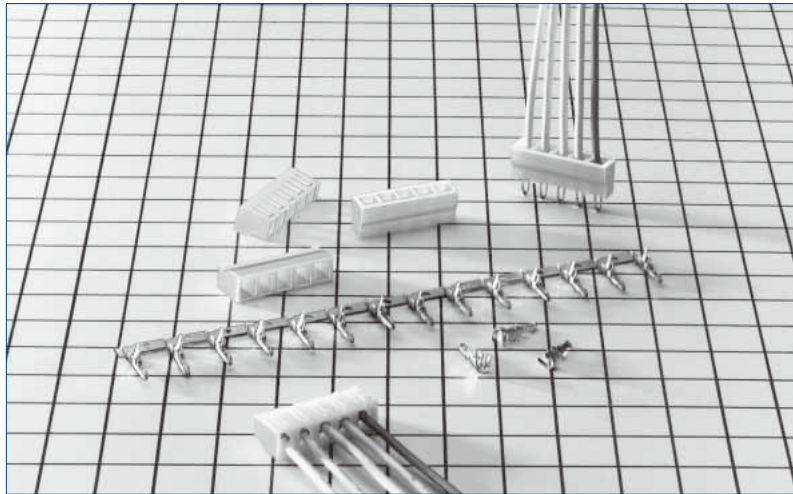


3.96mm Pitch Connector Directly Mounted on Board

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

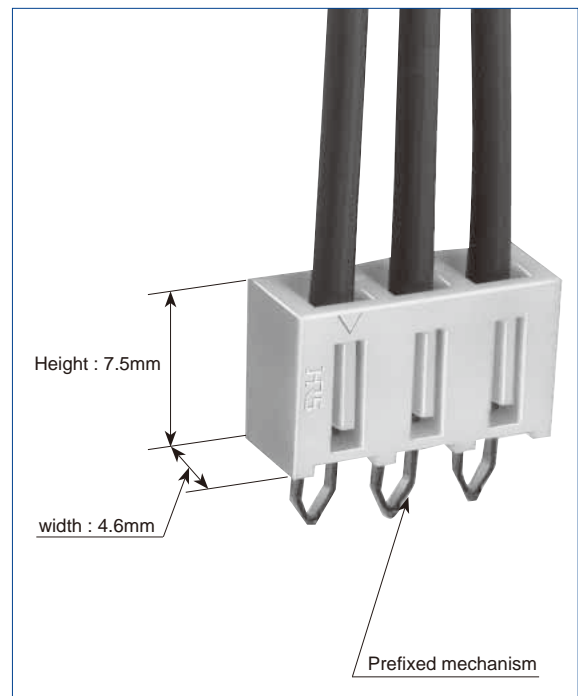
Width : 5.0mm

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



Product Specifications

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

Item	Specification	Condition
1. Insulation Resistance	1000MΩ min.	500V DC
2. Withstanding voltage	No flashover or insulation breakdown.	1500V AC/1minute
3. Contact Resistance	15mΩ max.	100mA
4. Vibration	No damage, cracks, or parts looseness.	Frequency : 10 to 55Hz, single amplitude of 0.75mm, 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 connector should be completely dry (no condensation present).

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	RoHS2
Crimping Plug	Insulator	Polyamide	White	UL94V-0	YES
Crimping Contact for Plug	Brass	Copper Alloy	Tin 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.

● 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 P : Plug	

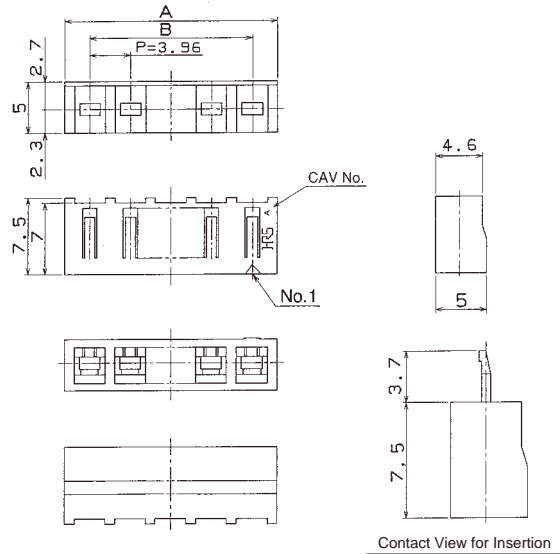
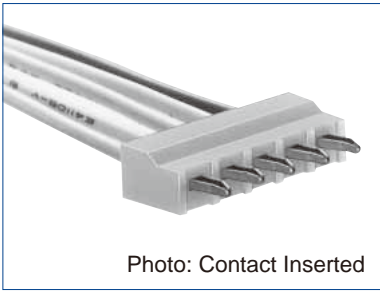
● Crimping Contact

DF6A - **1822** **PCF**

① ② ③

① Applicable cable type None : Jacket dia. 1.5mm to 2.2mm UL 1007 A : Jacket dia. 2.2mm to 2.9mm UL 1015	③ Packaging type PCF : Plug contact, reel packaging
② Applicable cable size 1822 : 18 to 22 AWG	

