

Crimping Contact Directly Mounted on Board

MDF12,MDF27 Series



■Features

1. Cable Direct Mounting Service Improved

The existing cable core soldered directly on the board is remade into the crimping contact, which can enhance the service efficiency and the reliability.

- Achieves pre-soldering fixation according to the board pre-fixed style, and enhances the service efficiency.
- Accepts a load to the cable at the contact, and prevents contact wire cutting.

2. Cable Lateral Unreeling Possible

The cable can be unreeled lateral to the board by using the angle type MDF27.

3. Current Capacity Secured Corresponding to Thick Cable

The cable size corresponds to AWG22 to 14, while AWG14 secures 15A current capacity.

In addition, since the contacts are provided corresponding to UL1007 and UL1015 jackets, the contact can be chosen according to applications.

■Applications

Various kinds of electronic equipment power supplies, etc.

■Product Specifications

Rating	Current rating Note 1	AWG 14 : 15A AWG 16 : 10A AWG 18 : 9A AWG 20 : 5A AWG 22 : 5A	Operating Temperature Range -35 to +85°C(Note 2) Operating Moisture Range 20 to 80%
	Voltage rating	300V AC	Storage Temperature Range -10 to +60°C Storage Moisture Range 40 to 70%

Item	Specification	Condition
1. Contact Resistance	15m ohms max.	100mA
2. 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.
3. Humidity (Steady state)	No damage, cracks, or parts looseness.	96 hours at temperature of 40°C and humidity of 90% to 95%
4. Temperature Cycle	No damage, cracks, or parts looseness.	(-55°C: 30 minutes-> 5 to 35°C: 10 minutes-> 85°C: 30 minutes-> 5 to 35°C: 10 minutes) 5cycles
5. 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: Includes temperature rise caused by current flow.

Note 2: 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.

■Material

Product	Part	Material	Finish
Crimping Contact for Plug	Terminal	Brass	Tin plated

Note : The whisker method is implemented for the tin plating.

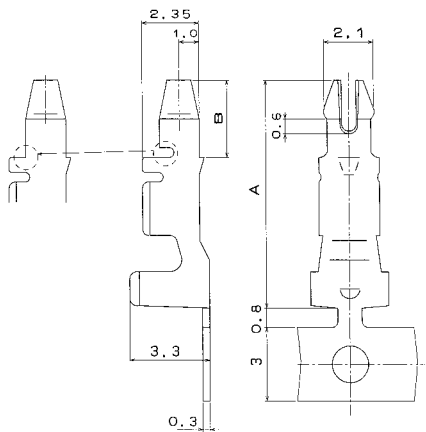
■Ordering Information

●Contact

MDF **12** **A** - **1822** **PCF**
① **②** **③** **④** **⑤**

① Series Name: MDF	④ Applicable Cable Size 1822: AWG18 to 22 1416: AWG14 to 16
② Series No. 12: Vertical type 27: Horizontal type	⑤ Packaging Type PCF : Plug contact / reel PC : Plug contact / bag
③ Cable Type Blank : UL1007 A : UL1015	

■MDF12 Series

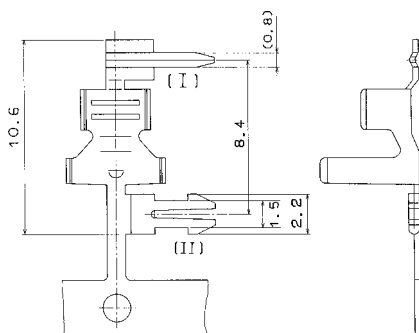


Note: AWG14-16

Part Number	CL No.	Applicable Cable		Packaging Type	A Size	B Size
		AWG	Jacket Diameter			
MDF12 -1822PCF	547-0196-9	AWG 18 to AWG 22	1.5mm to	5,000	9.4	3.2
MDF12 -1822PC	547-0221-4		2.2mm	100		
MDF12A-1822PCF	547-0208-6		2.1mm to	3,500		
MDF12A-1822PC	547-0222-7		2.9mm	100		
MDF12 -1416PCF	547-0209-9	AWG 14 to AWG 16	2.4mm to	2,500	11.2	3.6
MDF12 -1416PC	547-0223-0		2.7mm	100		
MDF12A-1416PCF	547-0210-8		2.6mm to	2,500		
MDF12A-1416PC	547-0224-2		3.6mm	100		

