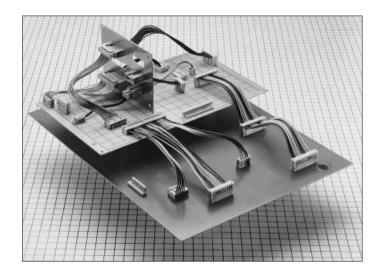
The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

2.5mm Pitch Connector for Discrete Wire Connection

DF1 Series



Features

1. Board Mounting Height (Crimping Type)

10mm 2.5mm pitch connector achieves the low profile.

2. Insulation Displacement Area Protected by Protector (ID Type)

The connector is structured to protect the insulation displacement connection area by the protector. Therefore, the connector has a strong tensile strength against the cable and prevents dusts.

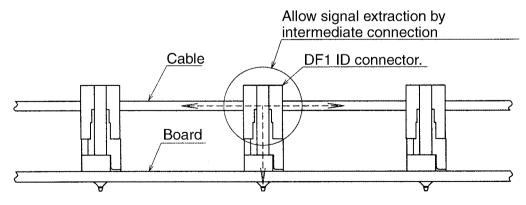
3. Easy Connection by Easy Tool (ID Type)

No expensive insulation displacement machine is needed. The connection can be established only by mating the cable into the protector and fastening it with the ID tool.

4. Intermediate Connection Possible (ID Type)

For intermediate connection, the connector allows signal extraction during cabling.

[Intermediate Connection]





FA equipment, measurement equipment

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hipper wsbitters the status of the Hipper wsbitters and the Hipper wsbitters and the status of the status of the Hipper wsbitters and the status of the status of the status of the Hipper wsbitters and the status of the status of the status of the Hipper wsbitters and the status of the status

Product Specifications

Rating	Curre Rating (N		Cable Size	AWG 2 AWG 2 AWG 2	6 : 2A	C	Operating Temperature Range Operating Moisture Range Storage Temperature Range	-30 to +85°C (Note2) 40 to 80% -10 to +60°C (Note3)	
	Volta	ge rating	ating 250V AC			S	Storage Moisture Range	40 to 70% $^{(\text{Note3})}$	
Item	1		Specification	า		Condition			
1. Insulation Resistance 1000M ohms Min			Min			500V DC			
2. Withstandin	g voltage	No flashover o	or insulation breakdown.			650V AC/1 minute			
3. Contact Res	sistance	30m ohms Ma	x			100n	mA		
4. Insertor/Extra	ction Force	MIN0.56N (57	gf), MAX4.4N(450g	ıf)		Measure by the square steel pin with 0.635±0.002mm			
5. Vibration	vration No electrical discontinuity			No electrical discontinuity of 1µs or more			ency: 10 to 55 Hz, single amplitude of 0.75 mm,	2 hours in each of the 3 directions.	
6. Moisture Re	esistance	Contact resistance:	30m ohms Max Insulation	resistance: 100	00M ohms Min	96 hours at temperature of 40° C and humidity of 90% to 95%			
7 Tomporatur		Contact registeres	30m ohms max.Insulation	registeres: 1000	M ohmo min	(-55℃: 30 minutes → 5~35℃: 10 minutes→			
7. Temperatur	e Cycle	Contact resistance.		resistance. Tool	JIVI OHINS MIIN.	85℃: 30 minutes → 5~35℃: 10 minutes) 5 cycles			
8. Durability (Matin	ng/un-mating)	Contact resista	ance: 30m ohms ma	ax.		Tin plating: 30 cycles			
9. Resistance to So	oldering 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. For the header only, the rating is 3A.

Note 2: Includes temperature rise caused by current flow.

Note 3: The term "storage" refers to product 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.

