

Subminiature, Waterproof Duplex Fiber Optic Connectors

MF10B Series

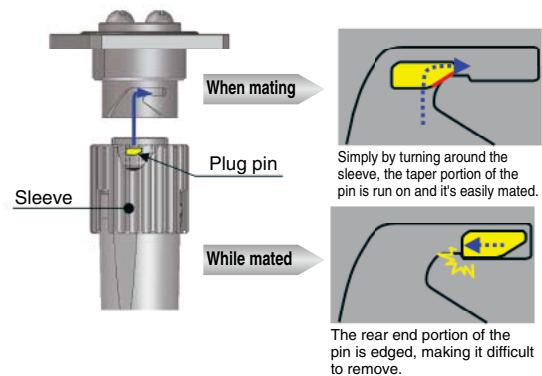
Waterproof

2pos.

Bayonet lock



Highly reliable bayonet lock.



■ Features

1. Micro miniature structure

This micro miniature twin-core waterproof connector consists of a $\phi 1.25\text{mm}$ MU ferrule encased in an internal housing and shell.

2. Integrated structure with excellent vibration and shock resistance

The bayonet lock assures connectors are easily and firmly mated. In addition, mating design resists disengagement, resulting in excellent resistance to vibration and shock, conforming to JIS E 4031 type 5 (vibration) and JIS E 4032 type 2 (shock) for railcar parts.

3. Excellent compatibility with high-intensity, high flexible cables.

For the plug side, a high-intensity optical fiber cable is available for military spec (external cable diameter $\phi 5$ or $\phi 6.5$ mm is the standard specification.)

This cable is light, flexible and suitable for longdistance link-ups in outdoor events.

Because of light weight and flexibility, the cable is suitable for long distance extension cable for live broadcast at outdoor events.

* For other cables, please consult factory.

4. Structure with a cleanable ferrule end face

When cleaning the plug ferrule, remove the sleeve from the front to expose the ferrule edge face and thus facilitate cleaning.

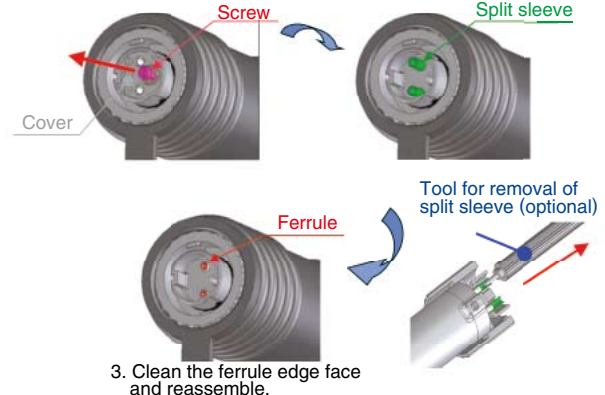
5. Varied panel mounting options

Square flange mounting with 4 screws in 4 positions and internal attachment via hexagon nuts are possible. The square flange type with 4 screws can be used for pitches between between 18 and 20mm.

