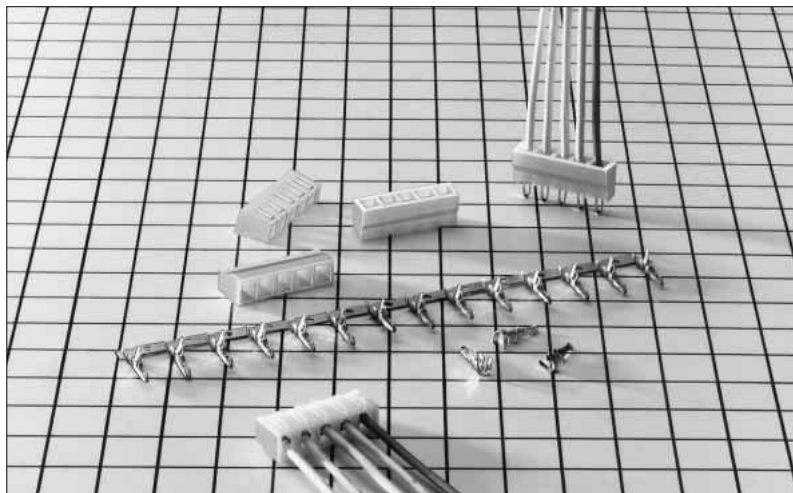


# 3.96mm Pitch Connector Directly Mounted on Board

## DF6 Series



### ■Features

#### 1. Service Efficiency Up

Conventional thick cables are directly mounted on the board piece by piece, but connectorization has achieved soldering services in a batch. This product enhances soldering service efficiency.

#### 2. Miniaturization

This product achieves miniaturization for thick cables.

Mounting height on board : 7.5mm

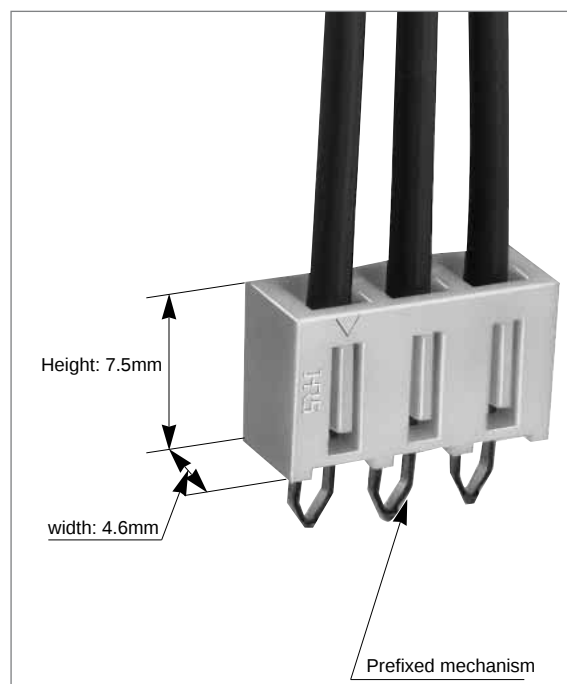
Width : 5.0mm

#### 3. Board Prefixed Mechanism

Since the connector is softly press-fitted to the board for insertion, it can be prefixed to the board.

### ■Applications

Secondary power supply units for various equipment



## DF6 Series 3.96mm Pitch Connector Directly Mounted on Board

### Product Specifications

|        |                            |                        |                             |                       |
|--------|----------------------------|------------------------|-----------------------------|-----------------------|
| Rating | Current rating<br>(Note 1) | AWG 18 : 5A            | Operating Temperature Range | -35 to +85°C (Note 1) |
|        |                            | Cable size AWG 20 : 4A | Operating Moisture Range    | 40 to 80%             |
|        | Voltage rating             | AWG 22 : 3A<br>300V AC | Storage Temperature Range   | -10 to +60°C (Note 2) |
|        |                            |                        | Storage Humidity Range      | 40 to 70% (Note 2)    |

| Item                            | Specification                                       | Condition                                                                                        |
|---------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1. Insulation Resistance        | 1000M ohms min.                                     | 500V DC                                                                                          |
| 2. Withstanding voltage         | No flashover or insulation breakdown.               | 1500V AC/1 minute                                                                                |
| 3. Contact Resistance           | 15m ohms max.                                       | 100mA                                                                                            |
| 4. Vibration                    | No damage, cracks, or parts looseness.              | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.        |
| 5. Humidity (Steady state)      | No damage, cracks, or parts looseness.              | 96 hours at temperature of 40°C and humidity of 90% to 95%                                       |
| 6. Temperature Cycle            | No damage, cracks, or parts looseness.              | (-55°C: 30 minutes → 15 to 35°C: 10 minutes → 85°C: 30 minutes → 5 to 35°C: 10 minutes) 5 cycles |
| 7. Resistance to Soldering heat | No deformation of components affecting performance. | Flow: 250°C for 10 seconds                                                                       |
|                                 |                                                     | Manual soldering: 300°C for 3 seconds                                                            |