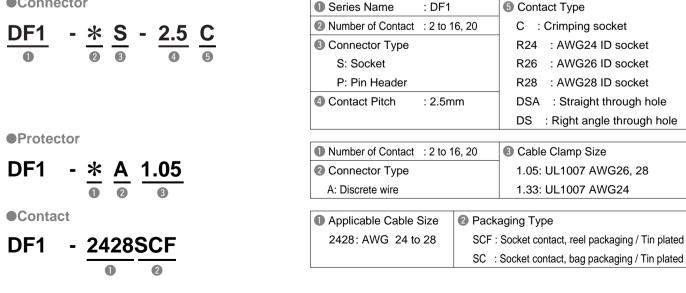
Material

Product	Part	Material	Finish	Remarks
Crimping Socket	Insulator	Polyamide	Light Brown	UL94V-0
Crimping Contact	Contact	Phosphor copper	Tin plated	
ID Cashat	Insulator	Polyamide	Light Brown	UL94V-0
ID Socket	Contact	Phosphor copper	Tin plated	
Dip Lloader	Insulator	Polyamide	Light Brown	UL94V-0
Pin Header	Contact	Phosphor copper	Tin plated	

Note: Hirose's tin-plated products takes measures against whisker.

Ordering Information

Connector



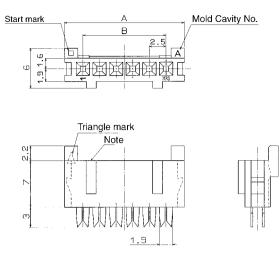
The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-Roll Strad standard best discontinued and best of the second of

■ID Socket (Open End Type)



Applicable Cable

Part Number	Applicable Cable	Jacket Diameter
DF1-*S-2.5R24(05)	UL1007 AWG24(11 pieces/0.16mm)	1.35 to 1.45mm
DF1-*S-2.5R26(05)	UL1007 AWG26(7 pieces/0.16mm)	1.25 to 1.35mm
DF1-*S-2.5R28(05)	UL1007 AWG28(7 pieces/0.127mm)	1.15 to 1.25mm



Note: This convex portion is located (2 contacts: the center at one point)(3 to 6 contacts: as shown in the illustration)(more than 7 contacts: one center at one point added to the above illustration).

(Tin plated annealing copper wire)

•AWG24 Cable Socket Size (Triangle Mark: Green)

Part Number	CL No.	Number of Contacts	Α	В	RoHS	Part Number	CL No.	Number of Contacts	А	В	RoHS
DF1-2S-2.5R24(05)	541-0039-2-05	2	8	2.5		DF1-10S-2.5R24(05)	541-0047-0-05	10	28	22.5	
DF1-3S-2.5R24(05)	541-0040-1-05	3	10.5	5	1	DF1-11S-2.5R24(05)	541-0048-3-05	11	30.5	25	
DF1-4S-2.5R24(05)	541-0041-4-05	4	13	7.5		DF1-12S-2.5R24(05)	541-0049-6-05	12	33	27.5	
DF1-5S-2.5R24(05)	541-0042-7-05	5	15.5	10		DF1-13S-2.5R24(05)	541-0050-5-05	13	35.5	30	Yes
DF1-6S-2.5R24(05)	541-0043-0-05	6	18	12.5	Yes	DF1-14S-2.5R24(05)	541-0051-8-05	14	38	32.5	
DF1-7S-2.5R24(05)	541-0044-2-05	7	20.5	15		DF1-15S-2.5R24(05)	541-0052-0-05	15	40.5	35	
DF1-8S-2.5R24(05)	541-0045-5-05	8	23	17.5		DF1-16S-2.5R24(05)	541-0053-3-05	16	43	37.5]
DF1-9S-2.5R24(05)	541-0046-8-05	9	25.5	20		DF1-20S-2.5R24(05)	541-0057-4-05	20	53	47.5	

•AWG26 Cable Socket Size (Triangle Mark: Light Blue)

●AWG26 Cabl	AWG26 Cable Socket Size (Triangle Mark: Light Blue) Unit: mm												
Part Number	CL No.	Number of Contacts	Α	В	RoHS	Part Number	CL No.	Number of Contacts	Α	В	RoHS		
DF1-2S-2.5R26(05)	541-0058-7-05	2	8	2.5	5	DF1-10S-2.5R26(05)	541-0066-5-05	10	28	22.5			
DF1-3S-2.5R26(05)	541-0059-0-05	3	10.5	5		DF1-11S-2.5R26(05)	541-0067-8-05	11	30.5	25			
DF1-4S-2.5R26(05)	541-0060-9-05	4	13	7.5		DF1-12S-2.5R26(05)	541-0068-0-05	12	33	27.5			
DF1-5S-2.5R26(05)	541-0061-1-05	5	15.5	10	Yes	DF1-13S-2.5R26(05)	541-0069-3-05	13	35.5	30	Yes		
DF1-6S-2.5R26(05)	541-0062-4-05	6	18	12.5	res	DF1-14S-2.5R26(05)	541-0070-2-05	14	38	32.5	res		
DF1-7S-2.5R26(05)	541-0063-7-05	7	20.5	15		DF1-15S-2.5R26(05)	541-0071-5-05	15	40.5	35			
DF1-8S-2.5R26(05)	541-0064-0-05	8	23	17.5		DF1-16S-2.5R26(05)	541-0072-8-05	16	43	37.5			
DF1-9S-2.5R26(05)	541-0065-2-05	9	25.5	20		DF1-20S-2.5R26(05)	541-0076-9-05	20	53	47.5			

