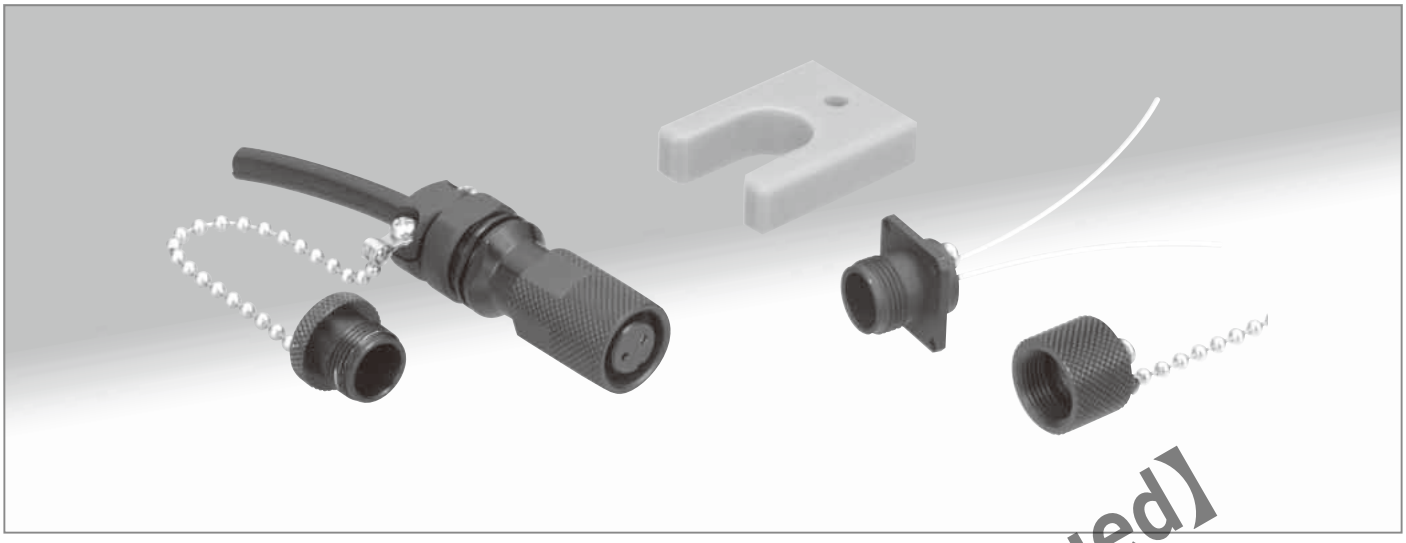
Subminiature, Waterproof Duplex Fiber Optic Connectors

MF10S Series

Waterproof (IP67) **2 Positions** **Screw Locking System**



(Scheduled to be discontinued)

■Features

1. Compact size

Using the widely accepted MU connector ferrule (1.25 mm dia.), assembled in a one-piece shell and internal housing, the waterproof connectors can be used in space-restricted applications.

2. Used in harsh outdoor environments

Tested for 500 hour in salt-fog the connectors are IP67 rated, fully mated or with protective caps.

3. High intensity fiber optic cable

Typical FO cable is the light weight and flexible 6.5 mm outside diameter military type.

Other types of cables can be also accommodated (consult Hirose).

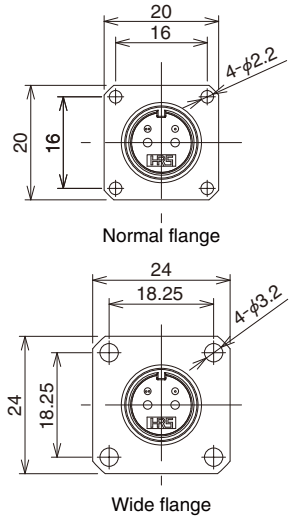
4. Coupling wrench

Optional coupling wrench can be provided to assure that the mated connectors are securely tightened to a specified torque range of 1.5 to 3 N·m.

■Applications

Variety of outdoor optical transmission systems including large LED controllers, surveillance cameras, base stations, railway monitoring, meteorological outdoor instrumentation and other harsh-environment outdoor applications requiring reliable FO connections.

●Flange variations



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In cases where the application will demand a high level of reliability, such as automotive, please contact a company representative for further information.