- Applicable Board Hole Diameter : $\phi 1.8^{+0.1}$
- Applicable Board Thickness : 1.6

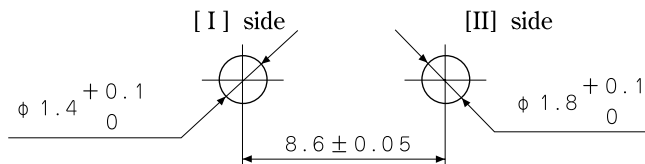
■MDF27 Series



Part Number	CL No.	Applicable Cable		Packaging Type
		AWG	Jacket Diameter	
MDF27 -1822PCF	547-0286-0	AWG 18 to AWG 22	1.5mm to	5000
MDF27 -1822PC	————		2.2mm	100
MDF27A-1822PCF	547-0288-5		2.1mm to	3500
MDF27A-1822PC	————		2.9mm	100
MDF27 -1416PCF	547-0294-8	AWG 14 to AWG 16	2.4mm to	2500
MDF27 -1416PC	————		2.7mm	100
MDF27A-1416PCF	547-0296-3		2.6mm to	2500
MDF27A-1416PC	————		3.6mm	100

- Applicable Board Thickness : 1.6

●PCB mounting pattern



- Applicable Cable (Tin Plating Annealed Copper Wire)

- Strip Length
3.3 to 4.2mm

Conductor Size (Wire Construction)
AWG 14 (41 cores./0.25mm)
AWG 16 (41 cores./0.254mm)
AWG 18 (34 cores./0.18mm)
AWG 20 (21 cores./0.18mm)
AWG 22 (17 cores./0.16mm)

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

◆ Applicable Crimping Tool

Type	Part Number	CL No.	Applicable Contact
Applicator	AP105-MDF12-1822P	901-4514-0	MDF12 -1822PCF
	AP105-MDF12A-1822P	901-4515-2	MDF12A-1822PCF
	AP105-MDF12-1416P	—————	MDF12 -1416PCF
	AP105-MDF12A-1416P	901-4533-4	MDF12A-1416PCF
	AP105-MDF27-1822P	—————	MDF27 -1822PCF
	AP105-MDF27A-1822P	—————	MDF27A-1822PCF
	AP105-MDF27-1416P	—————	MDF27 -1416PCF
	AP105-MDF27A-1416P	—————	MDF27A-1416PCF
Pres Main Unit	CM-105	901-0005-4	—————
Manual Crimping Tool	MDF12 -TA1822HC	550-0238-0	MDF12 -1822PC
	MDF12A-TA1822HC	550-0239-2	MDF12A-1822PC
	MDF12 -TA1416HC	—————	MDF12 -1416PC
	MDF12A-TA1416HC	550-0237-7	MDF12A-1416PC
	HT104/MDF27-1822P	—————	MDF27 -1822PC
	MDF27A-TA1822HC	—————	MDF27A-1822PC
	MDF27 -TA1416HC	—————	MDF27 -1416PC
	MDF27A-TA1416HC	—————	MDF27A-1416PC

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

Note 2. If products with no CL No. are ordered, consult HRS sales department.

◆ Precautions

1. Recommended Soldering Condition (DIP)	<p>Flow: 250°C for 3 seconds</p> <p>Manual soldering: 290°C for 3 seconds</p> <p>■ After the soldering process, if a load is applied to the cable where the connector and the cable contains heat, the jacket retaining area will be easily loosened. Be sure to carry out the post-soldering operation after the connector returns to the room temperature.</p>
2. Cleaning Condition	<p>Refer to Nylon Connector Use Hand book.</p> <p>Don't use a solvent such as trichloroethane, which degrades the cable jacket. In addition, avoid heat cleaning by solvent.</p>
3. Connection Condition	<p>Refer to Nylon Connector Use Hand book.</p>