•AWG28 Cable Socket Size (Triangle Mark: Red)

Part Number	CL No.	Number of Contacts	А	В	RoHS	Part Number	CL No.	Number of Contacts	А	В	RoHS
DF1-2S-2.5R28(05)	541-0115-9-05	2	8	2.5		DF1-10S-2.5R28(05)	541-0123-7-05	10	28	22.5	
DF1-3S-2.5R28(05)	541-0116-1-05	3	10.5	5		DF1-11S-2.5R28(05)	541-0124-0-05	11	30.5	25	
DF1-4S-2.5R28(05)	541-0117-4-05	4	13	7.5		DF1-12S-2.5R28(05)	541-0125-2-05	12	33	27.5	
DF1-5S-2.5R28(05)	541-0118-7-05	5	15.5	10		DF1-13S-2.5R28(05)	541-0126-5-05	13	35.5	30	Vaa
DF1-6S-2.5R28(05)	541-0119-0-05	6	18	12.5	Yes	DF1-14S-2.5R28(05)	541-0127-8-05	14	38	32.5	Yes
DF1-7S-2.5R28(05)	541-0120-9-05	7	20.5	15		DF1-15S-2.5R28(05)	541-0128-0-05	15	40.5	35	
DF1-8S-2.5R28(05)	541-0121-1-05	8	23	17.5		DF1-16S-2.5R28(05)	541-0129-3-05	16	43	37.5	
DF1-9S-2.5R28(05)	541-0122-4-05	9	25.5	20		DF1-20S-2.5R28(05)	531-0133-0-05	20	53	47.5	

Note: A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the products per bag.

Unit: mm

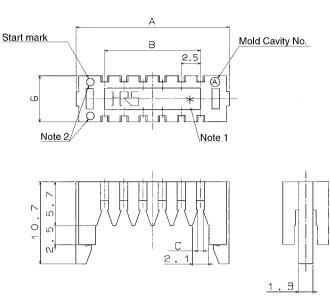
Unit: mm

B178 **HS**

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hipperwseiters 25 mini michine connectors can observe while connectors can be all and the status of the Hipperwseiters and the status of the status of the Hipperwseiters and the status of the status of

Protector





Note 1.Product contact No. mark, however 2 and 3 contacts are not indicated. Note 2.Round hole to distinguish the protector A1.05 and 1.33 (DF1-*A1.05 only)

Select the protector after inspecting the cable jacket diameter for use.

Protector Type	Applicable Jacket Diameter	Recommended Cable
DF1-*A1.33	φ1.35 to φ1.45	UL1007 AWG24
DF1-*A1.05	¢1.1 to ¢1.35	UL1007 AWG26 28

*indicates contact No.

●AWG24 Cable Protector Size

●AWG24 Cabl	AWG24 Cable Protector Size									
Part Number	CL No.	Number of Contacts	А	В	С	RoHS	Ρ			
DF1- 2A1.33	541-0077-1	2	10	2.5	1.1		C			
DF1- 3A1.33	541-0078-4	3	12.5	5	1.1		Ľ			
DF1- 4A1.33	541-0079-7	4	15	7.5	1.1		C			
DF1- 5A1.33	541-0080-6	5	17.5	10	1.1		C			
DF1- 6A1.33	541-0081-9	6	20	12.5	1.1		C			
DF1- 7A1.33	541-0082-1	7	22.5	15	1.1		Ľ			
DF1- 8A1.33	541-0083-4	8	25	17.5	1.1		C			
DF1- 9A1.33	541-0084-7	9	27.5	20	1.1	Yes	C			
DF1-10A1.33	541-0085-0	10	30	22.5	1.1	res	C			
DF1-11A1.33	541-0086-2	11	32.5	25	1.1		C			
DF1-12A1.33	541-0087-5	12	35	27.5	1.1		C			
DF1-13A1.33	541-0088-8	13	37.5	30	1.1		C			
DF1-14A1.33	541-0089-0	14	40	32.5	1.1		C			
DF1-15A1.33	541-0090-0	15	42.5	35	1.1		C			
DF1-16A1.33	541-0091-2	16	45	37.5	1.1		Ľ			
DF1-20A1.33	541-0095-3	20	55	47.5	1.1		Γ			