Note 1: The rated current will be changed according to cable sizes for use.

Note 2: Includes temperature rise caused by current flow.

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

Note 4: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

### Material

| Product                   | Part      | Material     | Finish     | Remarks |
|---------------------------|-----------|--------------|------------|---------|
| Crimping Plug             | Insulator | Polyamide    | White      | UL94V-0 |
| Crimping Contact for Plug | Brass     | Copper Alloy | Tin plated | —       |

### Ordering Information

#### ●Crimping Plug

**DF6 - \* P - 3.96 C**

① ② ③ ④ ⑤

|                               |                         |
|-------------------------------|-------------------------|
| ① Series Name : DF 6          | ④ Contact pitch: 3.96mm |
| ② Number of contacts: 1~8, 10 | ⑤ C: Crimping plug      |
| ③ Connector type<br>P: Plug   |                         |

#### ●Crimping Contact

**DF6A - 1822 PCF**

① ② ③

|                                                                                                                      |                                                                                          |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| ① Applicable cable type<br>None : Jacket dia. 1.5mm to 2.2mm<br>UL 1007<br>A : Jacket dia. 2.2mm to 2.9mm<br>UL 1015 | ③ Packaging type<br>PCF: Plug contact, reel packaging<br>SC: Plug contact, bag packaging |
| ② Applicable cable size<br>1822 : AWG#18~#22                                                                         |                                                                                          |

## ■Precrimping Plug

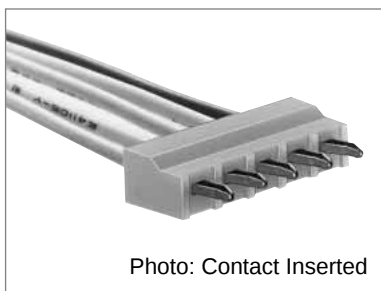
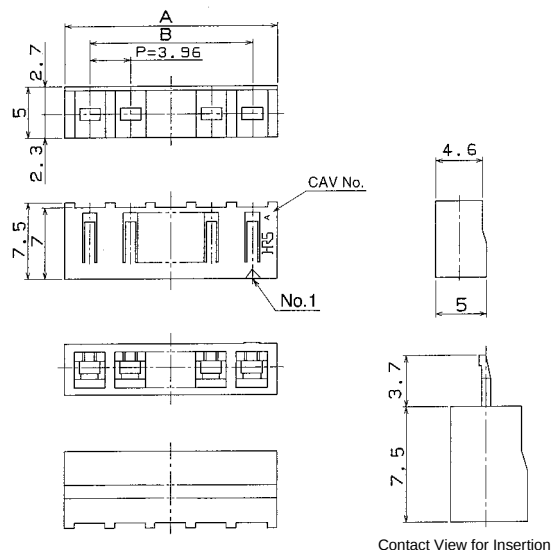


