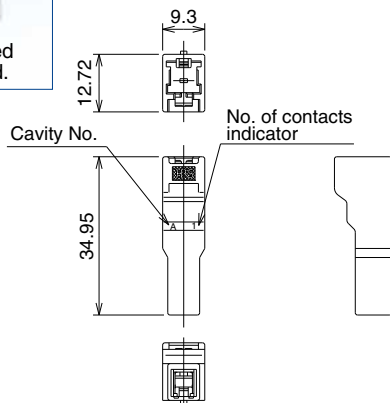
| Part No. | HRS No. | No. of Contacts | A | B | C | Tin-copper plated | Gold plated |
|---------------------|---------------|-----------------|-------|-------|-------|-------------------|-------------|
| DF22L-2P-7.92DS(**) | 680-1022-6 ** | 2 | 19.80 | 15.00 | 7.92 | (05) | (06) |
| DF22L-3P-7.92DS(**) | 680-1023-9 ** | 3 | 27.72 | 22.92 | 15.84 | (05) | (06) |
| DF22L-4P-7.92DS(**) | 680-1024-1 ** | 4 | 35.64 | 30.84 | 23.76 | (05) | — |
| DF22L-5P-7.92DS(**) | 680-1025-4 ** | 5 | 43.56 | 38.76 | 31.68 | (05) | (06) |

Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.
 Note 2 : Every even number position has a different locking design.
 Note 3 : Please contact Hirose representative if you have request for non-standard Au plating.

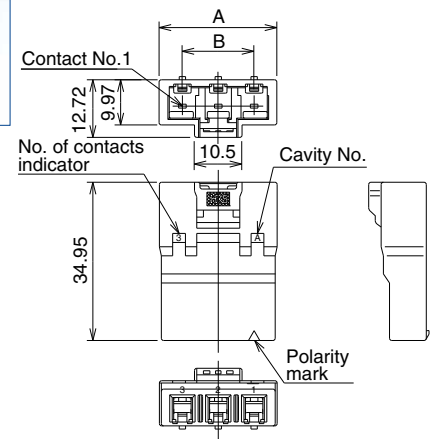
In-line Plug



1 Pos.



2, 3 Pos.



Standard Type (Guide Key : Inside, Color : Natural Beige) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|-----------------|------------|-----------------|-------|-------|
| DF22A-1EP-7.92C | 680-1053-0 | 1 | 9.30 | — |
| DF22A-2EP-7.92C | 680-1054-2 | 2 | 18.00 | 7.92 |
| DF22A-3EP-7.92C | 680-1055-5 | 3 | 26.00 | 15.84 |

R Type (Guide Key : Right Side, Color : Black) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|------------------|------------|-----------------|-------|-------|
| DF22AR-2EP-7.92C | 680-1069-0 | 2 | 18.00 | 7.92 |
| DF22AR-3EP-7.92C | 680-1070-9 | 3 | 26.00 | 15.84 |

L Type (Guide Key : Left Side, Color : Red) Unit : mm

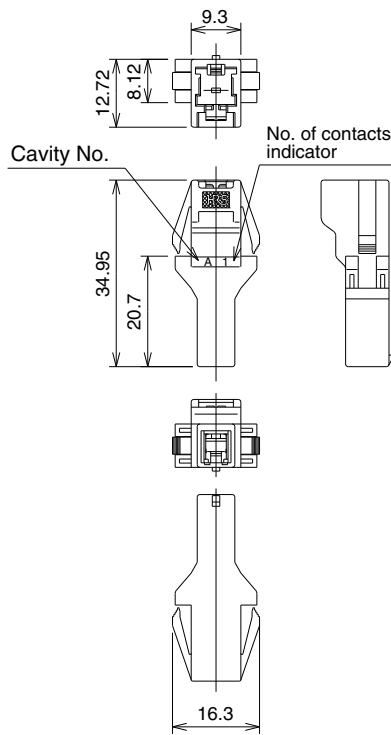
| Part No. | HRS No. | No. of Contacts | A | B |
|------------------|------------|-----------------|-------|------|
| DF22AL-2EP-7.92C | 680-1074-0 | 2 | 18.00 | 7.92 |

Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.
 Note 2 : Every even number position has a different locking design.