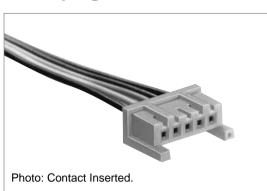
Unit: mm

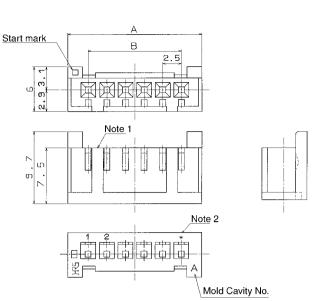
Part Number	CL No.	Number of Contacts	А	В	С	RoHS
DF1- 2A1.05	541-0096-6	2	10	2.5	0.7	
DF1- 3A1.05	541-0097-9	3	12.5	5	0.7	
DF1- 4A1.05	541-0098-1	4	15	7.5	0.7	
DF1- 5A1.05	541-0099-4	5	17.5	10	0.7	
DF1- 6A1.05	541-0100-1	6	20	12.5	0.7	
DF1- 7A1.05	541-0101-4	7	22.5	15	0.7	
DF1- 8A1.05	541-0102-7	8	25	17.5	0.7	
DF1- 9A1.05	541-0103-0	9	27.5	20	0.7	Yes
DF1-10A1.05	541-0104-2	10	30	22.5	0.7	res
DF1-11A1.05	541-0105-5	11	32.5	25	0.7	
DF1-12A1.05	541-0106-8	12	35	27.5	0.7	
DF1-13A1.05	541-0107-0	13	37.5	30	0.7	
DF1-14A1.05	541-0108-3	14	40	32.5	0.7	
DF1-15A1.05	541-0109-6	15	42.5	35	0.7]
DF1-16A1.05	541-0110-5	16	45	37.5	0.7]
DF1-20A1.05	541-0114-6	20	55	47.5	0.7	

Note: A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the product per bag.

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoH& rad starters be shifting the content of the contract the contract to the design information.

Crimping Socket





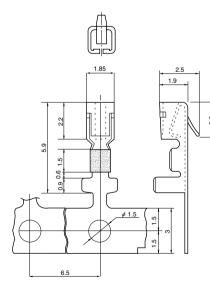
Note1:This convex portion is located (2 contacts: the center at one point)(3 to 6 contacts: as shown in the illustration)(more than 7 contacts: one center at one point added to the above illustration). Note 2.The terminal number indicates all contact numbers. Unit: mm

P	art Number	CL No.	Number of Contacts	Α	В	RoHS	Part Number	CL No.	Number of Contacts	А	В	RoHS
DI	F1- 2S-2.5C	541-0136-9	2	8	2.5		DF1-11S-2.5C	541-0145-0	11	30.5	25	
DI	F1- 3S-2.5C	541-0137-1	3	10.5	5		DF1-12S-2.5C	541-0146-2	12	33	27.5	
DI	F1- 4S-2.5C	541-0138-4	4	13	7.5		DF1-13S-2.5C	541-0147-5	13	33.5	30	
DI	F1- 5S-2.5C	541-0139-7	5	15.5	10]	DF1-14S-2.5C	541-0148-8	14	38	32.5	Yes
DI	F1- 6S-2.5C	541-0140-6	6	18	12.5	Yes	DF1-15S-2.5C	541-0149-0	15	40.5	35	res
DI	F1- 7S-2.5C	541-0141-9	7	20.5	15		DF1-16S-2.5C	541-0150-0	16	43	37.5	
DI	F1- 8S-2.5C	541-0142-1	8	23	17.5		DF1-18S-2.5C	541-0152-5	18	48	42.5	
DI	F1- 9S-2.5C	541-0143-4	9	25.5	20]	DF1-20S-2.5C	541-0154-0	20	53	47.5	
D	F1-10S-2.5C	541-0144-7	10	28	22.5]						

DF1-10S-2.5C 541-0144-7 10 28 22.5

Note:A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the product per bag.