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■Product Specifications

Ratings	Operating temperature range	-40℃ to +85℃	Storage temperature range	-25℃ to +75℃ (At packing)

	Item	Test method	Specifications
Optical characteristics	Insertion loss	Light source Wavelength 1310±30nm(LED) V0 Vm Sensor Sample Under Test Master connector Insertion loss= -10log(Vm/V0)	SM : 1.4dB max. (Average 0.3dB) MM : 0.7dB max. (Average 0.1dB) (Note)
Mechanical characteristics	Cable retention (Straight pull)	200N tensile loads	1) Insertion loss fluctuation after test: 0.3dB max. 2) No visible damage or components dislocation.
	Durability (mating/un-mating)	200 times	
	Vibration	Frequency : 10 to 55Hz, single amplitude of 0.75mm, acceleration of 98.1 m/s², 2 hours in each of the 2 axis.	
	Shock	Acceleration of 981m/s², 6ms duration, sine half-wave waveform, 3 cycles in each of the 2 axis.	
Environmental characteristics	Humidity (Temperature/humidity-cycles)	-10℃ to +65℃, humidity : 90% to 96% 10 cycles (240 hours)	1) Insertion loss fluctuation after test: 0.3dB max. 2) No visible damage or components dislocation.
	Temperature cycle	-40℃ to +75℃, 42 cycles	
	Dry heat	240 hours at +85℃	
	Cold	240 hours at –40℃	
	Salt mist	500 hours (chrome plating), 240 hours (nickel plating) in a 5% concentration of salt mist	No corrosion.
	Water proof	1 minute at internal air pressure of 4.9 kPa	No air leakage

Note : Total insertion loss of connection (plug, receptacle and master cord). (Multi-Mode : Used 1.5dB mode scrambler)

[Scheduled to be discontinued]

■Materials / Finish

Part	Material	Finish/Color	Remarks
Plug and receptacle housing	Zinc alloy	Chrome plated (Black) or nickel plated	————
	Brass	Chrome plated (Black) or nickel plated	————
	Aluminum alloy	Alumite (Black)	————
Retainer plate	Synthetic resin	————	UL94V-0
Hole cap	Aluminum alloy	Alumite (Black)	————
Screws, ball chain	Stainless steel	————	————
Spring	Steel alloy	Zinc plated	————
Split sleeve	Zirconia	————	————
Coupling wrench (Optional)	Plastic	Blue	————

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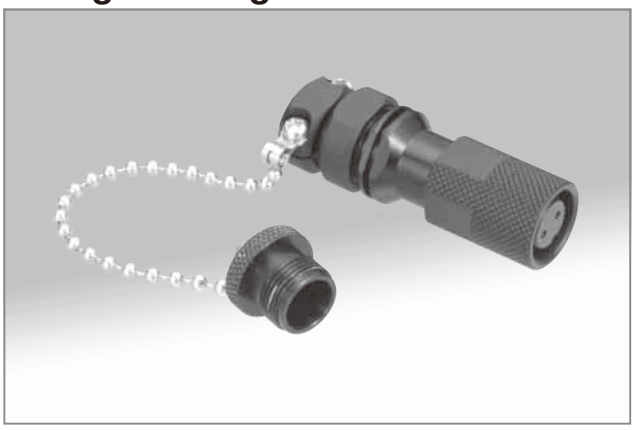
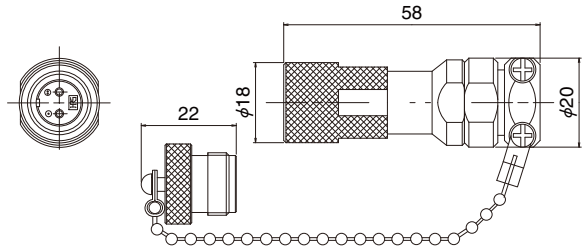
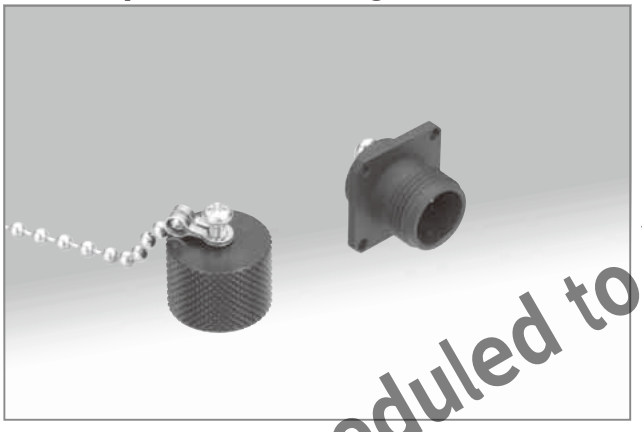
■Plug housings