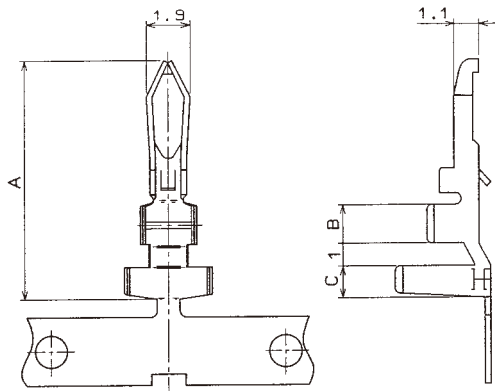
■Precrimping Plug



Part No.	HRS No.	Number of Contacts	A	B
DF6- 1P-3.96C	546-0001-1	1	4.92	—
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

DF6-1822PCF : 2.1mm to 2.6mm

DF6A-1822PCF : 2.3mm to 2.8mm

●Applicable through-hole: $1.8^{+0.15}_0$

Part No.	A	B	C
DF6-1822PCF(05)	10.2	1.5	1.2
DF6A-1822PCF(05)	10.7	1.7	1.4

◆Reel Contact (5.000pcs/reel)

Part No.	HRS No.	Finish	Applicable Wire (Tin Plated Annealing Copper Wire) (Note 1)				
			UL Style	AWG	Wire Construction	Sectional Area	Jacket Diameter
DF6-1822PCF(05)	546-0009-3-05	Tin Plated	1007	18 AWG	34cores/0.18mm	0.865mm ²	1.5~2.2mm
DF6A-1822PCF(05)	546-0013-0-05	Tin Plated	1015	20 AWG	21cores/0.18mm	0.534mm ²	
				22 AWG	17cores/0.16mm	0.342mm ²	2.2~2.9mm

Note 1 : Please consult with our Hirose sales representative in using wires other than these applicable wires.

◆Applicable Crimping Tools

Type/Item	Part No.	HRS 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	—
Extraction tool	DF-C-PO(A)	550-0170-8	DF6/DF6A-1822PCF(05)

Note 1 : If a trouble has occurred due to tools which are not designated by Hirose, Hirose won't guarantee any product.

Note 2 : Please do the crimping operations according to the "Crimp quality standard" and "Crimping condition table".

Note 3 : When non-authorized tools are used, Please consult with Hirose sales representative about provision of the drawing of the crimping tool.

◆ Crimping Precautions

■ Items required prior to start crimping

The work-related documents shown below are required before starting the harness connections.
(The ● mark shows the document required.)

When the documents shown below are not available, ask our sales personnel to provide them.

Document Title	Description	Automatic Crimping Machine	Hand Crimping Tool	Remarks
(1) Main unit of crimping machine instruction manual	Explanation of main press machine unit	●	—	When purchasing main press machine unit, it is bundled.
(2) Operating Instructions for Hand Tool	Crimp operation	●	—	When purchasing Applicator, it is bundled.
(3) Applicator Spare Parts Identification	Explanation for Applicator installation	●	—	
(4) Crimp Conditions	Standard values of : Crimp height ; Tensile strength	●	—	
(5) Crimp Quality Standards	Various standards for crimping conditions	●	—	When purchasing Hand Tool, it is bundled.
(6) Operating Instructions for Hand Tool	Inspection items of : Crimp height ; Crimp operation Tensile strength	—	●	
(7) Cable Assembly Procedure	Cable Assembly Procedure	●	●	Ask our sales personal to provide them.

■ Tools

When crimping work is applied to our contacts, the tool designated by Hirose should be used.
Crimping work by using tools other than as designated must not be done because 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 implementing the work.

■ Applicable electric wires

Check that the electric wire to be used is in the range of application.

If you intend to use an electric wire other than the recommended one, ask our sales personnel.

[Precautions]

- Electric wires that are applicable for crimping connectors shall, principally, be the tin-plated stranded soft-copper wire.
- Crimping of electric wires wherein single wires, polyester yarns, etc., exist and crimping of tin-coated wires should be avoided.
- Avoid crimping two electric wires together.
- The setting values of crimp height (Note 1) may vary between tin-plated and gold-plated terminals even if the same electric wires are used.
- The setting values of crimp height (Note 1) may vary depending on the difference in the core wire configuration even if the computed cross-sectional area is the same.

Note 1 : 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.

◆ Operating Precaution

1. Cleaning condition	Refer to the "User Guide for Wire-to-Board Connector". Don't use solvent to degrade the cable jacket like trichloroethane. In addition, avoid heat cleaning with solvent.
2. Connecting condition	Refer to the "User Guide for Wire-to-Board Connector".
3. Precautions	Slight discoloration on the insulating materials will not affect form, fit or function of the connectors. Refer to "User Guide for Wire-to-Board Connector".
4. Handling notes	Please refer the following documents. ■ Crimping Quality Standard (ETAD-H0907-00) ■ User Guide for Wire-to-Board Connector

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