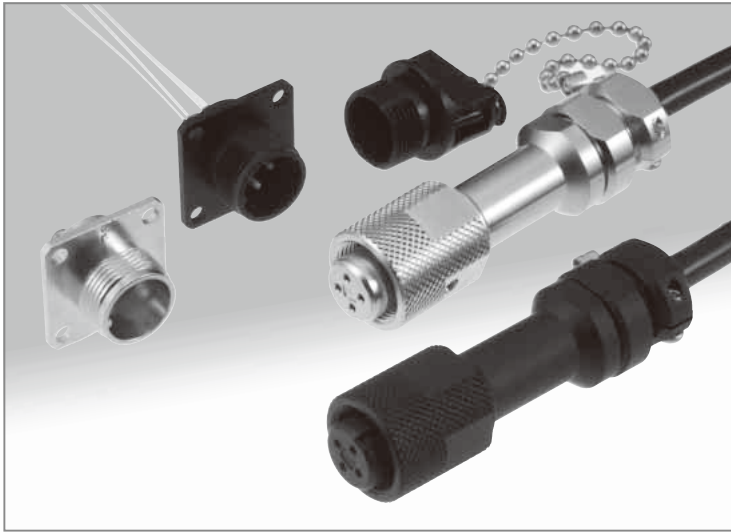


# Subminiature, Waterproof 4 pos. Fiber Optic Connectors

## MF12S Series



### ■ 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 7.5 mm outside diameter military type.

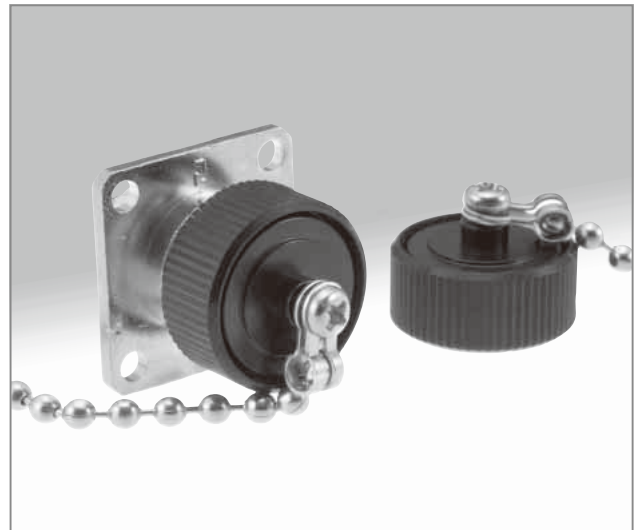
Other types of cables can be also accommodated (consult Hirose).

#### 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.

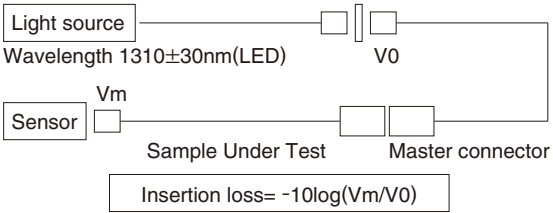
#### 5. Water proof(IP67) protective cap.

Weather-resistance plastic cap attached.



## Product Specifications

Ratings	Operating temperature range	-40°C to +85°C	Storage temperature range	-25°C to +75°C
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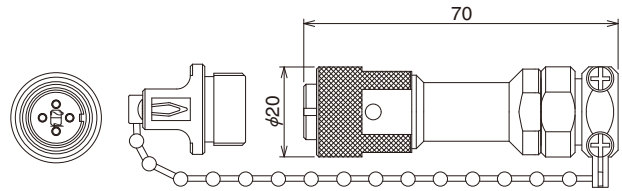
	Item	Test method	Specifications
Optical characteristics	Insertion loss	 <p>Light source Wavelength 1310±30nm(LED) V0 Sensor Vm Sample Under Test Master connector Insertion loss= <math>-10\log(Vm/V0)</math></p>	SM: 1.4dB max. (Average 0.3dB) MM: 0.7dB max. (Average 0.1dB) (Note)
Mechanical characteristics	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/s <sup>2</sup> , 2 hours in each of the 2 axis.	
	Shock	Acceleration of 981 m/s <sup>2</sup> , 6 ms duration, sine half-wave waveform, 3 cycles in each of the 2 axis.	
Environmental characteristics	Humidity (Temperature/humidity-cycles)	-10°C to +65°C, 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°C to +75°C, 42 cycles	
	Dry heat	240 hours at +85°C	
	Cold	240 hours at -40°C	No corrosion.
	Salt mist	500 hours (chrome plating), 240 hours (nickel plating) in a 5% concentration of salt mist	
	Air tight	Air pressure: 4.9 kPa, Submerged for one minute	

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

## Materials / Finish

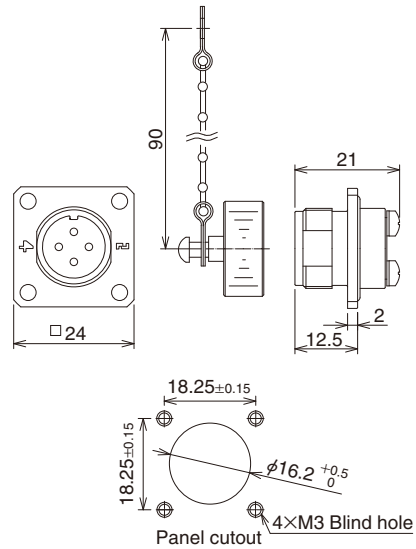
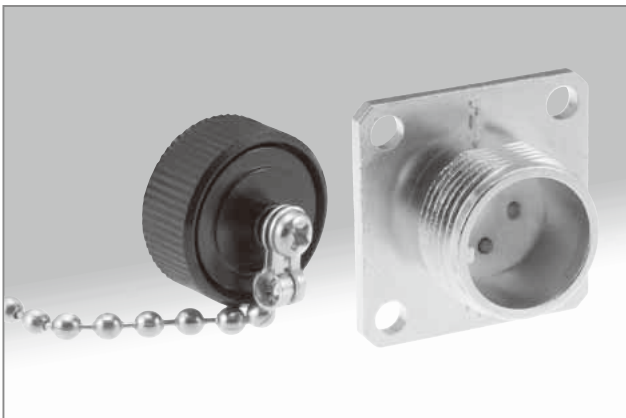
Part	Material	Finish/Color	Remarks
Plug and receptacle housing	Zinc alloy	Chrome plated (Black) or nickel plated	_____
	Brass	Chrome plated (Black) or nickel plated	_____
Retainer plate	Synthetic resin	_____	UL94V-0
Hole cap	Synthetic resin	_____	UL94V-0
Screws, ball chain	Stainless steel	_____	_____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

## ■ Plug housings



Part Number	CL No.	Plating
MF12S-WP8C01-0400	CL709-0536-5-00	Ni
MF12S-WP8CH01-0400	CL709-0603-0-00	Cr

## ■ Receptacle housings



Part Number	CL No.	Plating
MF12S-WDRF01-0400	CL709-0537-8-00	Ni
MF12S-WDRFH01-0400	CL709-0604-3-00	Cr

Notes \*

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

## ■ Coupling wrench (Optional)

Part Number	CL No.
MF12S-T1	CL709-0605-6-00

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Hirose Electric Co., Ltd.  
Environment

Attenuators

Terminators

POF / PCF