Ferrule with easy-clean structure

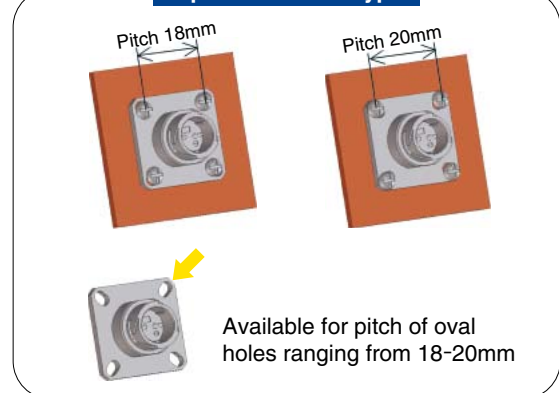
1. Loosen screw and remove cover

2. Remove split sleeve

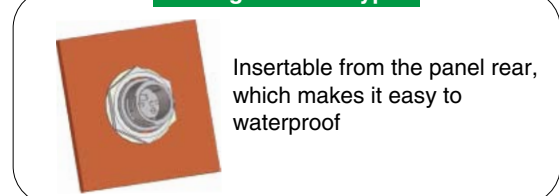


Varied panel attachment method

4-point screw fix type



Hexagon nut fix type



■ Specifications

Ratings		Operating Temperature Range		-40°C to +85°C	Storage Temperature Range	-25°C to +75°C (at packing)
Item			Test Method		Requirements	
Optical characteristics	Insertion loss	SM	Wavelength 1310±30nm(LD)		1.0 dB MAX. (Typical 0.2 dB)	
		MM(GI)	Wavelength 1310±30nm(LED)		0.5 dB MAX. (Typical 0.1 dB) (Note)	
	Return loss	SM	Wavelength 1310±30nm(LD)		40 dB min.	
		MM(GI)			22 dB min.	
Mechanical characteristics	Durability (mating/un-mating)		5,000 times		1) Insertion loss fluctuation after test:0.3dB max. 2) No visible damage or components dislocation.	
	Tensile strength(axial)		A tensile force to cable axially for at 200N(Cable Dia: ϕ6.5mm), 100N(Cable Dia: ϕ5mm), 400N(Cable with tension member)		Insertion loss range:≤0.3dB No Looseness, breakage, cracks	
	Flex Resistant		10,000 times at 90 degree, right and left direction.			
	Vibration		2 hours of the right and left, 4 hours of the vertical direction at an amplitude of 2.3mm and an acceleration 14.8G.			
	Shock		4 times and 2 directions with the acceleration 88m/s² and length of effectiveness 0.025s.			
Environmental characteristics	Humidity (Temperature/humidity-cycles)		-10°C to +65°C, humidity: 90% to 96%, 240hours. (24H/cycle×10cycle)		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			
	Salt mist		Salt mist :5% and temperature 35°C for 1000hours. With the connector hood installed.		No corrosion.	
	Water resistance(mating)		Put the product under water for 1min.With air pressure 4.9kPa.		No air leakage.	

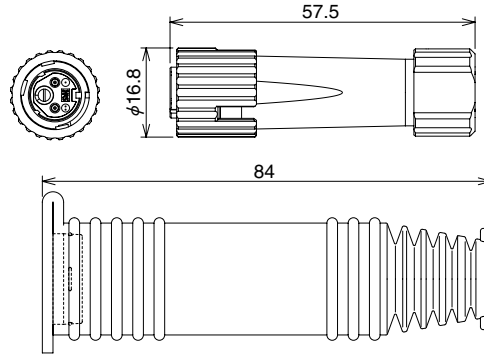
Note: Measured with a 1.5 dB Mode scrambler.

■ Material and Finish

Part	Material	Finish	Remarks
Housing	Zinc die-casting	Nickel plated / Chrome plated (Black)	———
Stopper	Synthetic resin	———	UL94V-0
Rubber hood	Synthetic rubber	———	———
Spring	Piano wire	Zinc plated	———
Split sleeve	Zirconia	———	———

■ Plug

● Cable without tension member (Cable dia: 5mm, 6.5mm)



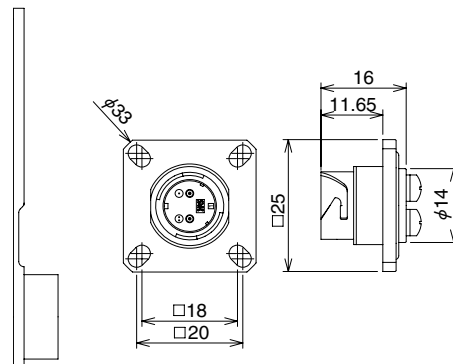
Part Number	CL No.	Plating
MF10B-WP5C01-0200	709-1020-8-00	Nickel
MF10B-WP5CH01-0200	709-1015-8-00	Chrome(black)
MF10B-WP6.5C01-0200	709-1004-1-00	Nickel
MF10B-WP6.5CH01-0200	709-1007-0-00	Chrome(black)

● Cable with tension member (Cable dia: 7 mm)

