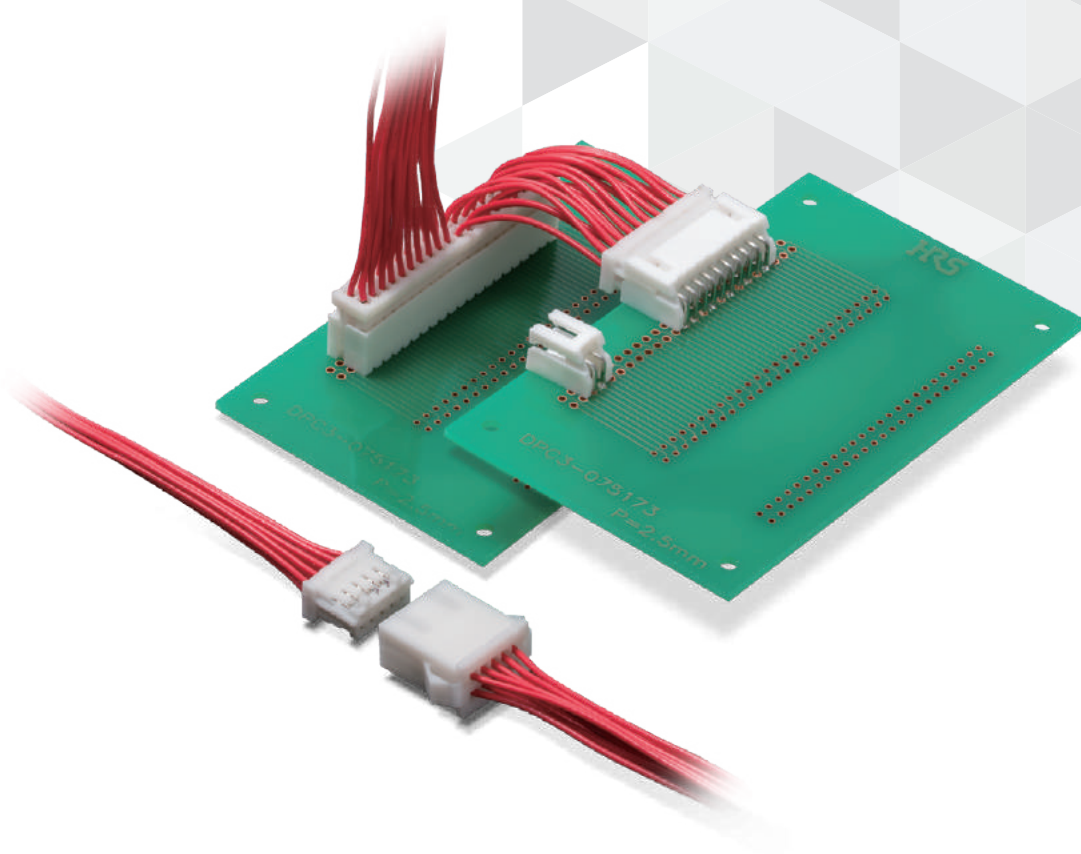
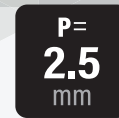


DF1B Series

2.5mm Pitch Connector for Discrete Wire Connection (UL/CSA Standard Certified Product)



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Features

1. New Insulation Displacement and Crimping Ideas

DF1B is a new type of connector in which the IDC contact is inserted into the case.

This method enables the following merits:

- ① By using the IDC contact and crimping contact together, different current capacity cables can be mixed in one case.
- ② After connection, the contact can be replaced for excellent maintenance.
- ③ The case protects the insulation displacement area for high reliability.
- ④ Since the insulation displacement process can be performed only by replacing the applicator of the existing crimping machine, no expensive machinery for insulation displacement is required.



Cables with different current capacities can be mixed in one case.

2. Wide Variety

Each of the "wire-to-board" and "in-line" types has single and double row variations, and both tin and gold plating are available as standard. (Refer to the applicable combination diagram on the next page.)

Applications

Business equipment including copy machines and printers.

Product Specifications

| | | | | | | |
|------------------------|------------|--------|--------|----------|------------------------------------|--------------|
| Rated Current (Note 1) | 20-24 AWG | 26 AWG | 28 AWG | 30 AWG | Operating Temperature (Note 2) | -35 to +85°C |
| | 3A/pin | 2A/pin | 1A/pin | 0.5A/pin | Operating Humidity Range (Note 3) | 40 to 80% |
| Rated Voltage | 250V AC/DC | | | | Storage Temperature Range (Note 4) | -10 to +60°C |
| | | | | | Storage Humidity Range (Note 4) | 40 to 70% |

| | | | |
|--------------------------------|-----------|-----------|----------|
| UL,CSA Current Rating (Note 1) | 20-22 AWG | 24-28 AWG | 30 AWG |
| | 3A/pin | 1A/pin | 0.5A/pin |
| UL,CSA Voltage Rating | 30V AC/DC | | |

UL CSA Safety File No. UL : E52653/CSA : LR95109

Note 1 : The rated current varies based on cable size used. The current rating of only the header is 3A.

Note 2 : Includes temperature rise caused by current flow.

Note 3 : Please use without condensation.

Note 4 : Applicable to unused items in packaged state.

Note 5 : Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

| Item | Specification | Condition |
|-----------------------------------|---|--|
| Insulation Resistance | 1000M Ω Min | 500V DC |
| Withstanding Voltage | No flashover or insulation breakdown. | 650V AC for 1 min. |
| Contact Resistance | 30m Ω Max | 100mA |
| Single Insertion/Extraction Force | 0.44N(45gf) Min.. 4.4N(450gf) Max. | Measure at the square steel pin of 0.635 \pm 0.002mm |
| Vibration | No electrical discontinuity of 1 μ s or more | Frequency : 10 to 55Hz, single amplitude of 0.75mm 2 hours in each of the 3 directions. |
| Humidity (Steady State) | Contact resistance:30m Ω Max. Insulation resistance:1000M Ω Min. | 96 hours at temperature of 40 \pm 2°C and humidity of 90% to 95% |
| Temperature Cycle | Contact resistance:30m Ω Max. Insulation resistance:1000M Ω Min. | (-55°C : 30 minutes \rightarrow 5 to 35°C : 10 minutes 85°C : 30 minutes \rightarrow 5 to 35°C : 10 minutes) 5 cycles |
| Mating Durability | Contact resistance:30m Ω Max. | Tin plating : 30 cycles Gold plating : 50 cycles |
| Resistance to Soldering Heat | No deformation of components affecting performance. | Flow : 260°C for 5 seconds Manual soldering : 300°C for 3 seconds |

Materials / Finish

| Product | Part | Material | Finish | Remarks | RoHS2 |
|-----------------------------------|-----------|-----------------|---------------------------|---------|-------|
| Socket | Insulator | Polyamide | White | UL94V-0 | Yes |
| IDC Contact for Socket | Contact | Phosphor Copper | Tin Plated or Gold Plated | - | |
| Crimping Contact for Socket | Contact | Phosphor Copper | Tin Plated or Gold Plated | - | |
| Pin Header | Insulator | Polyamide | White | UL94V-0 | |
| | Contact | Brass | Tin Plated or Gold Plated | - | |
| In-line Plug | Insulator | Polyamide | White | UL94V-0 | |
| IDC Contact for In-line Plug | Contact | Phosphor Copper | Tin Plated or Gold Plated | - | |
| Crimping Contact for In-line Plug | Contact | Phosphor Copper | Tin Plated or Gold Plated | - | |

Product Number Structure

Refer to the chart below when determining the product specifications from the product number. Please select from the product numbers listed in this catalog when placing orders.

Connector

DF1B # - # S - 2.5 RC

① ② ③ ④ ⑤ ⑥

| | | | |
|----------------|--|------------------|--|
| ① Series Name | DF1B | ④ Connector Type | S : Single Row Socket DS : Double Row Socket P : Single Row Pin Header DP : Double Row Pin Header ES : Single Row In-line Socket DES : Double Row In-line Socket EP : Single Row In-line Plug DEP : Double Row In-line Plug |
| ② Style Symbol | Blank : Standard type A : In-line Plug (Simple Lock Type) Z : Pin Header (Standard Type, Tin Plated) | ⑤ Contact Pitch | 2.5mm |
| ③ No. of Pos. | Single Row : 2 to 16, 18, 20 Double Row : 4 to 30, 34, 40 | ⑥ Contact Type | RC : IDC/Crimping Socket (Note) DSA : Straight Through Hole DS : Right Angle Through Hole |

Socket IDC Contact

DF1B - R 24 F A

① ② ③ ④

| | | | |
|-------------------------|---|------------------|---------------------------------------|
| ① Connection Type | R : IDC | ③ Packaging Type | Blank : Bag F : Reel |
| ② Applicable Cable Size | 24 : 24 AWG 26 : 26 AWG 28 : 28 AWG | ④ Plating Type | Blank : Tin Plated A : Gold Plated |

■ Plug IDC Contact

DF1B - 24 P R F

① ② ③ ④

| | | | |
|-------------------------|---|-------------------|-------------------------|
| ① Applicable Cable Size | 24 : 24 AWG 26 : 26 AWG 28 : 28 AWG | ③ Connection Type | R : IDC |
| ② Connector Type | P : Plug | ④ Packaging Type | Blank : Bag F : Reel |

■ Crimping Contact

DF1B - 2428 SCF A

① ② ③

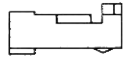
| | | | |
|-------------------------|--|----------------|---|
| ① Applicable Cable Size | 2022 : 20 to 22 AWG 2428 : 24 to 28 AWG 30 : 30 AWG | ③ Plating Type | Blank : Tin Plated A : Gold Plated B : Gold Plated (Note) |
| ② Packaging Type | SCF : Socket Contact/Reel SC : Socket Contact/Bag PCF : Plug Contact/Reel PC : Plug Contact/Bag | | |

Note : Socket contacts have an "A" at the end of the product name. Plug contacts have a "B" at the end of the product name. The product numbers of gold plated plug contacts for 24 to 28 AWG cable are DF1-PD2428SCFB(Reel) and DF1-PD2428SCB(Bag).