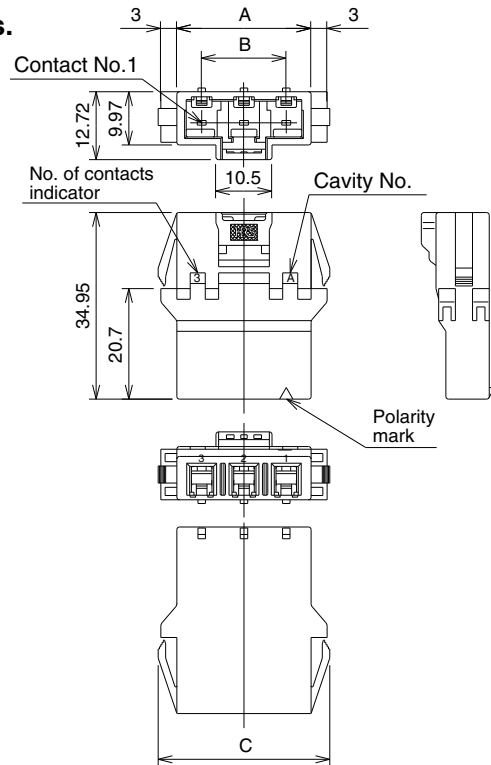
In-line Plug (Panel Lock Type)



1 Pos.



2, 3 Pos.



Standard Type (Guide Key : Inside, Color : White) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | C |
|----------------|------------|-----------------|-------|-------|-------|
| DF22-1EP-7.92C | 680-1048-0 | 1 | 9.30 | — | 16.30 |
| DF22-2EP-7.92C | 680-1049-2 | 2 | 17.22 | 7.92 | 24.22 |
| DF22-3EP-7.92C | 680-1050-1 | 3 | 25.14 | 15.84 | 32.14 |

R Type (Guide Key : Right Side, Color : Black) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | C |
|-----------------|------------|-----------------|-------|-------|-------|
| DF22R-2EP-7.92C | 680-1059-6 | 2 | 17.22 | 7.92 | 24.22 |
| DF22R-3EP-7.92C | 680-1060-5 | 3 | 25.14 | 15.84 | 32.14 |

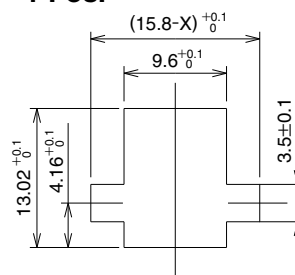
L Type (Guide Key : Left Side, Color : Red) Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | C |
|-----------------|------------|-----------------|-------|------|-------|
| DF22L-1EP-7.92C | 680-1063-3 | 1 | 9.30 | — | 16.30 |
| DF22L-2EP-7.92C | 680-1064-6 | 2 | 17.22 | 7.92 | 24.22 |

Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.
 Note 2 : Every even number position has a different locking design.

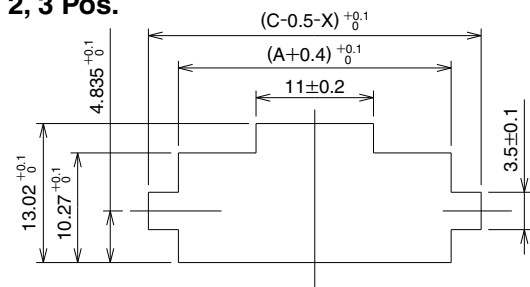
Panel Cutout

1 Pos.



| Panel thickness | X |
|-----------------|------|
| 2.0 | 0.48 |
| 1.6 | 0.96 |
| 1.2 | 1.44 |
| 0.8 | 1.92 |

2, 3 Pos.



Note 1 : Please ensure when mating this connector that the tapered portions of the panel are facing outward towards the receptacle connector's mating interface.