Part Number	CL No.	Plating
MF10B-WPS7C01-0200	709-1018-6-00	Nickel
MF10B-WPS7CH01-0200	709-1024-9-00	Chrome(black)

■ Receptacle

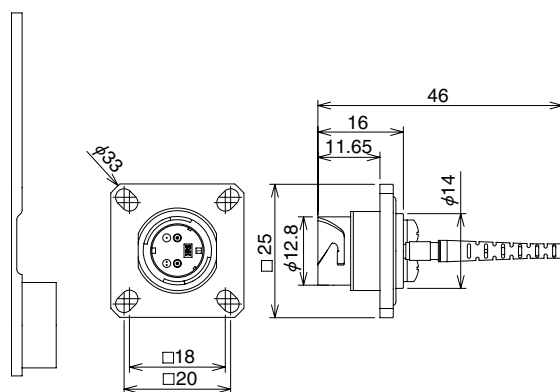
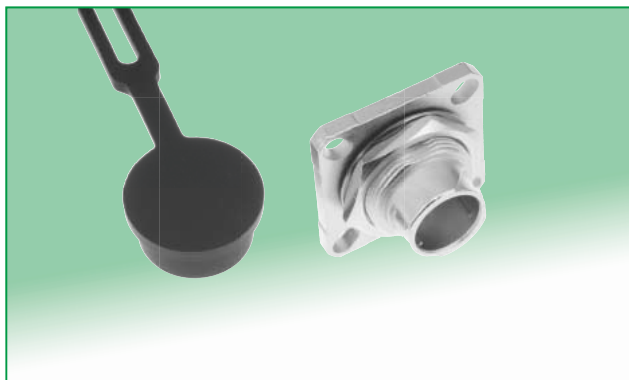
● $\phi 0.9$ fiber, M3 screw attachment type



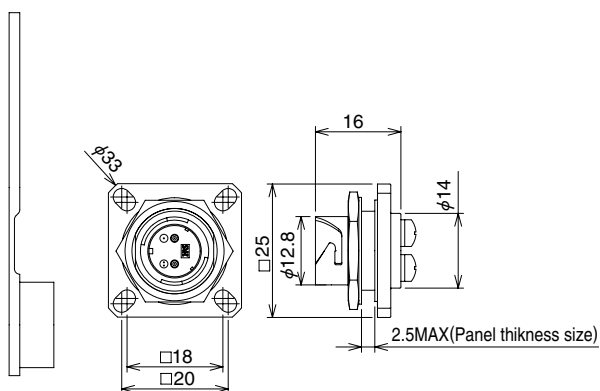
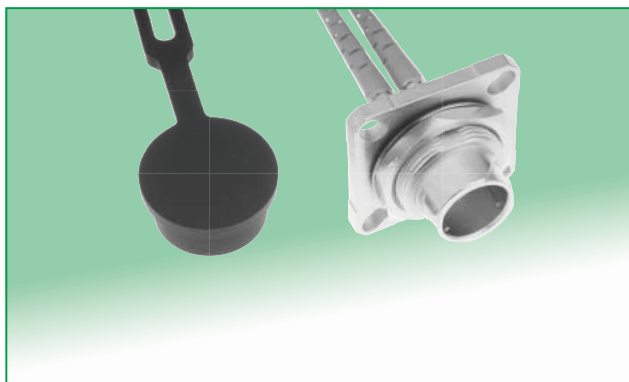
Part Number	CL No.	Plating
MF10B-WRF01-0200	709-1005-4-00	Nickel
MF10B-WRFH01-0200	709-1008-2-00	Chrome(black)

● $\phi 2$ code, M3 screw attachment type

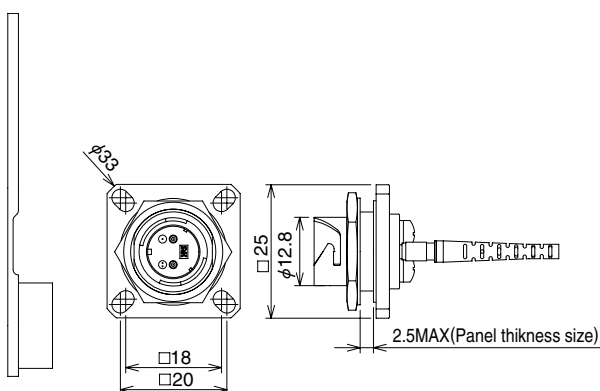
Part Number	CL No.	Plating
MF10B-WRFC01-0200	709-1014-5-00	Nickel
MF10B-WRFCH01-0200	709-1032-7-00	Chrome(black)

