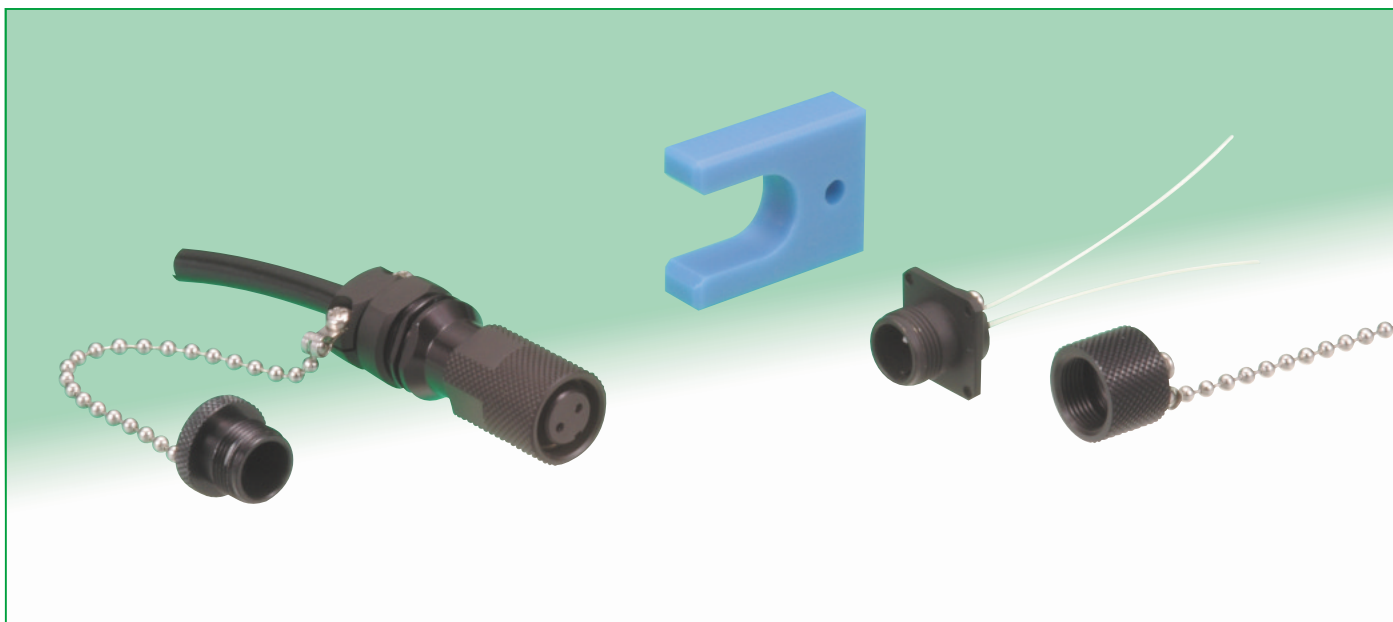


NEW

# Subminiature, Waterproof Duplex Fiber Optic Connectors

## MF10 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 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.

#### 5. Field installation

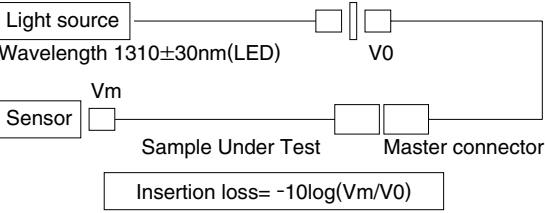
Portable tools and polishers are available; operating on 100 V AC or car cigarettes lighter's 12 V DC.