In-line Double-row Socket



Standard Type (Guide Key : Inside, Color : White) Unit : mm

| Part No. | HRS No. | No. of Contacts | Lock type |
|-----------------|------------|-----------------|---------------|
| DF22B-4DS-7.92C | 680-1142-8 | 4 | Standard lock |

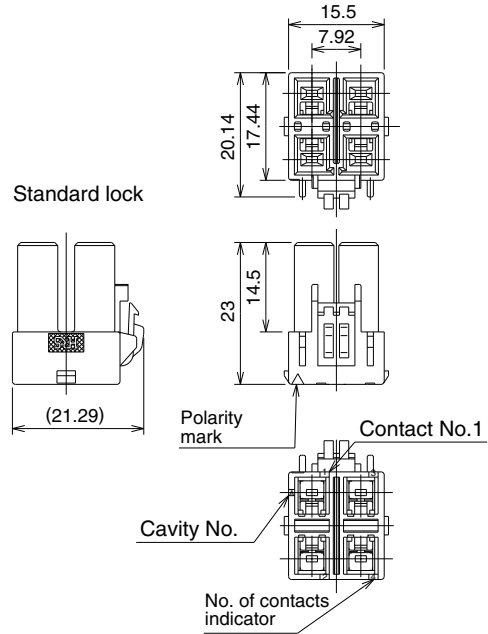
R Type (Guide Key : Right Side, Color : Black) Unit : mm

| Part No. | HRS No. | No. of Contacts | Lock type |
|------------------|------------|-----------------|---------------|
| DF22BR-4DS-7.92C | 680-1156-2 | 4 | Standard lock |

L Type (Guide Key : Left Side, Color : Red) Unit : mm

| Part No. | HRS No. | No. of Contacts | Lock type |
|------------------|------------|-----------------|---------------|
| DF22BL-4DS-7.92C | 680-1161-2 | 4 | Standard lock |

Note : Bag packaging (100 pcs/pack). Order by number of packs.



In-line Double-row Plug



Standard Type (Guide Key : Inside, Color : White) Unit : mm

| Part No. | HRS No. | No. of Contacts | Connector type |
|------------------|------------|-----------------|----------------------|
| DF22-4DEP-7.92C | 680-1051-4 | 4 | With snap-in tabs |
| DF22A-4DEP-7.92C | 680-1056-8 | 4 | Without snap-in tabs |

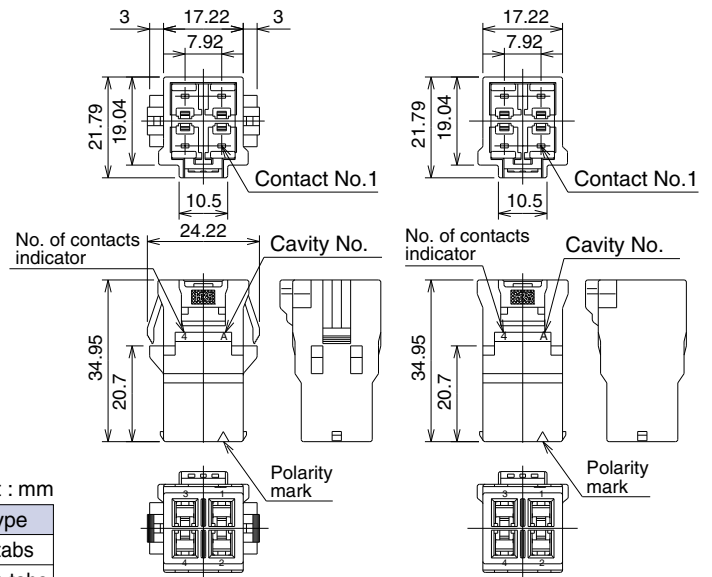
R Type (Guide Key : Right Side, Color : Black) Unit : mm

| Part No. | HRS No. | No. of Contacts | Connector type |
|------------------|------------|-----------------|-------------------|
| DF22R-4DEP-7.92C | 680-1170-3 | 4 | With snap-in tabs |