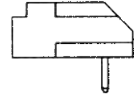
Applicable Combination

● Single Row Type

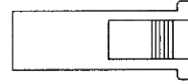
Socket (Cable Side)
DF1B-#S-2.5R



Straight Through Hole Type
Pin Header
DF1B(Z)-#P-2.5DSA



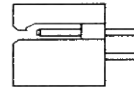
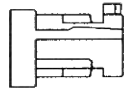
Right Angle Through Hole Type
Pin Header
DF1BZ-#P-2.5DS



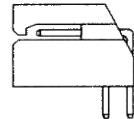
Panel Mount Type
In-line Plug (Cable Side)
DF1BA-#EP-2.5RC

● Double Row Type

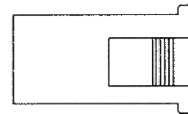
Socket (Cable Side)
DF1B-#DS-2.5RC



Straight Through Hole Type
Pin Header
DF1BZ-#DP-2.5DSA



Right Angle Through Hole Type
Pin Header
DF1BZ-#DP-2.5DS

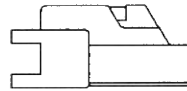
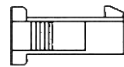


Panel Mount Type
In-line Plug (Cable Side)
DF1BA-#DEP-2.5RC

《In-line/ Positive Lock Type》

● Single Row Type

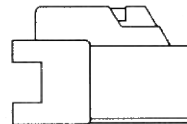
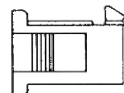
Socket (Cable Side)
DF1B-#ES-2.5RC



In-line Plug (Cable Side)
DF1B-#EP-2.5RC

● Double Row Type

Socket (Cable Side)
DF1B-#DES-2.5RC

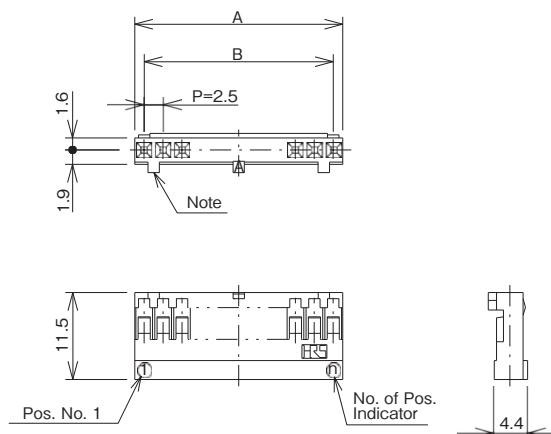


In-line Plug (Cable Side)
DF1B-#DEP-2.5RC

Single Row Socket



Shown with Contacts Inserted



Note : The 2pos. connector differs from the above figure and has a single center projection to prevent mis-insertion. For 3-6pos. there are two projections at both ends, and for 7-20pos. there are three projections.

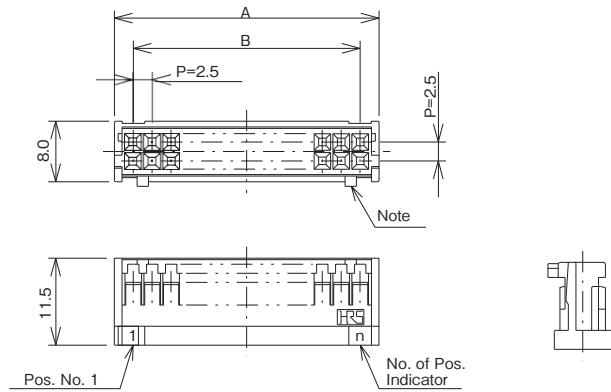
Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|---------------|------------------|-------------|------|------|-------------------|
| DF1B-2S-2.5R | CL0541-0200-6-00 | 2 | 5.0 | 2.5 | 100pcs per bag |
| DF1B-3S-2.5R | CL0541-0201-9-00 | 3 | 7.5 | 5.0 | |
| DF1B-4S-2.5R | CL0541-0202-1-00 | 4 | 10.0 | 7.5 | |
| DF1B-5S-2.5R | CL0541-0203-4-00 | 5 | 12.5 | 10.0 | |
| DF1B-6S-2.5R | CL0541-0204-7-00 | 6 | 15.0 | 12.5 | |
| DF1B-7S-2.5R | CL0541-0205-0-00 | 7 | 17.5 | 15.0 | |
| DF1B-8S-2.5R | CL0541-0206-2-00 | 8 | 20.0 | 17.5 | |
| DF1B-9S-2.5R | CL0541-0207-5-00 | 9 | 22.5 | 20.0 | |
| DF1B-10S-2.5R | CL0541-0208-8-00 | 10 | 25.0 | 22.5 | |
| DF1B-11S-2.5R | CL0541-0209-0-00 | 11 | 27.5 | 25.0 | |
| DF1B-12S-2.5R | CL0541-0210-0-00 | 12 | 30.0 | 27.5 | |
| DF1B-13S-2.5R | CL0541-0211-2-00 | 13 | 32.5 | 30.0 | |
| DF1B-14S-2.5R | CL0541-0212-5-00 | 14 | 35.0 | 32.5 | |
| DF1B-15S-2.5R | CL0541-0213-8-00 | 15 | 37.5 | 35.0 | |
| DF1B-16S-2.5R | CL0541-0214-0-00 | 16 | 40.0 | 37.5 | |
| DF1B-18S-2.5R | CL0541-0215-3-00 | 18 | 45.0 | 42.5 | |
| DF1B-20S-2.5R | CL0541-0216-6-00 | 20 | 50.0 | 47.5 | |

Double Row Socket



Shown with Contacts Inserted

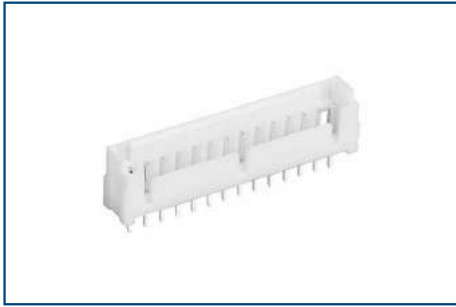


Note : The 4pos. connector differs from the above figure and has a single center projection to prevent mis-insertion.

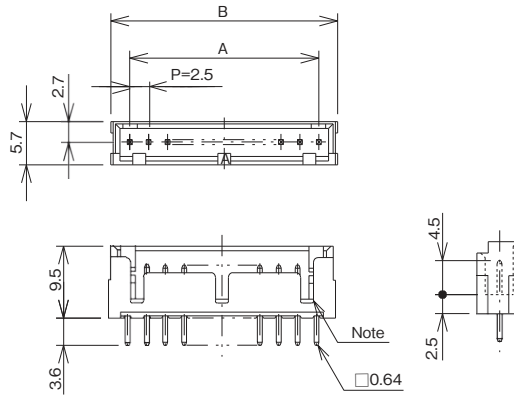
Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|-----------------|------------------|-------------|------|------|----------------|
| DF1B-4DS-2.5RC | CL0541-0648-0-00 | 4 | 7.5 | 2.5 | 100pcs per bag |
| DF1B-6DS-2.5RC | CL0541-0649-3-00 | 6 | 10.0 | 5.0 | |
| DF1B-8DS-2.5RC | CL0541-0650-2-00 | 8 | 12.5 | 7.5 | |
| DF1B-10DS-2.5RC | CL0541-0600-4-00 | 10 | 15.0 | 10.0 | |
| DF1B-12DS-2.5RC | CL0541-0601-7-00 | 12 | 17.5 | 12.5 | |
| DF1B-14DS-2.5RC | CL0541-0602-0-00 | 14 | 20.0 | 15.0 | |
| DF1B-16DS-2.5RC | CL0541-0603-2-00 | 16 | 22.5 | 17.5 | |
| DF1B-18DS-2.5RC | CL0541-0604-5-00 | 18 | 25.0 | 20.0 | |
| DF1B-20DS-2.5RC | CL0541-0605-8-00 | 20 | 27.5 | 22.5 | |
| DF1B-22DS-2.5RC | CL0541-0606-0-00 | 22 | 30.0 | 25.0 | |
| DF1B-24DS-2.5RC | CL0541-0607-3-00 | 24 | 32.5 | 27.5 | |
| DF1B-26DS-2.5RC | CL0541-0608-6-00 | 26 | 35.0 | 30.0 | |
| DF1B-28DS-2.5RC | CL0541-0609-9-00 | 28 | 37.5 | 32.5 | |
| DF1B-30DS-2.5RC | CL0541-0610-8-00 | 30 | 40.0 | 35.0 | |
| DF1B-34DS-2.5RC | CL0541-0612-3-00 | 34 | 45.0 | 40.0 | |
| DF1B-36DS-2.5RC | CL0541-0613-6-00 | 36 | 47.5 | 42.5 | |
| DF1B-40DS-2.5RC | CL0541-0615-1-00 | 40 | 52.5 | 47.5 | |

Single Row Straight Pin Header

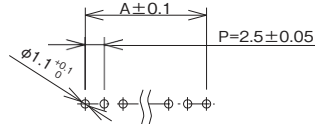


● Board Through-hole Diameter : $\phi 1.1^{+0.1}_0$



Note : The 2 and 3pos. connectors differ from the above figure and have a single center indentation to prevent mis-insertion. For 4-6pos. there are two indentations at both ends, and for 7-20pos. there are three indentations.

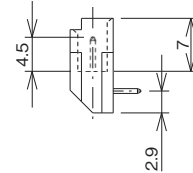
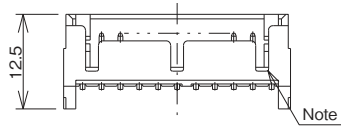
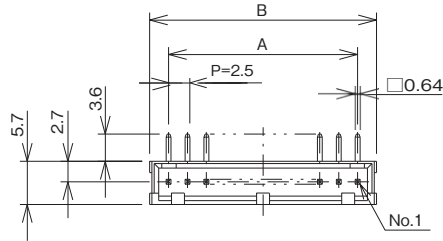
Recommended PCB Layout (t=1.6±0.1mm)