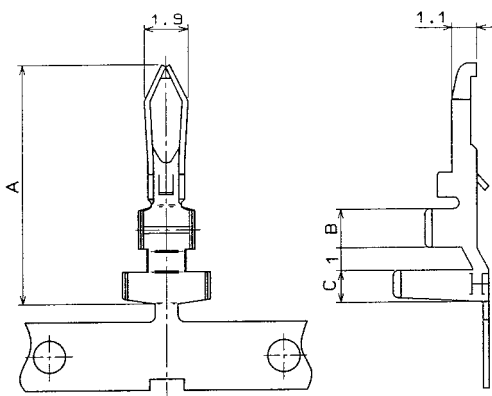
Photo: Contact Inserted

| Part Number   | CL No.     | Number of Contacts | A     | B     | RoHS |
|---------------|------------|--------------------|-------|-------|------|
| DF6- 1P-3.96C | 546-0001-1 | 1                  | 4.92  | —     | YES  |
| DF6- 2P-3.96C | 546-0002-4 | 2                  | 8.88  | 3.96  |      |
| DF6- 3P-3.96C | 546-0003-7 | 3                  | 12.84 | 7.92  |      |
| DF6- 4P-3.96C | 546-0004-0 | 4                  | 16.80 | 11.88 |      |
| DF6- 5P-3.96C | 546-0005-2 | 5                  | 20.76 | 15.84 |      |
| DF6- 6P-3.96C | 546-0006-5 | 6                  | 24.72 | 19.80 |      |
| DF6- 7P-3.96C | 546-0007-8 | 7                  | 28.68 | 23.76 |      |
| DF6- 8P-3.96C | 546-0008-0 | 8                  | 32.64 | 27.72 |      |
| DF6-10P-3.96C | 546-0011-5 | 10                 | 40.56 | 35.64 |      |

Note: A packaging quantity is delivered by the bag unit (100 pcs.).



## ■Crimping Contact



### ●Slip length

DF6-1822PC (F): 2.1mm to 2.6mm

DF6A-1822PC (F): 2.3mm to 2.8mm

### ●Applicable through-hole: 1.8<sup>+0.15</sup><sub>0</sub>

| Part Number      | CL No.        | Applicable Cable |              |          |                   | Packaging Type | Quantity | A    | B   | C   | RoHS |
|------------------|---------------|------------------|--------------|----------|-------------------|----------------|----------|------|-----|-----|------|
|                  |               | UL style         | Jacket dia.  | AWG size | Contact Construct |                |          |      |     |     |      |
| DF6 -1822PCF(05) | 546-0009-3-05 | 1007             | 1.5 to 2.2mm | AWG 18   | 34 cores/0.18mm   | Reel           | 5,000    | 10.2 | 1.5 | 1.2 | YES  |
| DF6 -1822PC(05)  | 546-0010-2-05 |                  |              | AWG 20   | 21 cores/0.18mm   | Bag            | 100      |      |     |     |      |
| DF6A-1822PCF(05) | 546-0013-0-05 | 1015             | 2.2 to 2.9mm | AWG 22   | 17 cores/0.16mm   | Reel           | 3,000    | 10.5 | 1.7 | 1.4 |      |
| DF6A-1822PC(05)  | 546-0014-3-05 |                  |              |          |                   | Bag            | 100      |      |     |     |      |

Note 1. The applicable cable conductor is a tin plated and annealed copper wire.

Note 2. If other cables are used instead of the applicable cable, contact the Hirose Sales Department.

## ◆Applicable Crimping Tools

| Type/Item            | Part Number      | CL No.     | Applicable Contact     |
|----------------------|------------------|------------|------------------------|
| Applicator           | AP105-DF6-1822P  | 901-4505-9 | DF6 -1822PCF(05)       |
|                      | AP105-DF6A-1822P | 901-4520-2 | DF6A-1822PCF(05)       |
| Press unit           | CM-105           | 901-0005-4 | —                      |
| Manual crimping tool | DF6 -TA1822HC    | 550-0174-9 | DF6 -1822PC(05)        |
|                      | DF6A-TA1822HC    | 550-0222-0 | DF6A-1822PC(05)        |
| Extraction tool      | DF-C-PO(A)       | 550-0170-8 | DF6/DF6A-1822PC(F)(05) |

Note: If any trouble has been caused due to other tools, which are not designated by Hirose, Hirose never guarantee any products.

DP6 Series 5.96mm Pitch Connector Directly Mounted on Board

◆Precautions

|                                   |                                                                                                                                                                                                                                                                                                            |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.Recommended soldering condition | Flow: 250℃ for 3 seconds<br>Manual soldering: 290℃ for 2 seconds<br>■After soldering, if a load is given to the cable where connector and cable contain heat, the jacket holding member will be loosened. After soldering, the operation should be performed, after connector returns to room temperature. |
| 2.Cleaning condition              | Refer to the "Nylon Connector Use Hand book".<br>Don't use solvent to degrade the cable jacket like trichloroethane.<br>In addition, avoid heat cleaning with solvent.                                                                                                                                     |
| 3.Connecting condition            | Refer to the "Nylon Connector Use Hand book".                                                                                                                                                                                                                                                              |
| 4.Precations                      | Slight discoloration on the insulating materials will not affect form, fit or function of the connectors.<br>Refer to "Nylon Connector Use Handbook"                                                                                                                                                       |