● $\phi 0.9$ fiber, hexagon nut attachment type

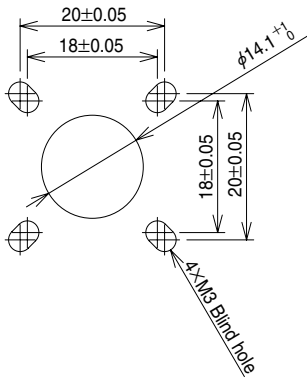
Part Number	CL No.	Plating
MF10B-WRB01-0200	709-1010-4-00	Nickel
MF10B-WRBH01-0200	709-1025-1-00	Chrome(black)

● $\phi 2$ code, hexagon nut attachment type

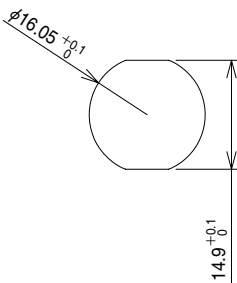
Part Number	CL No.	Plating
MF10B-WRBC01-0200	709-1013-2-00	Nickel
MF10B-WRBCH01-0200	709-1033-0-00	Chrome(black)



■Recommended panel cutouts



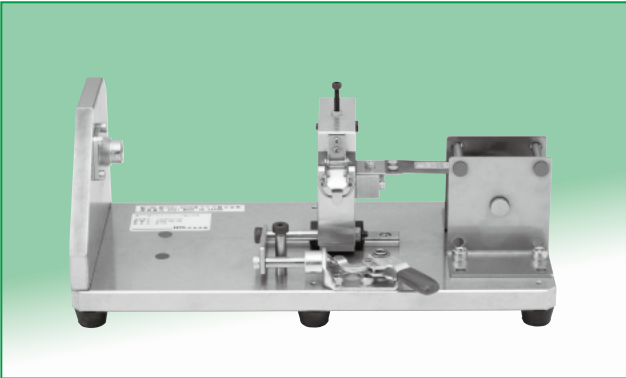
M3 screw attachment type



Hexagon nut attachment type

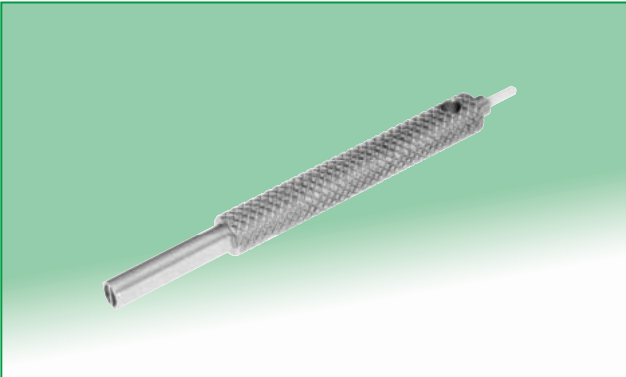
■Tools

●Plug assembly tool



Part Number	CL No.
MF10B-WP7C01-0200/CVMD	902-6063-0-00

●Split sleeve removal tool



Part Number	CL No.
MF10B-T1	709-1034-2-00

USA:

HIROSE ELECTRIC (U.S.A.), INC. Headquarters

2688 Westhills Court, Simi Valley, CA 93065-6235
Phone : +1-805-522-7958
Fax : +1-805-522-3217
<http://www.hiroseusa.com>

USA:

HIROSE ELECTRIC (U.S.A.), INC. San Jose Office

20400 Stevens Creek Blvd., Ste 250, Cupertino, CA 95014
Phone : +1-408-253-9640
Fax : +1-408-253-9641
<http://www.hiroseusa.com>

USA:

HIROSE ELECTRIC (U.S.A.), INC. Detroit Office (Automotive)

37677 Professional Center Drive, Suite #100C Livonia, MI 48154
Phone : +1-734-542-9963
Fax : +1-734-542-9964
<http://www.hiroseusa.com>

THE NETHERLANDS:

HIROSE ELECTRIC EUROPE B.V.