Crimping Contact for Socket



Part Number	CL No.	Packaging Type	Number of Contacts	Finish	RoHS	
DF1-2428SCF	541-0134-3	Reel	10000	Tin plating	Yes	
DF1-2428SC	541-0135-6	Bag	100	This plaung	165	

•Applicable Cable (Tin Plated Annealing Copper Wire)

Conductor Size (wire construction)	Jacket Diameter
AWG24 (11 cores/0.16mm)	
AWG26 (7 cores/0.16mm)	<i>φ</i> 0.9 to <i>φ</i> 1.5mm
AWG28 (07 cores/1.24mm)	

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

Recommended Cable

UL1061, UL1007

Strip Length

1.9 to 2.4mm

● Applicable Crimping Tool

Туре	Part Number	CL No.	Applicable Contact		
Applicator	AP105-DF1-2428S	901-4538-8	DF1-2428SCF		
Press Main Unit	CM-105	901-0005-4			
Manual Crimping Tool	DF1-T2428S	550-0102-8	DF1-2428SC		
Extraction Tool	Flat-bladed screwdriver, 0.75 mm max, blade width.				

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

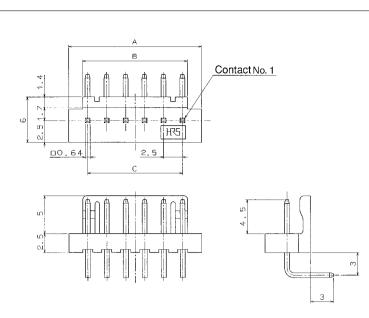
Note 2: Refer to tecknical specification for work method of extraction tool.

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hipperwsheite BHS 2:5000 at mythings connectors correction opentative.

■Pin Header Right Angle Type



Board Through-hole Diameter : ø1.1+0.1

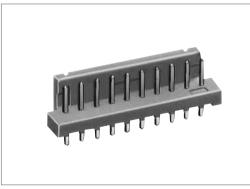


Unit: mm

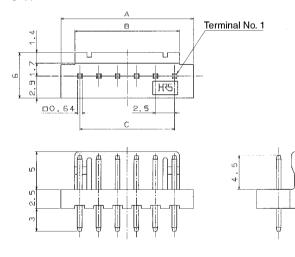
Part Number	CL No.	Number of Contacts	А	В	С	RoHS	Part Number	CL No.	Number of Contacts	А	В	С	RoHS
DF1- 2P-2.5DS(05)	541-0020-4-05	2	7.5	3.8	2.5		DF1-11P-2.5DS(05)	541-0029-9-05	11	30	26.3	25	
DF1- 3P-2.5DS(05)	541-0021-7-05	3	10	6.3	5		DF1-12P-2.5DS(05)	541-0030-8-05	12	32.5	28.8	27.5	
DF1- 4P-2.5DS(05)	541-0022-0-05	4	12.5	8.8	7.5		DF1-13P-2.5DS(05)	541-0031-0-05	13	35	31.3	30	
DF1- 5P-2.5DS(05)	541-0023-2-05	5	15	11.3	10		DF1-14P-2.5DS(05)	541-0032-3-05	14	37.5	33.8	32.5	Yes
DF1- 6P-2.5DS(05)	541-0024-5-05	6	17.5	13.8	12.5	Yes	DF1-15P-2.5DS(05)	541-0033-6-05	15	40	36.3	35	res
DF1- 7P-2.5DS(05)	541-0025-8-05	7	20	16.3	15		DF1-16P-2.5DS(05)	541-0034-9-05	16	42.5	38.8	37.5	
DF1- 8P-2.5DS(05)	541-0026-0-05	8	22.5	18.8	17.5		DF1-18P-2.5DS(05)	541-0036-4-05	18	47.5	43.8	42.5	
DF1- 9P-2.5DS(05)	541-0027-3-05	9	25	21.3	20		DF1-20P-2.5DS(05)	541-0038-0-05	20	52.5	48.8	47.5	
DF1-10P-2.5DS(05)	541-0028-6-05	10	27.5	23.8	22.5								

Note 1.A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the product per bag. Note 2.The socket applicable to the 18 contact connector is only crimping type.