Unit : mm

| Tin Plated | | Gold Plated | | No. of Pos. | A | B | Purchase Unit |
|------------------|------------------|---------------------|------------------|-------------|------|------|----------------|
| Part No. | HRS No. | Part No. | HRS No. | | | | |
| DF1BZ-2P-2.5DSA | CL0541-2000-8-00 | DF1B-2P-2.5DSA(01) | CL0541-0225-7-01 | 2 | 2.5 | 7.5 | 100pcs per bag |
| DF1BZ-3P-2.5DSA | CL0541-2001-0-00 | DF1B-3P-2.5DSA(01) | CL0541-0226-0-01 | 3 | 5.0 | 10.0 | |
| DF1BZ-4P-2.5DSA | CL0541-2002-3-00 | DF1B-4P-2.5DSA(01) | CL0541-0227-2-01 | 4 | 7.5 | 12.5 | |
| DF1BZ-5P-2.5DSA | CL0541-2003-6-00 | DF1B-5P-2.5DSA(01) | CL0541-0228-5-01 | 5 | 10.0 | 15.0 | |
| DF1BZ-6P-2.5DSA | CL0541-2004-9-00 | DF1B-6P-2.5DSA(01) | CL0541-0229-8-01 | 6 | 12.5 | 17.5 | |
| DF1BZ-7P-2.5DSA | CL0541-2005-1-00 | DF1B-7P-2.5DSA(01) | CL0541-0230-7-01 | 7 | 15.0 | 20.0 | |
| DF1BZ-8P-2.5DSA | CL0541-2006-4-00 | DF1B-8P-2.5DSA(01) | CL0541-0231-0-01 | 8 | 17.5 | 22.5 | |
| DF1BZ-9P-2.5DSA | CL0541-2007-7-00 | DF1B-9P-2.5DSA(01) | CL0541-0232-2-01 | 9 | 20.0 | 25.0 | |
| DF1BZ-10P-2.5DSA | CL0541-2008-0-00 | DF1B-10P-2.5DSA(01) | CL0541-0233-5-01 | 10 | 22.5 | 27.5 | |
| DF1BZ-11P-2.5DSA | CL0541-2009-2-00 | - | - | 11 | 25.0 | 30.0 | |
| DF1BZ-12P-2.5DSA | CL0541-2010-1-00 | DF1B-12P-2.5DSA(01) | CL0541-0235-0-01 | 12 | 27.5 | 32.5 | |
| DF1BZ-13P-2.5DSA | CL0541-2011-4-00 | - | - | 13 | 30.0 | 35.0 | |
| DF1BZ-14P-2.5DSA | CL0541-2012-7-00 | DF1B-14P-2.5DSA(01) | CL0541-0237-6-01 | 14 | 32.5 | 37.5 | |
| DF1BZ-15P-2.5DSA | CL0541-2013-0-00 | DF1B-15P-2.5DSA(01) | CL0541-0238-9-01 | 15 | 35.0 | 40.0 | |
| DF1BZ-16P-2.5DSA | CL0541-2014-2-00 | DF1B-16P-2.5DSA(01) | CL0541-0239-1-01 | 16 | 37.5 | 42.5 | |
| DF1BZ-18P-2.5DSA | CL0541-2015-5-00 | DF1B-18P-2.5DSA(01) | CL0541-0240-0-01 | 18 | 42.5 | 47.5 | |
| DF1BZ-20P-2.5DSA | CL0541-2016-8-00 | DF1B-20P-2.5DSA(01) | CL0541-0241-3-01 | 20 | 47.5 | 52.5 | |

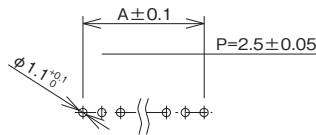
Single Row Right Angle Pin Header



● Board Through-hole Diameter : $\phi 1.1^{+0.1}_0$

Note : The 2 and 3pos. connectors differ from the above figure and have a single center indentation to prevent mis-insertion. For 4-6pos. there are two indentations at both ends, and for 7-20pos. there are three indentations.

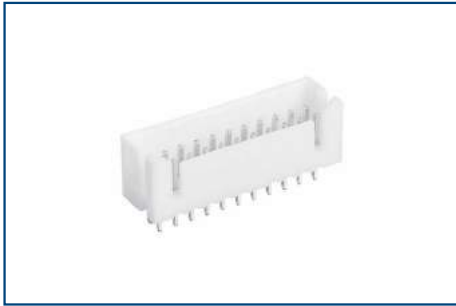
Recommended PCB Layout (t=1.6±0.1mm)



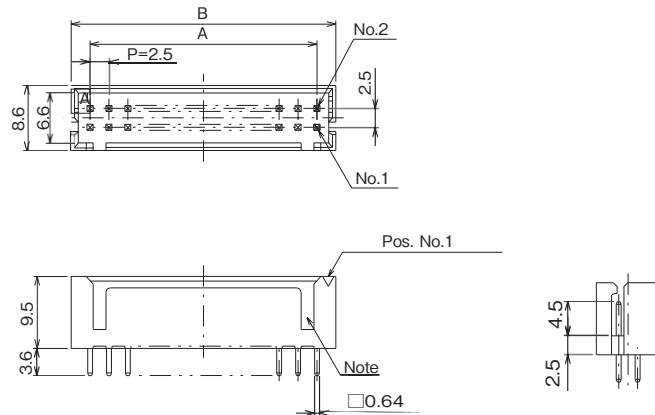
Unit : mm

| Tin Plated | | Gold Plated | | No. of Pos. | A | B | Purchase Unit |
|-----------------|------------------|--------------------|------------------|-------------|------|------|----------------|
| Part No. | HRS No. | Part No. | HRS No. | | | | |
| DF1BZ-2P-2.5DS | CL0541-2034-0-00 | DF1B-2P-2.5DS(01) | CL0541-0242-6-01 | 2 | 2.5 | 7.5 | 100pcs per bag |
| DF1BZ-3P-2.5DS | CL0541-2035-2-00 | DF1B-3P-2.5DS(01) | CL0541-0243-9-01 | 3 | 5.0 | 10.0 | |
| DF1BZ-4P-2.5DS | CL0541-2036-5-00 | DF1B-4P-2.5DS(01) | CL0541-0244-1-01 | 4 | 7.5 | 12.5 | |
| DF1BZ-5P-2.5DS | CL0541-2037-8-00 | DF1B-5P-2.5DS(01) | CL0541-0245-4-01 | 5 | 10.0 | 15.0 | |
| DF1BZ-6P-2.5DS | CL0541-2038-0-00 | DF1B-6P-2.5DS(01) | CL0541-0246-7-01 | 6 | 12.5 | 17.5 | |
| DF1BZ-7P-2.5DS | CL0541-2039-3-00 | DF1B-7P-2.5DS(01) | CL0541-0247-0-01 | 7 | 15.0 | 20.0 | |
| DF1BZ-8P-2.5DS | CL0541-2040-2-00 | DF1B-8P-2.5DS(01) | CL0541-0248-2-01 | 8 | 17.5 | 22.5 | |
| DF1BZ-9P-2.5DS | CL0541-2041-5-00 | - | - | 9 | 20.0 | 25.0 | |
| DF1BZ-10P-2.5DS | CL0541-2042-8-00 | DF1B-10P-2.5DS(01) | CL0541-0250-4-01 | 10 | 22.5 | 27.5 | |
| DF1BZ-11P-2.5DS | CL0541-2043-0-00 | - | - | 11 | 25.0 | 30.0 | |
| DF1BZ-12P-2.5DS | CL0541-2044-3-00 | DF1B-12P-2.5DS(01) | CL0541-0252-0-01 | 12 | 27.5 | 32.5 | |
| DF1BZ-13P-2.5DS | CL0541-2045-6-00 | - | - | 13 | 30.0 | 35.0 | |
| DF1BZ-14P-2.5DS | CL0541-2046-9-00 | DF1B-14P-2.5DS(01) | CL0541-0254-5-01 | 14 | 32.5 | 37.5 | |
| DF1BZ-15P-2.5DS | CL0541-2047-1-00 | DF1B-15P-2.5DS(01) | CL0541-0255-8-01 | 15 | 35.0 | 40.0 | |
| DF1BZ-16P-2.5DS | CL0541-2048-4-00 | DF1B-16P-2.5DS(01) | CL0541-0256-0-01 | 16 | 37.5 | 42.5 | |
| DF1BZ-18P-2.5DS | CL0541-2049-7-00 | DF1B-18P-2.5DS(01) | CL0541-0257-3-01 | 18 | 42.5 | 47.5 | |
| DF1BZ-20P-2.5DS | CL0541-2050-6-00 | DF1B-20P-2.5DS(01) | CL0541-0258-6-01 | 20 | 47.5 | 52.5 | |

Double Row Straight Pin Header

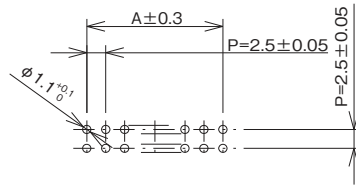


● Board Through-hole Diameter : $\phi 1.1^{+0.1}_0$



Note : The 4 and 6pos. connectors differ from the above figure and have a single center indentation to prevent mis-insertion.

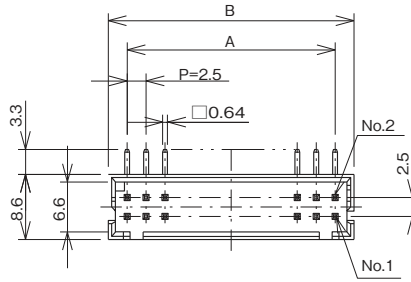
Recommended PCB Layout ($t=1.6\pm 0.1\text{mm}$)



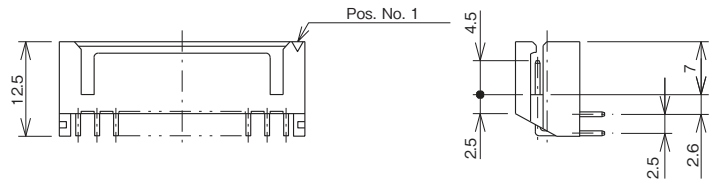
Unit : mm

| Tin Plated | | Gold Plated | | No. of Pos. | A | B | Purchase Unit |
|-------------------|------------------|----------------------|------------------|-------------|------|------|----------------|
| Part No. | HRS No. | Part No. | HRS No. | | | | |
| DF1BZ-4DP-2.5DSA | CL0541-2017-0-00 | DF1B-4DP-2.5DSA(01) | CL0541-0651-5-01 | 4 | 2.5 | 7.5 | 100pcs per bag |
| DF1BZ-6DP-2.5DSA | CL0541-2018-3-00 | DF1B-6DP-2.5DSA(01) | CL0541-0652-8-01 | 6 | 5.0 | 10.0 | |
| DF1BZ-8DP-2.5DSA | CL0541-2019-6-00 | DF1B-8DP-2.5DSA(01) | CL0541-0653-0-01 | 8 | 7.5 | 12.5 | |
| DF1BZ-10DP-2.5DSA | CL0541-2020-5-00 | DF1B-10DP-2.5DSA(01) | CL0541-0616-4-01 | 10 | 10.0 | 15.0 | |
| DF1BZ-12DP-2.5DSA | CL0541-2021-8-00 | DF1B-12DP-2.5DSA(01) | CL0541-0617-7-01 | 12 | 12.5 | 17.5 | |
| DF1BZ-14DP-2.5DSA | CL0541-2022-0-00 | DF1B-14DP-2.5DSA(01) | CL0541-0618-0-01 | 14 | 15.0 | 20.0 | |
| DF1BZ-16DP-2.5DSA | CL0541-2023-3-00 | DF1B-16DP-2.5DSA(01) | CL0541-0619-2-01 | 16 | 17.5 | 22.5 | |
| DF1BZ-18DP-2.5DSA | CL0541-2024-6-00 | DF1B-18DP-2.5DSA(01) | CL0541-0620-1-01 | 18 | 20.0 | 25.0 | |
| DF1BZ-20DP-2.5DSA | CL0541-2025-9-00 | DF1B-20DP-2.5DSA(01) | CL0541-0621-4-01 | 20 | 22.5 | 27.5 | |
| DF1BZ-22DP-2.5DSA | CL0541-2026-1-00 | DF1B-22DP-2.5DSA(01) | CL0541-0622-7-01 | 22 | 25.0 | 30.0 | |
| DF1BZ-24DP-2.5DSA | CL0541-2027-4-00 | DF1B-24DP-2.5DSA(01) | CL0541-0623-0-01 | 24 | 27.5 | 32.5 | |
| DF1BZ-26DP-2.5DSA | CL0541-2028-7-00 | DF1B-26DP-2.5DSA(01) | CL0541-0624-2-01 | 26 | 30.0 | 35.0 | |
| DF1BZ-28DP-2.5DSA | CL0541-2029-0-00 | DF1B-28DP-2.5DSA(01) | CL0541-0625-5-01 | 28 | 32.5 | 37.5 | |
| DF1BZ-30DP-2.5DSA | CL0541-2030-9-00 | DF1B-30DP-2.5DSA(01) | CL0541-0626-8-01 | 30 | 35.0 | 40.0 | |
| DF1BZ-34DP-2.5DSA | CL0541-2031-1-00 | DF1B-34DP-2.5DSA(01) | CL0541-0628-3-01 | 34 | 40.0 | 45.0 | |
| DF1BZ-36DP-2.5DSA | CL0541-2032-4-00 | DF1B-36DP-2.5DSA(01) | CL0541-0629-6-01 | 36 | 42.5 | 47.5 | |
| DF1BZ-40DP-2.5DSA | CL0541-2033-7-00 | DF1B-40DP-2.5DSA(01) | CL0541-0631-8-01 | 40 | 47.5 | 52.5 | |