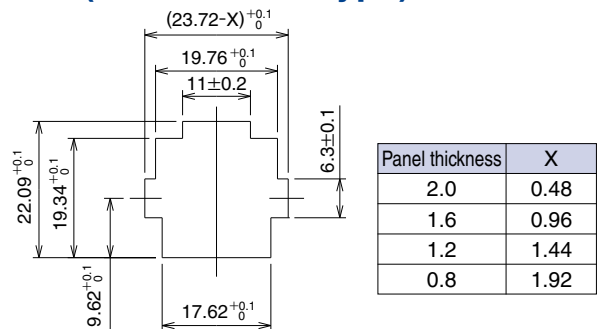
L Type (Guide Key : Left Side, Color : Red) Unit : mm

| Part No. | HRS No. | No. of Contacts | Connector type |
|-------------------|------------|-----------------|----------------------|
| DF22L-4DEP-7.92C | 680-1175-7 | 4 | With snap-in tabs |
| DF22AL-4DEP-7.92C | 680-1189-1 | 4 | Without snap-in tabs |

Note : Bag packaging (100 pcs/pack). Order by number of packs.



Recommended Panel Cutout (Panel mount type)

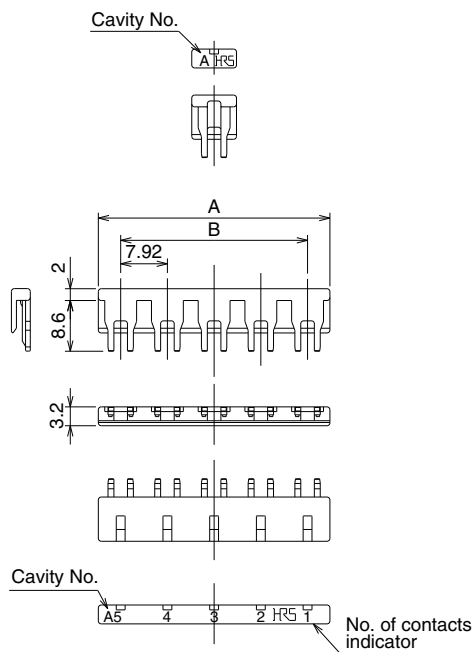


Note 1 : Please ensure when mating this connector that the tapered portions of the panel are facing outward towards the receptacle connector's mating interface.

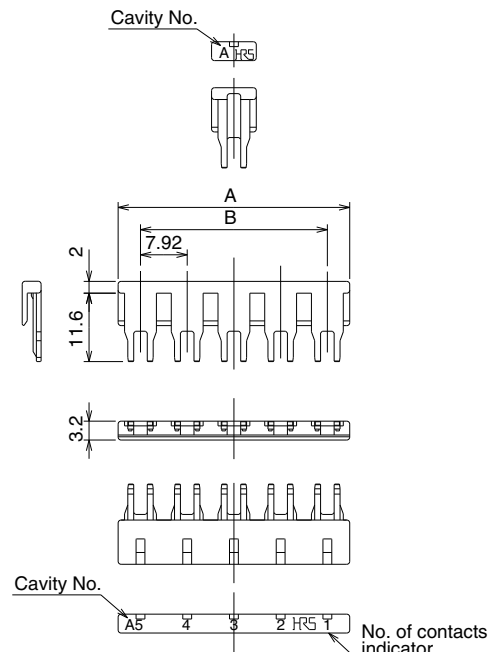
Retainer



For Standard height, standard lock (Type I)



For Long type, standard lock (Type III)
Long type, enhanced ergonomic lock (Type IV)



Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|-------------------|--|-----------------|-------|-------|
| DF22-2RS/P-7.92 | 680-1209-7 | 2 | 15.50 | 7.92 |
| DF22-3RS/P-7.92 | 680-1210-6 | 3 | 23.42 | 15.84 |
| DF22-4RS/P-7.92 | 680-1211-9 | 4 | 31.34 | 23.76 |
| DF22-5RS/P-7.92 | 680-1212-1 | 5 | 39.26 | 31.68 |
| Applicable Socket | DF22-*S-7.92C For Standard height, standard lock (Type I) * indicates number of contacts. | | | |

Note : Bag packaging (100 pcs/pack). Order by number of packs.