Pin Header Straight Type



Board Through-hole Diameter : ø1.1^{+0.1}



												U	Init: mm
Part Number	CL No.	Number of Contacts	Α	В	С	RoHS	Part Number	CL No.	Number of Contacts	А	В	С	RoHS
DF1- 2P-2.5DSA(05)	541-0001-0-05	2	7.5	3.8	2.5		DF1-11P-2.5DSA(05)	541-0010-0-05	11	30	26.3	25	
DF1- 3P-2.5DSA(05)	541-0002-2-05	3	10	6.3	5		DF1-12P-2.5DSA(05)	541-0011-3-05	12	32.5	28.8	27.5	
DF1- 4P-2.5DSA(05)	541-0003-5-05	4	12.5	8.8	7.5		DF1-13P-2.5DSA(05)	541-0012-6-05	13	35	31.3	30	
DF1- 5P-2.5DSA(05)	541-0004-8-05	5	15	11.3	10		DF1-14P-2.5DSA(05)	541-0013-9-05	14	37.5	33.8	32.5	Yes
DF1- 6P-2.5DSA(05)	541-0005-0-05	6	17.5	13.8	12.5	Yes	DF1-15P-2.5DSA(05)	541-0014-1-05	15	40	36.3	35	res
DF1- 7P-2.5DSA(05)	541-0006-3-05	7	20	16.3	15		DF1-16P-2.5DSA(05)	541-0015-4-05	16	42.5	38.8	37.5	
DF1- 8P-2.5DSA(05)	541-0007-6-05	8	22.5	18.8	17.5		DF1-18P-2.5DSA(05)	541-0017-0-05	18	47.5	43.8	42.5	
DF1- 9P-2.5DSA(05)	541-0008-9-05	9	25	21.3	20		DF1-20P-2.5DSA(05)	541-0019-5-05	20	52.5	48.8	47.5	
DF1-10P-2.5DSA(05)	541-0009-1-05	10	27.5	23.8	22.5								

Note 1.A packaging quantity is delivered by the bag unit (100 pcs.). If needed, please order the product per bag. Note 2.The socket applicable to the 18 contacts connector is only crimping type.

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoHS Fradests have best discontinued restrictions on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

●DF1 Connection Press

Part Number	CL No.	Height	Width	Depth	Weight
DF1 Connection Press HP513	550-0134-4	200mm	260mm	250mm	3.7kg

Note:The intermediate connection can be established by removing the cable cuttingblade of this press machine.

Select a protector after inspecting a cable Jacket diameter for use.

Protector Type	Applicable Jacket Diameter	Recommended Cable
DF1-*A1.33	φ1.35 to φ1.45	UL1007 AWG24
DF1-*A1.05	φ1.1 to φ1.35	UL1007 AWG26, 28

* indicates contact No.

●DF1 Cable Crimper

Part Number	CL No.
DF1 Cable Crimper	550-0130-3

Used to install the cable in the protector.

Precautions

1. Recommended Soldering Condition	Flow: 250°C for 10 seconds
	Manual soldering: 300°C for 3 seconds
2. Cleaning Condition	Refer to Nylon Connector Use Hand book.
3. Connection Condition	[Crimping]
	Refer to Nylon Connector Use Hand book.
	[ID]
	●For the insulation displacement tool, set a set of connector per insulation displacement. If more
	than 2 connectors have been set, they interrupt each other, which will cause an insulation
	displacement failure.
	ullet After the insulation displacement, make sure that the locks on both protector sides are
	completely activated.
4. Precation	Slight variations in color of the plastic compounds do not affect form, fit or function of the connector.
5. Precation	Refer to Nylon Connector Use Hand book.





Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Hirose Electric:

<u>DF1-10S-2.5R26(05)</u> <u>DF1-11S-2.5R26(05)</u> <u>DF1-12S-2.5R26(05)</u> <u>DF1-13S-2.5R26(05)</u> <u>DF1-14S-2.5R26(05)</u> <u>DF1-14S-</u>