Double Row Right Angle Pin Header

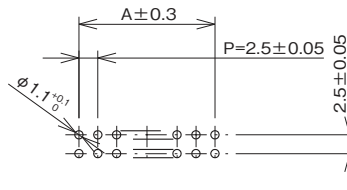


● Board Through-hole Diameter : $\phi 1.1^{+0.1}_0$



Note : The 4 and 6pos. connectors differ from the above figure and have a single center indentation to prevent mis-insertion.

Recommended PCB Layout ($t=1.6\pm 0.1\text{mm}$)



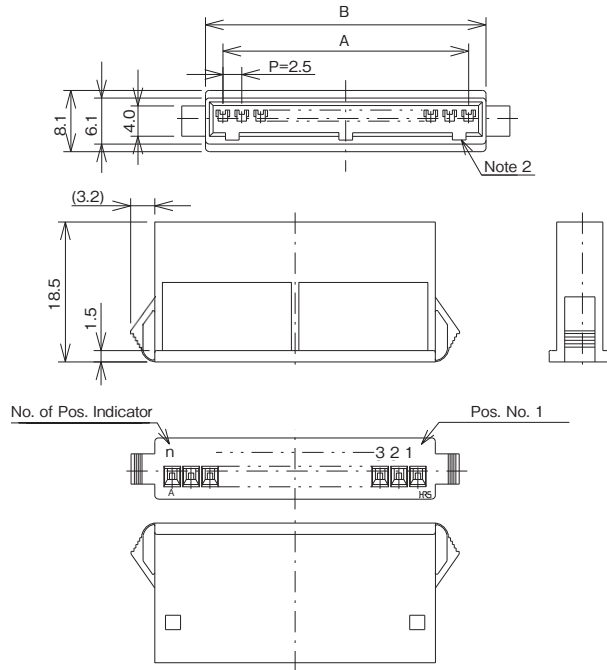
Unit : mm

| Tin Plated | | Gold Plated | | No. of Pos. | A | B | Purchase Unit |
|------------------|------------------|---------------------|------------------|-------------|------|------|----------------|
| Part No. | HRS No. | Part No. | HRS No. | | | | |
| DF1BZ-4DP-2.5DS | CL0541-2051-9-00 | DF1B-4DP-2.5DS(01) | CL0541-0654-3-01 | 4 | 2.5 | 7.5 | 100pcs per bag |
| DF1BZ-6DP-2.5DS | CL0541-2052-1-00 | DF1B-6DP-2.5DS(01) | CL0541-0655-6-01 | 6 | 5.0 | 10.0 | |
| DF1BZ-8DP-2.5DS | CL0541-2053-4-00 | DF1B-8DP-2.5DS(01) | CL0541-0656-9-01 | 8 | 7.5 | 12.5 | |
| DF1BZ-10DP-2.5DS | CL0541-2054-7-00 | DF1B-10DP-2.5DS(01) | CL0541-0632-0-01 | 10 | 10.0 | 15.0 | |
| DF1BZ-12DP-2.5DS | CL0541-2055-0-00 | DF1B-12DP-2.5DS(01) | CL0541-0633-3-01 | 12 | 12.5 | 17.5 | |
| DF1BZ-14DP-2.5DS | CL0541-2056-2-00 | DF1B-14DP-2.5DS(01) | CL0541-0634-6-01 | 14 | 15.0 | 20.0 | |
| DF1BZ-16DP-2.5DS | CL0541-2057-5-00 | DF1B-16DP-2.5DS(01) | CL0541-0635-9-01 | 16 | 17.5 | 22.5 | |
| DF1BZ-18DP-2.5DS | CL0541-2058-8-00 | DF1B-18DP-2.5DS(01) | CL0541-0636-1-01 | 18 | 20.0 | 25.0 | |
| DF1BZ-20DP-2.5DS | CL0541-2059-0-00 | DF1B-20DP-2.5DS(01) | CL0541-0637-4-01 | 20 | 22.5 | 27.5 | |
| DF1BZ-22DP-2.5DS | CL0541-2060-0-00 | DF1B-22DP-2.5DS(01) | CL0541-0638-7-01 | 22 | 25.0 | 30.0 | |
| DF1BZ-24DP-2.5DS | CL0541-2061-2-00 | DF1B-24DP-2.5DS(01) | CL0541-0639-0-01 | 24 | 27.5 | 32.5 | |
| DF1BZ-26DP-2.5DS | CL0541-2062-5-00 | DF1B-26DP-2.5DS(01) | CL0541-0640-9-01 | 26 | 30.0 | 35.0 | |
| DF1BZ-28DP-2.5DS | CL0541-2063-8-00 | DF1B-28DP-2.5DS(01) | CL0541-0641-1-01 | 28 | 32.5 | 37.5 | |
| DF1BZ-30DP-2.5DS | CL0541-2064-0-00 | DF1B-30DP-2.5DS(01) | CL0541-0642-4-01 | 30 | 35.0 | 40.0 | |
| DF1BZ-34DP-2.5DS | CL0541-2065-3-00 | DF1B-34DP-2.5DS(01) | CL0541-0644-0-01 | 34 | 40.0 | 45.0 | |
| DF1BZ-36DP-2.5DS | CL0541-2066-6-00 | DF1B-36DP-2.5DS(01) | CL0541-0645-2-01 | 36 | 42.5 | 47.5 | |
| DF1BZ-40DP-2.5DS | CL0541-2067-9-00 | DF1B-40DP-2.5DS(01) | CL0541-0647-8-01 | 40 | 47.5 | 52.5 | |

Single Row In-line Plug (Friction Lock Type)



Shown with Contacts Inserted
 ● Applicable Socket: DF1B-#S-2.5R

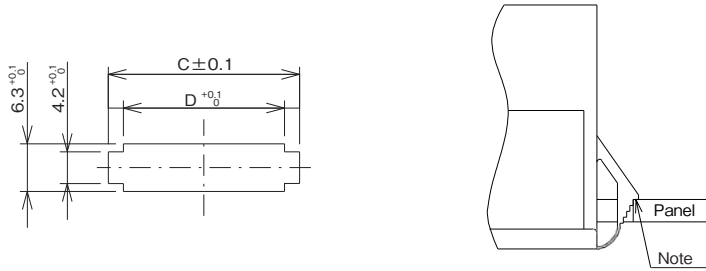


Note : The 2pos. connector differs from the above figure and has a single center indentation to prevent mis-insertion. For 3-6pos. there are two indentations at both ends, and for 7-20pos. there are three indentations.

Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|------------------|------------------|-------------|------|------|-------------------|
| DF1BA-2EP-2.5RC | CL0541-0700-9-00 | 2 | 2.5 | 7.1 | 100pcs per bag |
| DF1BA-3EP-2.5RC | CL0541-0701-1-00 | 3 | 5.0 | 9.6 | |
| DF1BA-4EP-2.5RC | CL0541-0702-4-00 | 4 | 7.5 | 12.1 | |
| DF1BA-5EP-2.5RC | CL0541-0703-7-00 | 5 | 10.0 | 14.6 | |
| DF1BA-6EP-2.5RC | CL0541-0704-0-00 | 6 | 12.5 | 17.1 | |
| DF1BA-7EP-2.5RC | CL0541-0705-2-00 | 7 | 15.0 | 19.6 | |
| DF1BA-8EP-2.5RC | CL0541-0706-5-00 | 8 | 17.5 | 22.1 | |
| DF1BA-9EP-2.5RC | CL0541-0707-8-00 | 9 | 20.0 | 24.6 | |
| DF1BA-10EP-2.5RC | CL0541-0708-0-00 | 10 | 22.5 | 27.1 | |
| DF1BA-12EP-2.5RC | CL0541-0710-2-00 | 12 | 27.5 | 32.1 | |

Panel Cutouts



Note : Do not use a rounded surface at the panel tab portion.

Unit : mm

| Applicable Plug | No. of Pos. | C | | | D |
|------------------|-------------|--------------------------------|------------|------------|------|
| | | Panel Board Thickness (Note 1) | | | |
| | | 0.5 to 1.2 | 1.3 to 1.6 | 1.7 to 2.0 | |
| DF1BA-2EP-2.5RC | 2 | 11.2 | 11.9 | 12.6 | 7.3 |
| DF1BA-3EP-2.5RC | 3 | 13.7 | 14.4 | 15.1 | 9.8 |
| DF1BA-4EP-2.5RC | 4 | 16.2 | 16.9 | 17.6 | 12.3 |
| DF1BA-5EP-2.5RC | 5 | 18.7 | 19.4 | 20.1 | 14.8 |
| DF1BA-6EP-2.5RC | 6 | 21.2 | 21.9 | 22.6 | 17.3 |
| DF1BA-7EP-2.5RC | 7 | 23.7 | 24.4 | 25.1 | 19.8 |
| DF1BA-8EP-2.5RC | 8 | 26.2 | 26.9 | 27.6 | 22.3 |
| DF1BA-9EP-2.5RC | 9 | 28.7 | 29.4 | 30.1 | 24.8 |
| DF1BA-10EP-2.5RC | 10 | 31.2 | 31.9 | 32.6 | 27.3 |
| DF1BA-12EP-2.5RC | 12 | 36.2 | 36.9 | 37.6 | 32.3 |

Note 1 : The installation hole size C varies based on the panel board thickness.