Unit : mm

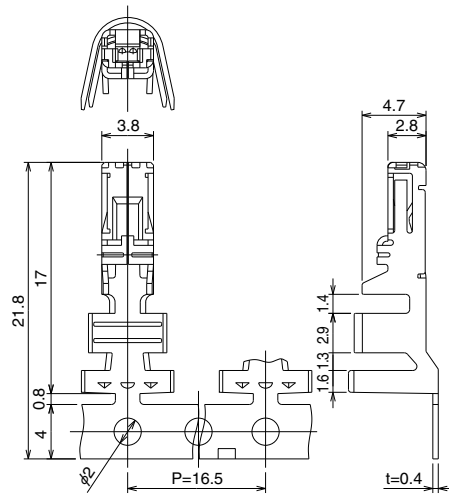
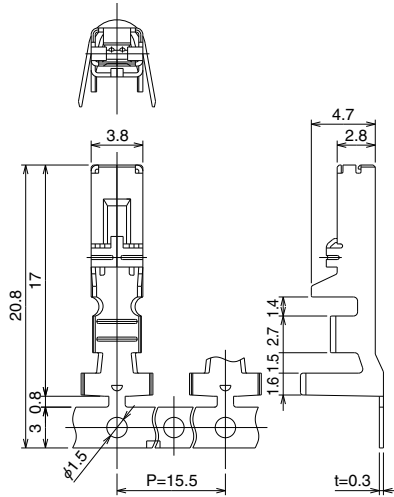
| Part No. | HRS No. | No. of Contacts | A | B |
|--------------------|---|-----------------|-------|-------|
| DF22B/C-2RS/P-7.92 | 680-1200-2 | 2 | 15.50 | 7.92 |
| DF22B/C-3RS/P-7.92 | 680-1201-5 | 3 | 23.42 | 15.84 |
| DF22B/C-4RS/P-7.92 | 680-1202-8 | 4 | 31.34 | 23.76 |
| DF22B/C-5RS/P-7.92 | 680-1203-0 | 5 | 39.26 | 31.68 |
| Applicable Socket | DF22B-*S-7.92C For Long type, standard lock (Type III) DF22C-*S-7.92C Long type, enhanced ergonomic lock (Type IV) DF22-*EP-7.92C DF22A-*EP-7.92C * indicates number of contacts. | | | |

Note 1 : Bag packaging (100 pcs/pack). Order by number of packs.
Note 2 : When connecting retainer into the plug housing, please note the cavity numbers will line up numerically, but the retainer cavity numbers will be upside down compared to the plug cavity numbers.

◆ Crimp Contact for Socket

For 14 to 16 AWG

For 10 to 12 AWG



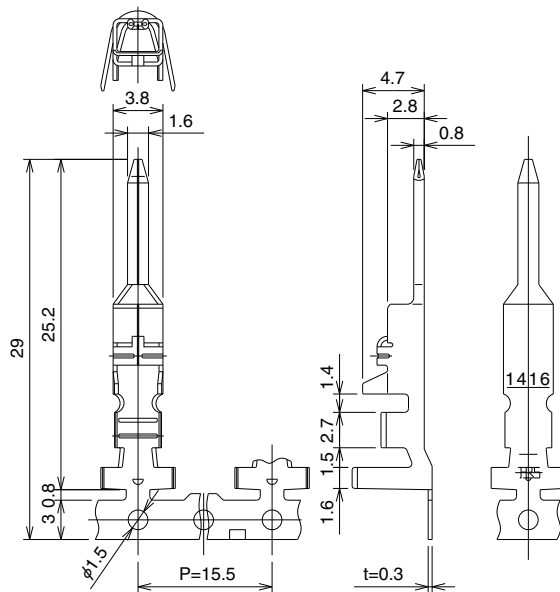
| Part No. | HRS No. | Applicable cable | | | | Packaging | Finish |
|----------------|------------|------------------|------------------|------------------|-------------------------|-----------|-------------|
| | | UL style | Jacket diameter | Wire size | Stranded wire conductor | | |
| DF22-1416SCF | 680-1000-3 | 1430 | φ2.4 to 3.0mm | 16 AWG, 14 AWG | 26/0.254mm, 41/0.26mm | 2500/reel | Tin plated |
| DF22-1416SC | 680-1001-6 | | φ2.6mm | 16 AWG | 26/0.254mm | 100/pack | |
| DF22A-1416SCF | 680-1002-9 | 1015 | φ3.0 to 3.8mm | 16 AWG | 26/0.254mm | 2000/reel | |
| DF22A-1416SC | 680-1003-1 | | φ3.2mm, φ3.7mm | 14 AWG | 41/0.26mm | 100/pack | |
| DF22A-1012SCF | 680-1089-7 | | φ3.6 to 4.9mm | 12 AWG | 65/0.26mm | 2000/reel | |
| DF22A-1012SC | 680-1090-6 | | φ4.04mm, φ4.69mm | 10 AWG | 104/0.26mm | 100/pack | |
| DF22-1416SCFA | 680-1085-6 | 1430 | φ2.4 to 3.0mm | 16 AWG | 26/0.254mm | 2500/reel | Gold plated |
| DF22A-1416SCFA | 680-1087-1 | 1015 | φ3.0 to 3.8mm | 14 AWG | 41/0.26mm | 2000/reel | |
| DF22A-1012SCFA | 680-1106-4 | | φ3.6 to 4.9mm | 12 AWG 10 AWG | 65/0.26mm 104/0.26mm | 2000/reel | |