### ■ 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.

## ■Product Specifications

Ratings	Operating temperature range	-40℃ to +85℃	Storage temperature range	-25℃ to +75℃
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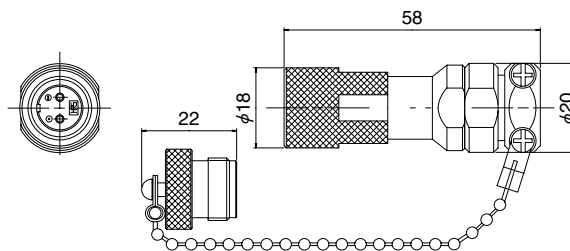
	Item	Test method	Specifications
Optical characteristics	Insertion loss	 <p>Light source Wavelength 1310±30nm(LED) V0 Vm Sensor Sample Under Test Master connector Insertion loss= <math>-10\log(Vm/V0)</math></p>	SM: 1.4dB max. (Average 0.3dB) MM: 0.7dB max. (Average 0.1dB) (Note)
Mechanical characteristics	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℃ 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 in a 5% concentration of salt mist	No corrosion.

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)	_____
	Brass	Chrome plated (Black)	_____
	Aluminum alloy	Alumite (Black)	_____
Retainer plate	Synthetic rubber	_____	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	_____

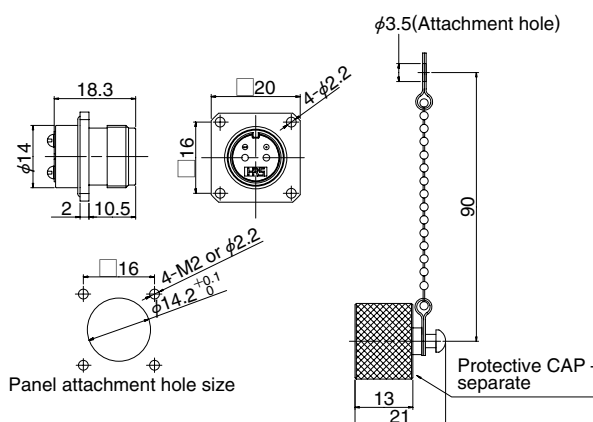
## ■Plug housing



Protective CAP - attached

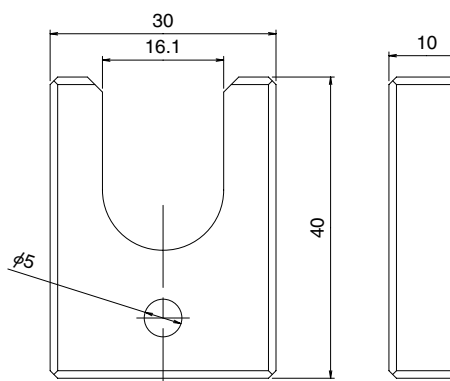
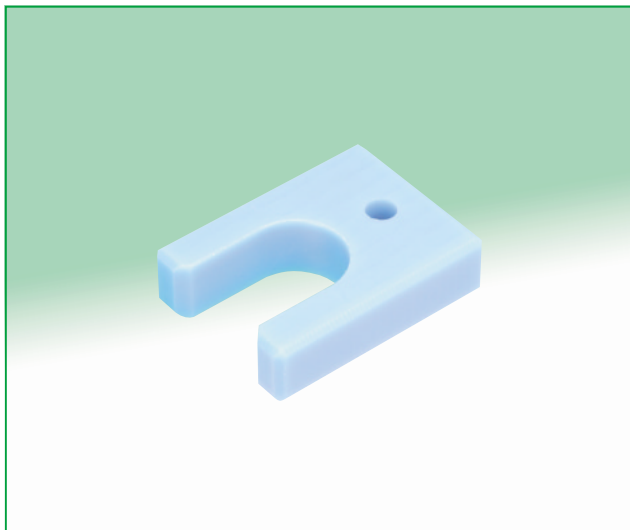
Part number	CL No.
MF10S-WP7C01-0200	CL709-0203-2

## ■Receptacle housing



Part number	CL No.
MF10S-WDRF01-0200	CL709-0204-5

## ■Coupling wrench (Optional)



Part number	CL No.
MF10-T1	CL709-0205-8