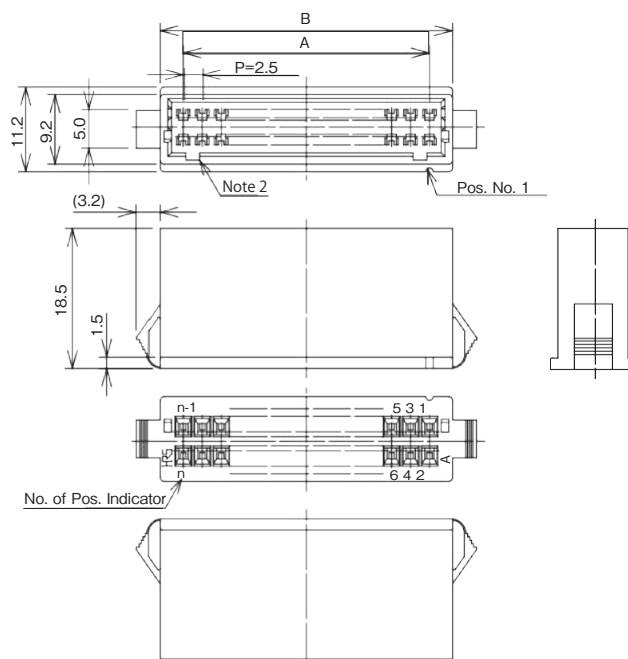
Note 2 : Fabricate installation holes so that no burrs occur.

Double Row In-line Plug (Friction Lock Type)



Shown with Contacts Inserted

●Applicable Socket : DF1B-#DS-2.5RC

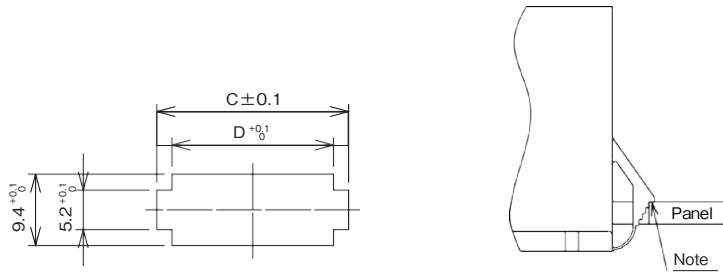


Note : The 4pos. connector differs from the above figure and has a single center indentation to prevent mis-insertion.

Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|-------------------|------------------|-------------|------|------|----------------|
| DF1BA-4DEP-2.5RC | CL0541-0719-7-00 | 4 | 2.5 | 8.6 | 100pcs per bag |
| DF1BA-6DEP-2.5RC | CL0541-0720-6-00 | 6 | 5.0 | 11.1 | |
| DF1BA-8DEP-2.5RC | CL0541-0721-9-00 | 8 | 7.5 | 13.6 | |
| DF1BA-10DEP-2.5RC | CL0541-0722-1-00 | 10 | 10.0 | 16.1 | |
| DF1BA-12DEP-2.5RC | CL0541-0723-4-00 | 12 | 12.5 | 18.6 | |
| DF1BA-14DEP-2.5RC | CL0541-0724-7-00 | 14 | 15.0 | 21.1 | |
| DF1BA-16DEP-2.5RC | CL0541-0725-0-00 | 16 | 17.5 | 23.6 | |
| DF1BA-18DEP-2.5RC | CL0541-0726-2-00 | 18 | 20.0 | 26.1 | |
| DF1BA-20DEP-2.5RC | CL0541-0727-5-00 | 20 | 22.5 | 28.6 | |
| DF1BA-22DEP-2.5RC | CL0541-0728-8-00 | 22 | 25.0 | 31.1 | |
| DF1BA-24DEP-2.5RC | CL0541-0729-0-00 | 24 | 27.5 | 33.6 | |
| DF1BA-26DEP-2.5RC | CL0541-0730-0-00 | 26 | 30.0 | 36.1 | |
| DF1BA-28DEP-2.5RC | CL0541-0731-2-00 | 28 | 32.5 | 38.6 | |
| DF1BA-30DEP-2.5RC | CL0541-0732-5-00 | 30 | 35.0 | 41.1 | |
| DF1BA-34DEP-2.5RC | CL0541-0734-0-00 | 34 | 40.0 | 46.1 | |

Panel Cutouts



Note : Do not use a rounded surface at the panel tab portion.

Unit : mm

| Applicable Plug | No. of Pos. | C | | | D |
|-------------------|-------------|--------------------------------|------------|------------|------|
| | | Panel Board Thickness (Note 1) | | | |
| | | 0.5 to 1.2 | 1.3 to 1.6 | 1.7 to 2.0 | |
| DF1BA-4DEP-2.5RC | 4 | 12.7 | 13.4 | 14.1 | 8.8 |
| DF1BA-6DEP-2.5RC | 6 | 15.2 | 15.9 | 16.6 | 11.3 |
| DF1BA-8DEP-2.5RC | 8 | 17.7 | 18.4 | 19.1 | 13.8 |
| DF1BA-10DEP-2.5RC | 10 | 20.2 | 20.9 | 21.6 | 16.3 |
| DF1BA-12DEP-2.5RC | 12 | 22.7 | 23.4 | 24.1 | 18.8 |
| DF1BA-14DEP-2.5RC | 14 | 25.2 | 25.9 | 26.6 | 21.3 |
| DF1BA-16DEP-2.5RC | 16 | 27.7 | 28.4 | 29.1 | 23.8 |
| DF1BA-18DEP-2.5RC | 18 | 30.2 | 30.9 | 31.6 | 26.3 |
| DF1BA-20DEP-2.5RC | 20 | 32.7 | 33.4 | 34.1 | 28.8 |
| DF1BA-22DEP-2.5RC | 22 | 35.2 | 35.9 | 36.6 | 31.3 |
| DF1BA-24DEP-2.5RC | 24 | 37.7 | 38.4 | 39.1 | 33.8 |
| DF1BA-26DEP-2.5RC | 26 | 40.2 | 40.9 | 41.6 | 36.3 |
| DF1BA-28DEP-2.5RC | 28 | 42.7 | 43.4 | 44.1 | 38.8 |
| DF1BA-30DEP-2.5RC | 30 | 45.2 | 45.9 | 46.6 | 41.3 |
| DF1BA-34DEP-2.5RC | 34 | 50.2 | 50.9 | 51.6 | 46.3 |

Note 1 : The installation hole size C varies based on the panel board thickness.

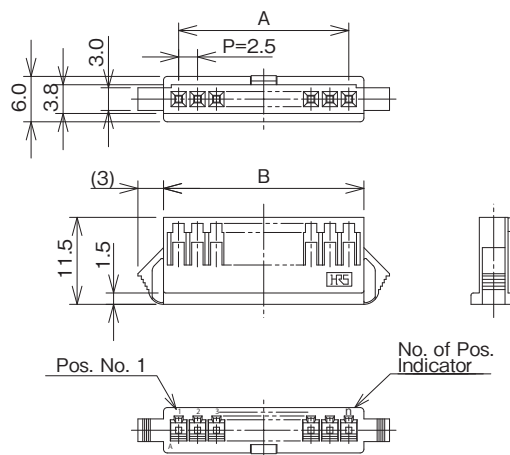
Note 2 : Fabricate installation holes so that no burrs occur.

Single Row In-line Socket (Positive Lock Type)



Shown with Contacts Inserted

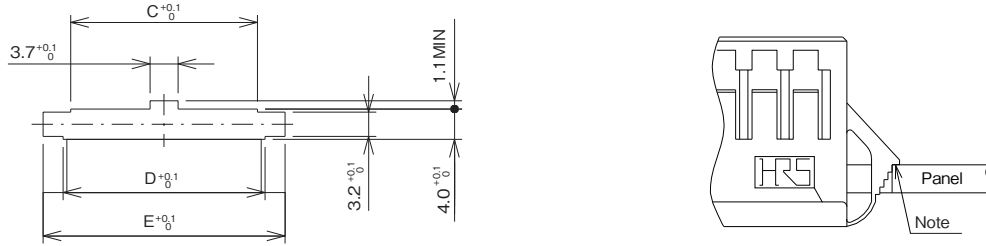
●Applicable Socket : DF1B-#EP-2.5RC



Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|-----------------|------------------|-------------|------|------|-------------------|
| DF1B-2ES-2.5RC | CL0541-0320-8-00 | 2 | 2.5 | 6.5 | 100pcs per bag |
| DF1B-3ES-2.5RC | CL0541-0321-0-00 | 3 | 5.0 | 9.0 | |
| DF1B-4ES-2.5RC | CL0541-0322-3-00 | 4 | 7.5 | 11.5 | |
| DF1B-5ES-2.5RC | CL0541-0323-6-00 | 5 | 10.0 | 14.0 | |
| DF1B-6ES-2.5RC | CL0541-0324-9-00 | 6 | 12.5 | 16.5 | |
| DF1B-7ES-2.5RC | CL0541-0325-1-00 | 7 | 15.0 | 19.0 | |
| DF1B-8ES-2.5RC | CL0541-0326-4-00 | 8 | 17.5 | 21.5 | |
| DF1B-9ES-2.5RC | CL0541-0327-7-00 | 9 | 20.0 | 24.0 | |
| DF1B-10ES-2.5RC | CL0541-0328-0-00 | 10 | 22.5 | 26.5 | |
| DF1B-11ES-2.5RC | CL0541-0329-2-00 | 11 | 25.0 | 29.0 | |
| DF1B-12ES-2.5RC | CL0541-0330-1-00 | 12 | 27.5 | 31.5 | |
| DF1B-13ES-2.5RC | CL0541-0331-4-00 | 13 | 30.0 | 34.0 | |

Panel Cutouts



Note : Do not use a rounded surface at the panel tab portion.