Note 1 : Applicable wire with tin plated solid soft conductor.

Note 2 : When using other than the recommended wire, contact your nearest Hirose representative.

Note 3 : Strip length: 3.5 to 4.5mm

◆ Crimp Contact for In-line Plug



| Part No. | HRS No. | Applicable cable | | | | Packaging | Finish |
|---------------|------------|------------------|-----------------|----------------|-------------------------|-----------|-------------|
| | | UL style | Jacket diameter | Wire size | Stranded wire conductor | | |
| DF22-1416PCF | 680-1078-0 | 1430 | φ2.4 to 3.0mm | 16 AWG, 14 AWG | 26/0.254mm, 41/0.26mm | 2500/reel | Tin plated |
| DF22-1416PC | 680-1080-2 | | φ2.6mm | 16 AWG | 26/0.254mm | 100/pack | |
| DF22A-1416PCF | 680-1079-3 | 1015 | φ3.0 to 3.8mm | 16 AWG | 26/0.254mm | 2000/reel | |
| DF22A-1416PC | 680-1081-5 | | φ3.2mm, φ3.7mm | 14 AWG | 41/0.26mm | 100/pack | |
| DF22-1416PCFA | 680-2002-4 | 1430 | φ2.4 to 3.0mm | 14 AWG | 41/0.26mm | 2500/reel | Gold plated |

Note 1 : Applicable wire with tin plated solid soft conductor.

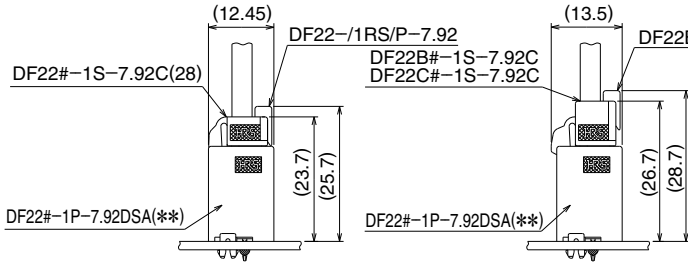
Note 2 : When using other than the recommended wire, contact your nearest Hirose representative.

Note 3 : Strip length: 3.5 to 4.5mm

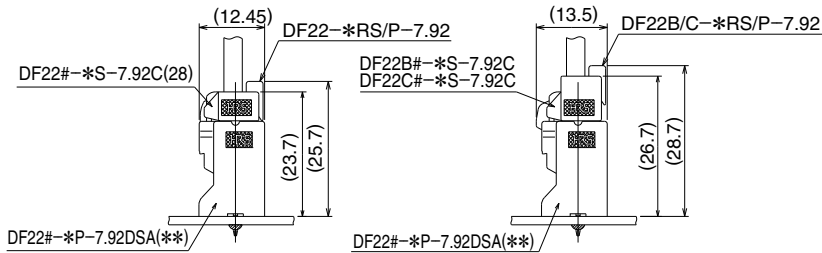
◆ Mated Dimensions

● Socket to Straight Header Connection

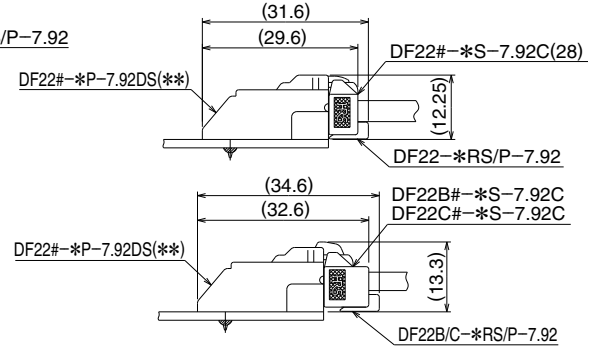
1 Pos.