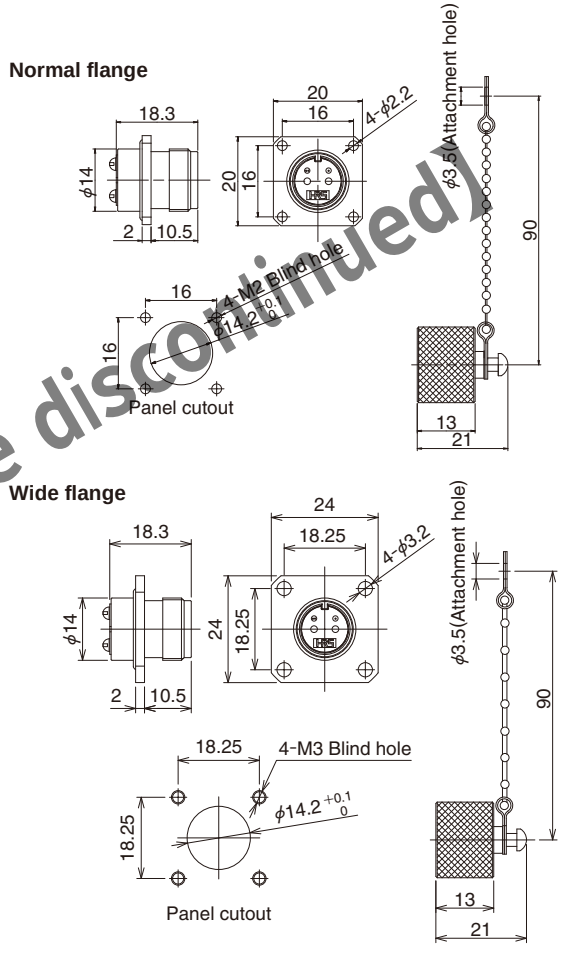




Part No.	HRS No.	Plating
MF10S-WP7C01-0200(31)*	709-0203-2 31	Cr
MF10S-WPN7C01-0200(31)*	709-0544-3 31	Ni

■Receptacle housings

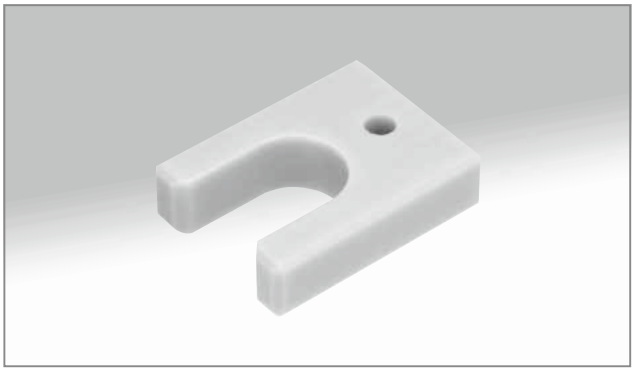


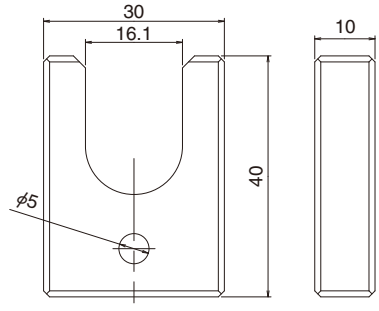


Part No.	HRS No.	Plating*	Flange*
MF10S-WDRF01-0200(31)	709-0204-5 31	Cr	N
MF10S-WDRFN01-0200(31)	709-0548-4 31	Ni	N
MF10S-WDRFNG01-0200(31)	709-0549-7 31	Ni	W
MF10S-WDRFG01-0200(31)	709-0578-5 31	Cr	W

Notes ∗
Cr : Chrome plating (Black), Ni : Nickel plating
N : Normal flange, W : Wide flange

■Coupling wrench (Optional)





Part No.	HRS No.
MF10-T1	709-0205-8 00

[Scheduled to be discontinued]