Unit : mm

| Applicable Plug | No. of Pos. | C | D | E | | |
|-----------------|-------------|------|------|--------------------------------|------------|------------|
| | | | | Panel Board Thickness (Note 1) | | |
| | | | | 0.5 to 1.2 | 1.3 to 1.6 | 1.7 to 2.0 |
| DF1B-2ES-2.5RC | 2 | 4.7 | 6.7 | 10.8 | 11.3 | 12.0 |
| DF1B-3ES-2.5RC | 3 | 7.2 | 9.2 | 13.3 | 13.8 | 14.5 |
| DF1B-4ES-2.5RC | 4 | 9.7 | 11.7 | 15.8 | 16.3 | 17.0 |
| DF1B-5ES-2.5RC | 5 | 12.2 | 14.2 | 18.3 | 18.8 | 19.5 |
| DF1B-6ES-2.5RC | 6 | 14.7 | 16.7 | 20.8 | 21.3 | 22.0 |
| DF1B-7ES-2.5RC | 7 | 17.2 | 19.2 | 23.3 | 23.8 | 24.5 |
| DF1B-8ES-2.5RC | 8 | 19.7 | 21.7 | 25.8 | 26.3 | 27.0 |
| DF1B-9ES-2.5RC | 9 | 22.2 | 24.2 | 28.3 | 28.8 | 29.5 |
| DF1B-10ES-2.5RC | 10 | 24.7 | 26.7 | 30.8 | 31.3 | 32.0 |
| DF1B-11ES-2.5RC | 11 | 27.2 | 29.2 | 33.3 | 33.8 | 34.5 |
| DF1B-12ES-2.5RC | 12 | 29.7 | 31.7 | 35.8 | 36.3 | 37.0 |
| DF1B-13ES-2.5RC | 13 | 32.2 | 34.2 | 38.3 | 38.8 | 39.5 |

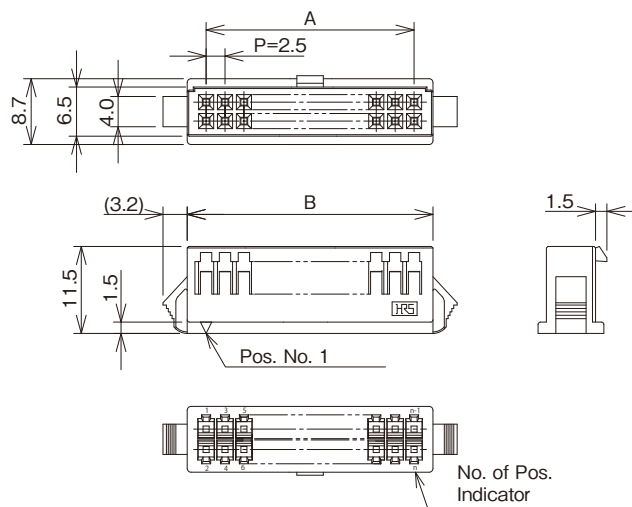
Note 1 : The installation hole size E varies based on panel board thickness.
 Note 2 : Fabricate installation holes so that no burrs occur.

Double Row In-line Socket (Positive Lock Type)



Shown with Contacts Inserted

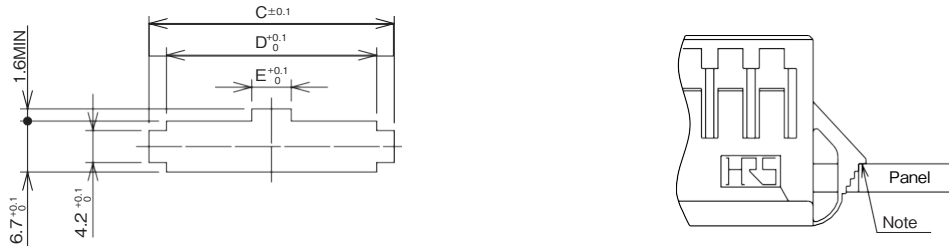
●Applicable Socket : DF1B-#DEP-2.5RC



Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|------------------|------------------|-------------|------|------|-------------------|
| DF1B-10DES-2.5RC | CL0541-0351-1-00 | 10 | 10.0 | 15.0 | 100pcs per bag |
| DF1B-12DES-2.5RC | CL0541-0352-4-00 | 12 | 12.5 | 17.5 | |
| DF1B-14DES-2.5RC | CL0541-0353-7-00 | 14 | 15.0 | 20.0 | |
| DF1B-16DES-2.5RC | CL0541-0354-0-00 | 16 | 17.5 | 22.5 | |
| DF1B-18DES-2.5RC | CL0541-0346-1-00 | 18 | 20.0 | 25.0 | |
| DF1B-20DES-2.5RC | CL0541-0355-2-00 | 20 | 22.5 | 27.5 | |
| DF1B-22DES-2.5RC | CL0541-0356-5-00 | 22 | 25.0 | 30.0 | |
| DF1B-24DES-2.5RC | CL0541-0357-8-00 | 24 | 27.5 | 32.5 | |
| DF1B-26DES-2.5RC | CL0541-0358-0-00 | 26 | 30.0 | 35.0 | |
| DF1B-28DES-2.5RC | CL0541-0359-3-00 | 28 | 32.5 | 37.5 | |
| DF1B-30DES-2.5RC | CL0541-0360-2-00 | 30 | 35.0 | 40.0 | |
| DF1B-32DES-2.5RC | CL0541-0361-5-00 | 32 | 37.5 | 42.5 | |
| DF1B-34DES-2.5RC | CL0541-0362-8-00 | 34 | 40.0 | 45.0 | |

Panel Cutouts



Note : Do not use a rounded surface at the panel tab portion.

Unit : mm

| Applicable Plug | No. of Pos. | C | | | D | E |
|------------------|-------------|--------------------------------|------------|------------|------|-----|
| | | Panel Board Thickness (Note 1) | | | | |
| | | 0.5 to 1.2 | 1.3 to 1.6 | 1.7 to 2.0 | | |
| DF1B-10DES-2.5RC | 10 | 19.1 | 19.8 | 20.5 | 15.2 | 3.7 |
| DF1B-12DES-2.5RC | 12 | 21.6 | 22.3 | 23.0 | 17.7 | 3.7 |
| DF1B-14DES-2.5RC | 14 | 24.1 | 24.8 | 25.5 | 20.2 | 3.7 |
| DF1B-16DES-2.5RC | 16 | 26.6 | 27.3 | 28.0 | 22.7 | 3.7 |
| DF1B-18DES-2.5RC | 18 | 29.1 | 29.8 | 30.5 | 25.2 | 3.7 |
| DF1B-20DES-2.5RC | 20 | 31.6 | 32.3 | 33.0 | 27.7 | 5.2 |
| DF1B-22DES-2.5RC | 22 | 34.1 | 34.8 | 35.5 | 30.2 | 5.2 |
| DF1B-24DES-2.5RC | 24 | 36.6 | 37.3 | 38.0 | 32.7 | 5.2 |
| DF1B-26DES-2.5RC | 26 | 39.1 | 39.8 | 40.5 | 35.2 | 5.2 |
| DF1B-28DES-2.5RC | 28 | 41.6 | 42.3 | 43.0 | 37.7 | 5.2 |
| DF1B-30DES-2.5RC | 30 | 44.1 | 44.8 | 45.5 | 40.2 | 5.2 |
| DF1B-32DES-2.5RC | 32 | 46.6 | 47.3 | 48.0 | 42.7 | 5.2 |
| DF1B-34DES-2.5RC | 34 | 49.1 | 49.8 | 50.5 | 45.2 | 5.2 |

Note 1 : The installation hole size C varies based on panel board thickness.

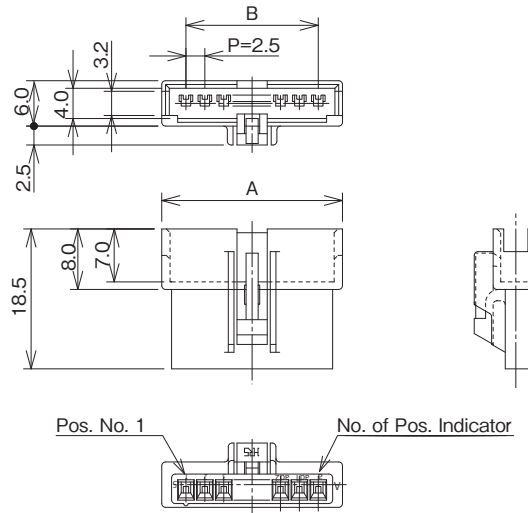
Note 2 : Fabricate installation holes so that no burrs occur.

Single Row In-line Plug (Positive Lock Type)



Shown with Contacts Inserted

●Applicable Socket : DF1B-#ES-2.5RC



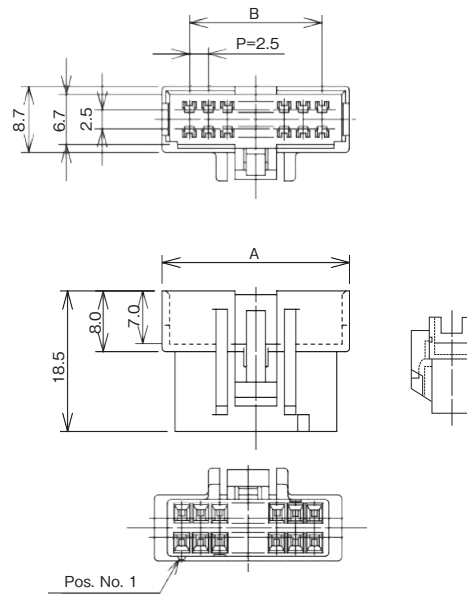
Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|-----------------|------------------|-------------|------|------|-------------------|
| DF1B-2EP-2.5RC | CL0541-0332-7-00 | 2 | 8.9 | 2.5 | 100pcs per bag |
| DF1B-3EP-2.5RC | CL0541-0333-0-00 | 3 | 11.4 | 5.0 | |
| DF1B-4EP-2.5RC | CL0541-0334-2-00 | 4 | 13.9 | 7.5 | |
| DF1B-5EP-2.5RC | CL0541-0335-5-00 | 5 | 16.4 | 10.0 | |
| DF1B-6EP-2.5RC | CL0541-0336-8-00 | 6 | 18.9 | 12.5 | |
| DF1B-7EP-2.5RC | CL0541-0337-0-00 | 7 | 21.4 | 15.0 | |
| DF1B-8EP-2.5RC | CL0541-0338-3-00 | 8 | 23.9 | 17.5 | |
| DF1B-9EP-2.5RC | CL0541-0339-6-00 | 9 | 26.4 | 20.0 | |
| DF1B-10EP-2.5RC | CL0541-0340-5-00 | 10 | 28.9 | 22.5 | |
| DF1B-11EP-2.5RC | CL0541-0341-8-00 | 11 | 31.4 | 25.0 | |
| DF1B-12EP-2.5RC | CL0541-0342-2-00 | 12 | 33.9 | 27.5 | |
| DF1B-13EP-2.5RC | CL0541-0343-3-00 | 13 | 36.4 | 30.0 | |

Double Row In-line Plug (Positive Lock Type)



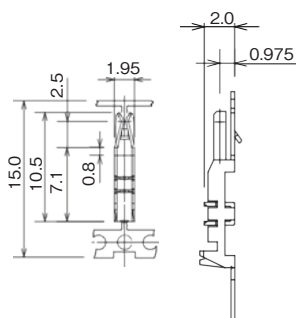
Shown with Contacts Inserted
 ●Applicable Socket : DF1B-#DES-2.5RC



Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | Purchase Unit |
|------------------|------------------|-------------|------|------|----------------|
| DF1B-10DEP-2.5RC | CL0541-0366-9-00 | 10 | 17.2 | 10.0 | 100pcs per bag |
| DF1B-12DEP-2.5RC | CL0541-0367-1-00 | 12 | 19.7 | 12.5 | |
| DF1B-14DEP-2.5RC | CL0541-0368-4-00 | 14 | 22.2 | 15.0 | |
| DF1B-16DEP-2.5RC | CL0541-0369-7-00 | 16 | 24.7 | 17.5 | |
| DF1B-18DEP-2.5RC | CL0541-0350-9-00 | 18 | 27.2 | 20.0 | |
| DF1B-20DEP-2.5RC | CL0541-0370-6-00 | 20 | 29.7 | 22.5 | |
| DF1B-22DEP-2.5RC | CL0541-0371-9-00 | 22 | 32.2 | 25.0 | |
| DF1B-24DEP-2.5RC | CL0541-0372-1-00 | 24 | 34.7 | 27.5 | |
| DF1B-26DEP-2.5RC | CL0541-0373-4-00 | 26 | 37.2 | 30.0 | |
| DF1B-28DEP-2.5RC | CL0541-0374-7-00 | 28 | 39.7 | 32.5 | |
| DF1B-30DEP-2.5RC | CL0541-0375-0-00 | 30 | 42.2 | 35.0 | |
| DF1B-32DEP-2.5RC | CL0541-0376-2-00 | 32 | 44.7 | 37.5 | |
| DF1B-34DEP-2.5RC | CL0541-0377-5-00 | 34 | 47.2 | 40.0 | |

IDC Contact for Socket



● Reel Contact Applicable Tool : Applicator

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|----------------|------------------|-------------|--------------------|---|-----|-------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-R24F | CL0541-0217-9-00 | Tin Plated | 10,000pcs per reel | 1061 | 24 | 11/0.16mm | 0.221mm ² | 0.9 to 1.39mm |
| DF1B-R24FA(06) | CL0541-0261-0-06 | Gold Plated | | 1061 | 24 | 11/0.16mm | 0.221mm ² | 0.9 to 1.39mm |
| DF1B-R26F | CL0541-0218-1-00 | Tin Plated | | 1061, 1007 | 26 | 7/0.16mm | 0.141mm ² | 0.9 to 1.39mm |
| DF1B-R26FA(06) | CL0541-0262-3-06 | Gold Plated | | 1061, 1007 | 26 | 7/0.16mm | 0.141mm ² | 0.9 to 1.39mm |
| DF1B-R28F | CL0541-0219-4-00 | Tin Plated | | 1061, 1007 | 28 | 7/0.127mm | 0.089mm ² | 0.9 to 1.39mm |
| DF1B-R28FA(06) | CL0541-0263-6-06 | Gold Plated | | 1061, 1007 | 28 | 7/0.127mm | 0.089mm ² | 0.9 to 1.39mm |

Note : When using cables other than those specified, contact a Hirose sales representative.

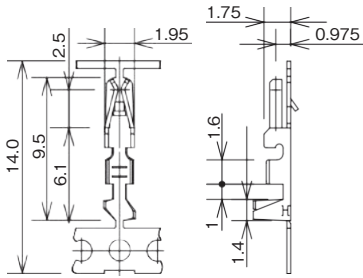
● Loose Contact Applicable Tool : Manual IDC tool

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|---------------|------------------|-------------|----------------|---|-----|-------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-R24 | CL0541-0220-3-00 | Tin Plated | 100pcs per bag | 1007 | 24 | 11/0.16mm | 0.221mm ² | 1.39mm |
| DF1B-R24A(06) | CL0541-0264-9-06 | Gold Plated | | 1007 | 24 | 11/0.16mm | 0.221mm ² | 1.39mm |
| DF1B-R26 | CL0541-0221-6-00 | Tin Plated | | 1007 | 26 | 7/0.16mm | 0.141mm ² | 1.3mm |
| DF1B-R26A(06) | CL0541-0265-1-06 | Gold Plated | | 1007 | 26 | 7/0.16mm | 0.141mm ² | 1.3mm |
| DF1B-R28 | CL0541-0222-9-00 | Tin Plated | | 1007 | 28 | 7/0.127mm | 0.089mm ² | 1.2mm |
| DF1B-R28A(06) | CL0541-0266-4-06 | Gold Plated | | 1007 | 28 | 7/0.127mm | 0.089mm ² | 1.2mm |

Note : Only the above cables are suitable when using the manual IDC tool.

● IDC Contact Extraction Tool : DF-C-PO(A)

Crimping Contact for Socket



●Strip Length : 2.0 to 2.5mm

●Reel Contact Applicable Tool : Applicator

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|---------------|------------------|-------------|--------------------|---|-----|-------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-2022SCF | CL0541-0223-1-00 | Tin Plated | 10,000pcs per reel | 1061, 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.2 to 1.9mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | |
| DF1B-2022SCFA | CL0541-0662-1-00 | Gold Plated | | 1061, 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.2 to 1.9mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | |
| DF1B-2428SCF | CL0541-0678-1-00 | Tin Plated | | 1061, 1007 | 24 | 11/0.16mm | 0.221mm ² | 0.9 to 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | |
| DF1B-2428SCFA | CL0541-0680-3-00 | Gold Plated | | 1061, 1007 | 24 | 11/0.16mm | 0.221mm ² | 0.9 to 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | |
| DF1B-30SCF | CL0541-0682-9-00 | Tin Plated | | 1061, 1007 | 30 | 7/0.1mm | 0.055mm ² | 0.6 to 1.2mm |
| DF1B-30SCFA | CL0541-0684-4-00 | Gold Plated | | 1061, 1007 | 30 | 7/0.1mm | 0.055mm ² | 0.6 to 1.2mm |

Note : When using cables other than those specified, contact a Hirose sales representative.

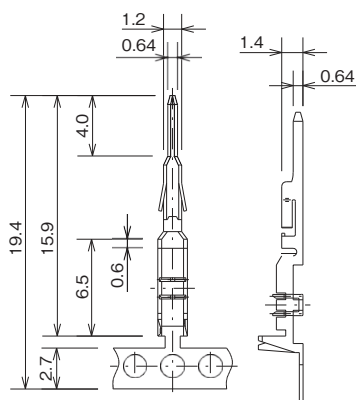
●Loose Contact Applicable Tool : Manual Crimping Tool

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|--------------|------------------|-------------|----------------|---|-----|-------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-2022SC | CL0541-0224-4-00 | Tin Plated | 100pcs per bag | 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.8mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | 1.6mm |
| DF1B-2022SCA | CL0541-0663-4-00 | Gold Plated | | 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.8mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | 1.6mm |
| DF1B-2428SC | CL0541-0679-4-00 | Tin Plated | | 1007 | 24 | 11/0.16mm | 0.221mm ² | 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | 1.3mm |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | 1.2mm |
| DF1B-2428SCA | CL0541-0681-6-00 | Gold Plated | | 1007 | 24 | 11/0.16mm | 0.221mm ² | 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | 1.3mm |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | 1.2mm |
| DF1B-30SC | CL0541-0683-1-00 | Tin Plated | | 1007 | 30 | 7/0.1mm | 0.055mm ² | 1.1mm |
| DF1B-30SCA | CL0541-0685-7-00 | Gold Plated | | 1007 | 30 | 7/0.1mm | 0.055mm ² | 1.1mm |

Note : Only the above cables are suitable when using the manual IDC tool.

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

IDC Contact for Plug



● Reel Contact Applicable Tool : Applicator

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|------------|------------------|------------|--------------------|---|-----|-------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-24PRF | CL0541-0666-2-00 | Tin Plated | 10,000pcs per reel | 1061 | 24 | 11/0.16mm | 0.221mm ² | 0.9 to 1.39mm |
| DF1B-26PRF | CL0541-0668-8-00 | Tin Plated | | 1061, 1007 | 26 | 7/0.16mm | 0.141mm ² | 0.9 to 1.39mm |
| DF1B-28PRF | CL0541-0670-0-00 | Tin Plated | | 1061, 1007 | 28 | 7/0.127mm | 0.089mm ² | 0.9 to 1.39mm |

Note : When using cables other than those specified, contact a Hirose sales representative.

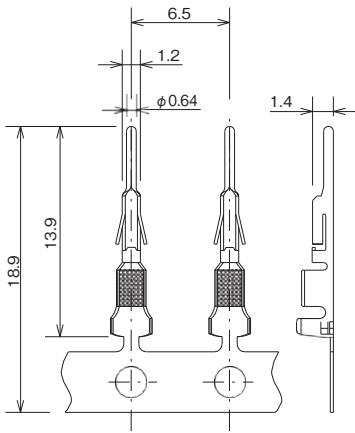
● Loose Contact Applicable Tool : Manual ID tool

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|-----------|------------------|------------|----------------|---|-----|-------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-24PR | CL0541-0667-5-00 | Tin Plated | 100pcs per bag | 1007 | 24 | 11/0.16mm | 0.221mm ² | 1.39mm |
| DF1B-26PR | CL0541-0669-0-00 | Tin Plated | | 1007 | 26 | 7/0.16mm | 0.141mm ² | 1.3mm |
| DF1B-28PR | CL0541-0671-2-00 | Tin Plated | | 1007 | 28 | 7/0.127mm | 0.089mm ² | 1.2mm |

Note : Only the above cables are suitable when using the manual IDC tool.

● IDC Contact Extraction Tool : DF-C-PO(C)

Crimping Contact for Plug



●Strip Length : 3.0 to 3.7mm

●Reel Contact Applicable Tool : Applicator

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|----------------|------------------|-------------|--------------------|---|-----|-------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-2022PCF | CL0541-0259-9-00 | Tin Plated | 10,000pcs per reel | 1061, 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.2 to 1.9mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | |
| DF1B-2022PCFB | CL0541-0690-7-00 | Gold Plated | | 1061, 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.2 to 1.9mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | |
| DF1B-2428PCF | CL0541-0664-7-00 | Tin Plated | | 1061, 1007 | 24 | 11/0.16mm | 0.221mm ² | 0.9 to 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | |
| DF1-PD2428SCFB | CL0541-0660-6-00 | Gold Plated | | 1061, 1007 | 24 | 11/0.16mm | 0.221mm ² | 0.9 to 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | |
| DF1B-30PCF | CL0541-0686-0-00 | Tin Plated | | 1061, 1007 | 30 | 7/0.1mm | 0.055mm ² | 0.6 to 1.2mm |
| DF1B-30PCFB | CL0541-0688-5-00 | Gold Plated | | | 30 | 7/0.1mm | 0.055mm ² | 0.6 to 1.2mm |

Note : When using cables other than those specified, contact a Hirose sales representative.