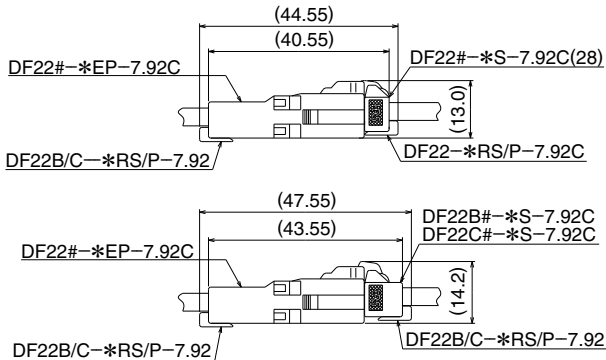
2 to 5 Pos.



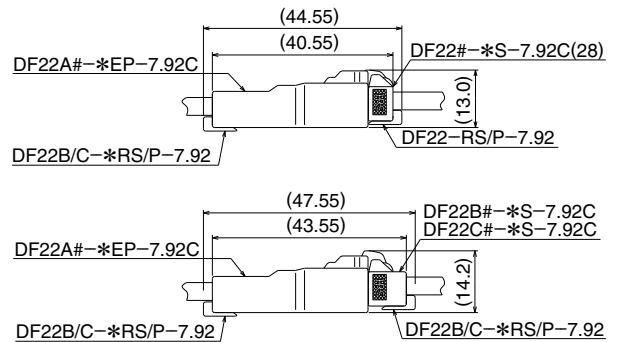
● Socket to Right Angle Header Connection



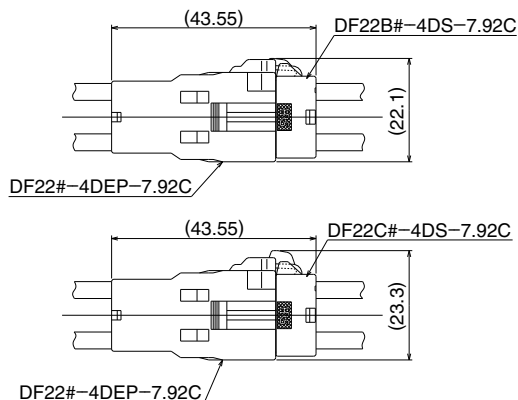
● Socket to In-line Plug (Panel mount type) Connection



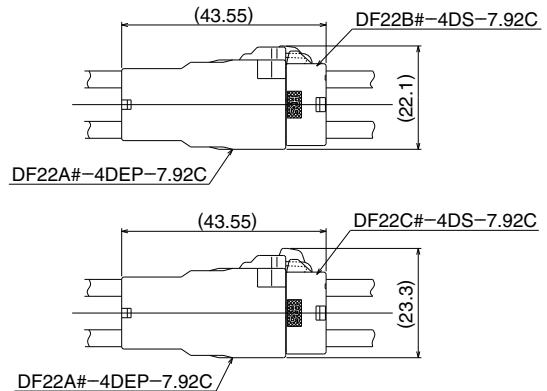
● Socket to In-line Plug Connection



● In-line Double-row socket to In-line Double-row Plug (Panel mount type) Connection