Hogehillweg #8 1101 CC Amsterdam Z-O
Phone : +31-20-6557460
Fax : +31-20-6557469
<http://www.hiroseurope.com>

GERMANY:

HIROSE ELECTRIC EUROPE B.V. GERMAN BRANCH

Herzog-Carl-Strasse 4 D-73760 Ostfildern (Scharnhäuser Park)
Phone : +49-711-4560-02-1
Fax : +49-711-4560-02-299
<http://www.hirose.de>

UNITED KINGDOM:

HIROSE ELECTRIC EUROPE B.V. UK BRANCH

First Floor, St Andrews House, Caldecotte Lake Business Park, Milton Keynes MK7 8LE
Phone : +44-1908-369060
Fax : +44-1908-369078
<http://www.hirose.co.uk>

CHINA:

HIROSE ELECTRIC (SHANGHAI) CO., LTD.

1601, Henderson Metropolitan, NO.300, East Nanjing Road, Huangpu District, Shanghai, China 200001
Phone : +86-21-6391-3355
Fax : +86-21-6391-3335
<http://www.hirose-china.com.cn>

CHINA:

HIROSE ELECTRIC (SHANGHAI) CO., LTD. BEIJING BRANCH

A1001, Ocean International Center, Building 56# East 4th Ring Middle Road, Chao Yang District, Beijing, 100025
Phone : +86-10-5165-9332
Fax : +86-10-5908-1381
<http://www.hirose-china.com.cn>

CHINA:

HIROSE ELECTRIC TECHNOLOGIES (SHENZHEN) CO., LTD.

Room 09-13, 19/F, Office Tower Shun Hing Square, Di Wang Commercial Centre 5002, ShenNanDong Road, ShenZhen City, Guangdong Province, 518008
Phone : +86-755-8207-0851
Fax : +86-755-8207-0873
<http://www.hirose-china.com.cn>

HONG KONG:

HIROSE ELECTRIC HONGKONG TRADING CO., LTD.

Room 1001, West Wing, Tsim Sha Tsui Centre, 66 Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong
Phone : +852-2803-5338
Fax : +852-2591-6560
<http://www.hirose-hongkong.com.hk>

TAIWAN:

HIROSE ELECTRIC TAIWAN CO., LTD.

103 8F, No.87, Zhengzhou Rd., Taipei
Phone : +886-2-2555-7377
Fax : +886-2-2555-7350
<http://www.hirose-taiwan.com.tw>

KOREA:

HIROSE KOREA CO., LTD.

1261-10, Jeoungwhang-Dong, Shihung-City, Kyunggi-Do 429-450
Phone : +82-31-496-7000, 7124
Fax : +82-31-496-7100
<http://www.hirose.co.kr>

SINGAPORE:

HIROSE ELECTRIC SINGAPORE PTE. LTD.

10 Anson Road #26-16 International Plaza 079903
Phone : +65-6324-6113
Fax : +65-6324-6123
<http://www.hirose-singapore.com.sg>

INDIA:

HIROSE ELECTRIC SINGAPORE PTE. LTD. BANGALORE LIAISON OFFICE

Unit No.03, Ground Floor, Explorer Building International Tech Park Whitefield Road, Bangalore 560066 Karnataka, India
Phone : +65-6324-6113
Fax : +65-6324-6123
<http://www.hirose-singapore.com.sg>



HIROSE ELECTRIC CO.,LTD.

6-3, Nakagawa Chuoh-2-Chome, Tsuzuki-Ku, Yokohama-Shi 224-8540, JAPAN
TEL: +81-45-620-3526 Fax: +81-45-591-3726
<http://www.hirose.com>
<http://www.hirose-connectors.com>