● Loose Contact Applicable Tool : Manual Crimping Tool

| Part No. | HRS No. | Finish | Purchase Unit | Applicable Cable (Tin Plated Annealing Copper Wire) | | | | |
|---------------|------------------|-------------|----------------|---|---------|----------------------|----------------------|-----------------|
| | | | | UL Style | AWG | Wire Construction | Sectional Area | Jacket Diameter |
| DF1B-2022PC | CL0541-0260-8-00 | Tin Plated | 100pcs per bag | 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.8mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | 1.6mm |
| DF1B-2022PCB | CL0541-0691-0-00 | Gold Plated | | 1007 | 20 | 21/0.18mm | 0.540mm ² | 1.8mm |
| | | | | | 22 | 17/0.16mm | 0.342mm ² | 1.6mm |
| DF1B-2428PC | CL0541-0665-0-00 | Tin Plated | | 1007 | 24 | 11/0.16mm | 0.221mm ² | 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | 1.3mm |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | 1.2mm |
| DF1-PD2428SCB | CL0541-0661-9-00 | Gold Plated | | 1007 | 24 | 11/0.16mm | 0.221mm ² | 1.5mm |
| | | | | | 26 | 7/0.16mm | 0.141mm ² | 1.3mm |
| | | | | | 28 | 7/0.127mm | 0.089mm ² | 1.2mm |
| DF1B-30PC | CL0541-0687-2-00 | Tin Plated | 1007 | 30 | 7/0.1mm | 0.055mm ² | 1.1mm | |
| DF1B-30PCB | CL0541-0689-8-00 | Gold Plated | 1007 | 30 | 7/0.1mm | 0.055mm ² | 1.1mm | |

Note : Only the above cables are suitable when using the manual IDC tool.

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

Applicable Tool

| Connection Type | Type | Part No. | HRS No. | Applicable Contacts |
|-----------------|----------------------|---------------------|--------------------------|--|
| IDC | Applicator | AP105-DF1B-R | CL0901-4507-4-00 | DF1B-R##F, DF1B-R##F(06) DF1B-R##FA, DF1B-R##FA(06) |
| | | AP105-DF1B-PR | CL0901-4536-2-00 | DF1B-##PRF ##=24, 26, 28 |
| | Manual IDC Tool | DF1B-T2428HR | CL0550-0171-0-00 | DF1B-R##F, DF1B-R##F(06) DF1B-R##FA, DF1B-R##FA(06) |
| | | DF1B-T2428PHR | CL0550-0221-7-00 | DF1B-##PR ##=24, 26, 28 |
| Crimping | Applicator | AP105-DF1B-2022S | CL0901-4510-9-00 | DF1B-2022SCF(A) |
| | | AP105-DF1B-2428S | CL0901-4518-0-00 | DF1B-2428SCF(A) |
| | | AP105-DF1B-30S | CL0901-4517-8-00 | DF1B-30SCF(A) |
| | | AP105-DF1B-2022P | CL0901-4509-0-00 | DF1B-2022PCF(B) |
| | | AP105-DF1B-2428P | CL0901-4521-5-00 | DF1B-2428PCF, DF1-PD2428SCFB |
| | | AP105-DF1B-30P | CL0901-4519-3-00 | DF1B-30PCF(B) |
| | Manual Crimping Tool | DF1B-TA2022SHC | CL0550-0182-7-00 | DF1B-2022SC(A) |
| | | DF1B-TA2428SHC | CL0550-0209-1-00 | DF1B-2428SC(A) |
| | | DF1B-TA30SHC | CL0550-0211-3-00 | DF1B-30SC(A) |
| | | DF1B-TA2022PHC | CL0550-0183-0-00 | DF1B-2022PC(B) |
| | | HT802/DF1B-2428P(A) | CL0550-0430-0-00 | DF1B-2428PC, DF1-PD2428SCB |
| | | DF1B-TA30PHC | CL0550-0210-0-00 | DF1B-30PC(B) |
| Press Main Unit | CM-105C | CL0901-0001-0-00 | - | |
| Extraction Tool | DF-C-PO(A) | CL0550-0170-8-00 | DF1B-R##F | |
| | DF-C-PO(B) | CL0550-0179-2-00 | DF1B-####SCF | |
| | DF-C-PO(C) | CL0550-0198-7-00 | DF1B-####PCF, DF1B-##PRF | |

Note 1 : Please conduct crimping work according to the table in the Crimp Quality Standard (ETAD-H0909-00, ETAD-H0913-00).

Note 2 : Problems with tools other than those specified by Hirose are outside the scope of warranty.

Note 3 : #### indicates the applicable wire sizes.

Note 4 : When non-authorized tools are used, please consult with Hirose sales representative about provision of the drawing of the crimping tool.

Crimping

Items required prior to start crimping

The work-related documents shown below are required before starting harness assembly.

(The ● mark represents required documents.)

Please contact your Hirose sales representative if you do not have these documents.

| Document Title | Description | Automatic Crimping Machine | Hand Crimping Tool | Remarks |
|---|--|----------------------------|--------------------|---|
| Crimping Machine Main Unit Instruction Manual | Explanation of main press machine unit | ● | — | Bundled with purchase of main press machine unit. |
| Applicator Spare Parts Identification | Explanation for Applicator installation | ● | — | Bundled with purchase of applicator. |
| Crimp Conditions | Standard Crimp Height and Tensile Strength Values | ● | — | |
| Crimp Quality Standards | Various standards for crimping conditions | ● | — | |
| Operating Instructions for Hand Tool | Crimp height, Standard values of tensile strength and others | — | ● | Bundled with purchase of hand tool. |
| Harness Procedure Manual | Harness Procedure | ● | ● | Ask a Hirose sales personnel to provide them. |

Tools

When crimping work is applied to our contacts, use the tools designated by Hirose.

※Crimping performed with tools other than those designated should be avoided as it may result in contact failure, disconnection of cable, etc.

※The operating instructions manual is available for the crimping machine and the applicator. Be sure to carefully read the operating instructions manual before beginning work.

Applicable Cables

Check that the cables to be used are within the applicable range.

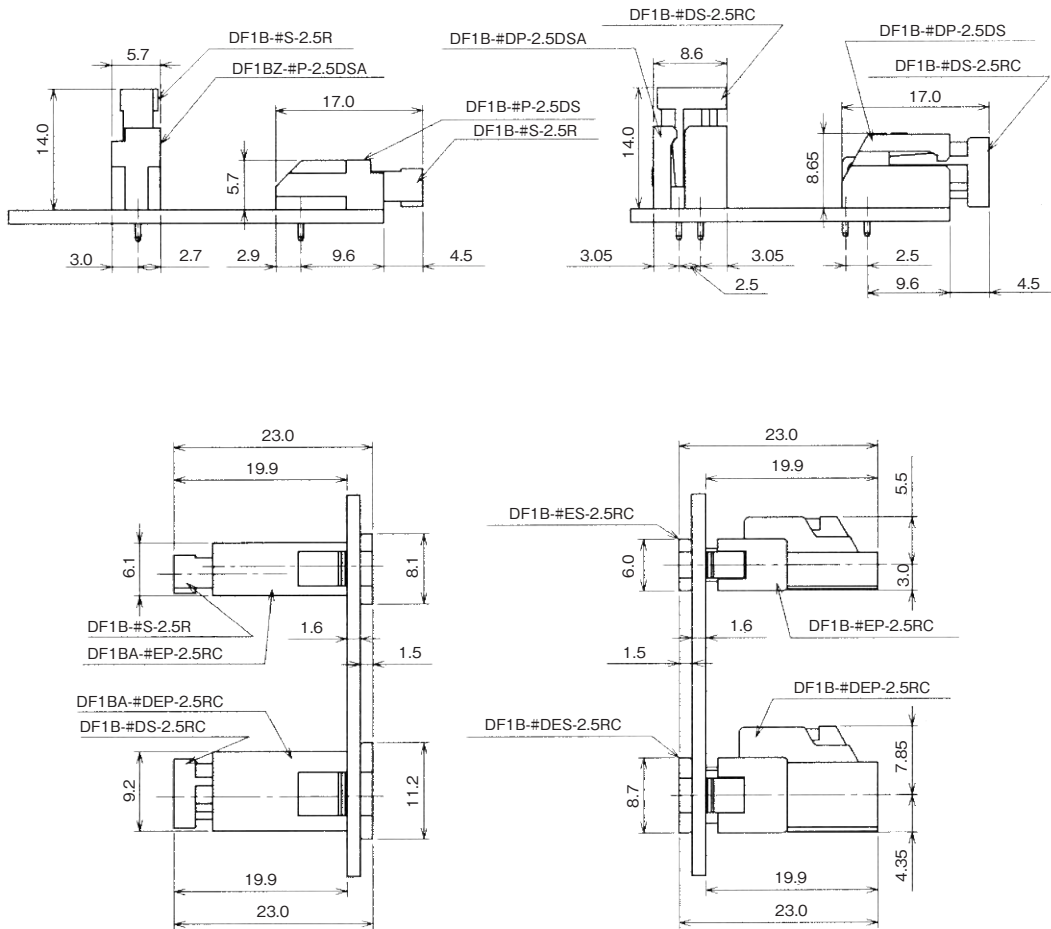
If you intend to use a cable other than those recommended, contact a sales representative.

[Precautions]

- Cables applicable to crimping connectors are tin-plated stranded soft-copper wire.
- Avoid crimping solid wire, wires with polyester threads or tin coated wires.
- Avoid crimping two cables together.
- The crimp height setting values (Note) may vary between tin-plated and gold-plated terminals even if the same electric wires are used.
- The crimp height setting values (Note) may vary depending on the difference in the core wire configuration even if the computed cross-sectional area is the same.

Note : The crimp height is an important item that determines crimping quality. We execute crimping tests for each electric wire to ensure the optimal value for the crimp height with high precision, thereby ensuring optimal setup values.

Application Pattern



Precautions

| | |
|-------------------------|---|
| 1. Cleaning Condition | Refer to the "Wire-to-Board Connector Use Handbook". |
| 2. Connection Condition | Refer to the "Wire-to-Board Connector Use Handbook". |
| 3. Cautions | The color of the plastic molding may differ slightly depending on product lot and future storage conditions but this does not affect the product performance. |
| 4. Precaution | Please refer to the following documents. <ul style="list-style-type: none"> ■ Crimp Quality Standards (ETAD-H0909-00, ETAD-H0913-00) ■ Harness Procedure Manual (ATAD-H0677-00) ■ Extraction Tool Procedure Manual ■ User Guide for Wire-to-Board Connectors |

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please confirm the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, assurance will not be given.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.