● In-line Double-row socket to In-line Double-row Plug Connection



◆ Tools

| Type | Item | Part No. | HRS No. | Applicable Contacts |
|--|---|-------------------|-----------------------------|-----------------------------|
| Automatic | Press unit | CM-105C | 901-0001-0 | DF22/DF22A-1416SCF/PCF/SCFA |
| | Applicators are used in automatic crimping machines manufactured by Hirose Electric | AP105-DF22-1416 | 901-4576-7 | DF22-1416SCF/PCF/SCFA/PCFA |
| | | AP105-DF22A-1416 | 901-4578-2 | DF22A-1416SCF/PCF/SCFA |
| | | AP109A-DF22-1416 | 901-4579-5 | DF22-1416SCF/PCF/SCFA/PCFA |
| | Applicators are used in automatic crimping machines manufactured by other companies | AP109A-DF22A-1416 | 901-4580-4 | DF22A-1416SCF/PCF/SCFA/PCFA |
| | | AP109A-DF22A-1012 | 901-4582-0 | DF22A-1012SCF/SCFA |
| | | CHS893800H-UP | — | DF22-1416SCF/DF22-1416PCF |
| Applicator manufactured by JAPAN AUTOMATIC MACHINE | CHS893900H-UP | — | DF22A-1416SCF/DF22A-1416PCF | |
| | QHS895800H-UP | — | DF22A-1012SCF | |
| | Manual | Crimp tools | HT104/DF22-1416 | 550-0285-0 |
| HT104/DF22A-1416 | | | 550-0286-2 | DF22A-1416SC/PC |
| HT103/DF22A-1012 | | | 550-0288-8 | DF22A-1012SC |

Note 1 : When crimping contact DF22A-1012SCF use a press with 3.5 ton min.

Note 2 : AP109A type applicators cannot be used with the CM-105C press.

Note 3 : Any problems that occur from using tools other than those specified by Hirose, are not covered by warranty.

Note 4 : Applicator manufactured by JAPAN AUTOMATIC MACHINE (J.A.M.). Please access to HP of J.A.M., if you make inquiries about the applicator or crimp defect. (URL : <http://www.jam-net.co.jp>)

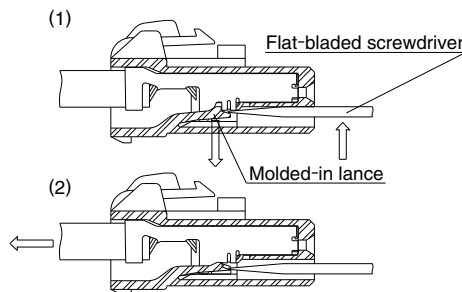
Note 5 : Please follow the "Crimping quality standards" and "Table of crimping conditions" when crimping contacts.

◆ Contact Extraction

■ Contact extraction tool : Flat-bladed screwdriver, 1.4mm blade width

■ Intended crimp Contacts : DF22-1416SC(F), DF22-1416SCFA, DF22A-1416SC(F), DF22A-1416SCFA, DF22A-1012SC(F), DF22A-1012SCFA, DF22-1416PC(F), DF22-1416PCFA, and DF22A-1416PC(F)

■ Work Method
Housing Cross-Sectional Diagram



1. Refer to the drawing No. 1. Insert correct size screwdriver in the insulator against the molded-in lance. Deflect the lance as shown.

2. Assure that the lance is deflected to release the contact and pull-out wire with the terminated contact.

⚠ Caution

There are parts on the crimp contact that can cause injuries, please use caution when unmating the contacts.

◆ Precautions

- The connector could be damaged if it is pulled out forcibly. When it is hard to pull out, push it in slightly first and then depress the lock and un-mate.
- When thick, short sections of wire are used, the connector could be deformed due to the force of the wires' position. Route cables in such a way that they do not twist when being installed.
- 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.
- Please refer to the documents "Cable assembly Procedure", "Crimp condition" and "Crimp quality standards" for the cable assembly procedures.
- Please refer to the "Mating/Unmating Operation Instruction Manual" for the connector operation.
- Please refer to the "Nylon Connector Guide" for handling instructions.

◆ Current Ratings

The current rating listed in the catalog indicates the allowable current per contact. However, in applications requiring current transmission through all the contacts, about one-third of the listed rating should be applied.

When the current rating for the connector is 3A, and the allowable current of the conductor being used is 1A, then rating of 1A will be used for the entire assembly.

The connectors should not be mating / unmating when the electrical current is being applied.

Hot swap should not be performed.

◆ Usage Environment

Please contact us about use in equipment that is subjected to repetitive high temperature and low temperature environmental conditions.



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<http://www.hirose-connectors.com>