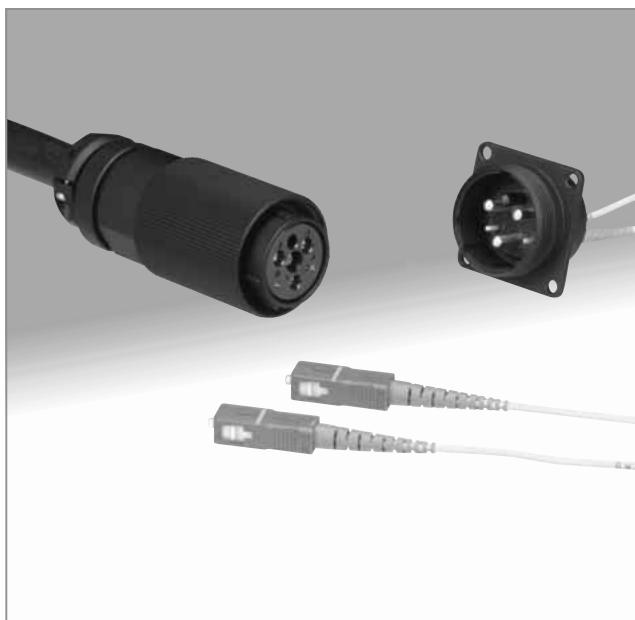


Waterproof Connectors Combining Optical and Electrical Connections

MF25 Series



■ Features

1. Fiber optic and electric hybrid connection

3 electrical contacts rated at 30A max. current

2 fiber optic connections (single or multi-mode fibers)

2. Used in harsh outdoor environments

Construction, materials and components assure consistent performance when used outdoor. Tested 500 hours in salt fog without any affect on its performance. Rated IP67 - complete protection against dust, no water penetration when submerged in water at depth of 1.8m for 48 hours.

3. Variety of cables

Up to 18 mm outside diameter cable can be used (electrical and optical combined).

Solder termination of electrical conductors having cross sectional area of 6mm² (equivalent of AWG#10) may be used.

4. Low insertion loss

Ferrule can be tuned to guarantee insertion loss of less than 0.4dB.

5. RoHS compliance

All materials and finishes comply with applicable RoHS directives.

■ Applications

Outdoor optical transmission systems: Surveillance cameras and monitors, base stations, railway, transportation, survey, geological and exploration equipment.

■ Product Specifications

Ratings	Operating temperature range: -40°C to +75°C	Storage temperate range: -40°C to +85°C
	Current rating: 30A	Voltage rating: 300V AC, 420V DC

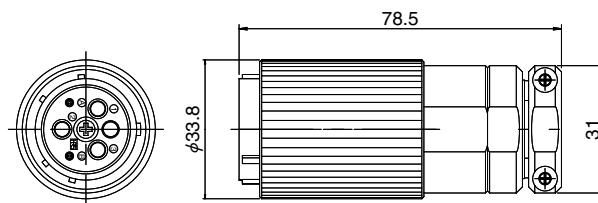
	Characteristic	Conditions (IEC 61300)	Specifications
Optical/electrical characteristics	Insertion Loss	Wavelength 1310±20nm (LED)	0.4dB max. (SM) 0.3dB max. (MM) Note
	Return Loss	Wavelength 1310±20nm (LD)	40dB min. (SM)
	Insulation resistance	500V DC	1000 M ohms min.
	Withstanding voltage	1000V AC / one minute	No flashover or insulation breakdown
Mechanical characteristics	Durability (cycles, mating/un-mating)	500 times	Insertion loss after test: 0.4dB max. (SM) Insertion loss after test: 0.3dB max. (MM)
	Vibration	Frequency: 10 to 500MHz, single amplitude of 0.75mm, 3 hours in each of the 3 axis.	Return loss after test: 40dB max. (SM) No visible damage or dislocation of any component or cable.
	Shock	Acceleration of 490m/s ² , 11ms duration, sin half-wave waveform, 3 cycles in each of the 3 axis.	
Environmental characteristics	Humidity	-71±2°C, humidity: 95±5%, 336 hours	Insertion loss after test: 0.4dB max. (SM)
	Temperature cycle	-40°C to +75°C 42 cycles	Insertion loss after test: 0.3dB max. (MM)
	Dry heat	240 hours at 85°C	Return loss after test: 40dB max. (SM)
	Cold	240 hours at -40°C	No visible damage, dislocation of clamp or cable.
	Salt spray	5% salt solutions for 500 hours	No corrosions
	Air tight	Air pressure: 4.9 Pa, Submerged for one minute	No air foam leakage

Note: Multi-mode fiber, used 1.5dB mode scrambler

■Materials

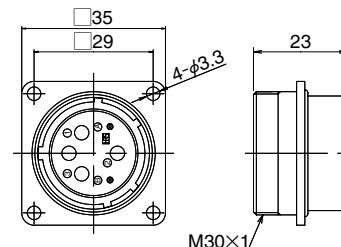
Component	Material	Finish	Remarks
Housing	Aluminum die-casting	Chrome plated (Black)	_____
	Brass	Chrome plated (Black)	_____
Electrical contacts	Brass	Silver plated	_____
Insulator, Retainer plate	Synthetic resin	_____	UL94V-0
O-ring, gasket, bushing	Synthetic rubber	_____	_____
Screw	Stainless steel	_____	_____
Screws	Iron	Nickel plated	_____
Spring	Steel	Zinc plated	_____
Split sleeve	Zirconia	_____	_____

■Plug housing



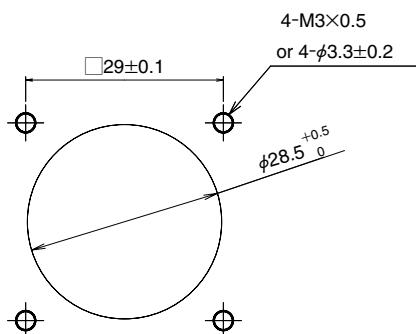
Part number	CL No.	Number of positions	RoHS
MF25S-WP14S02-0203	CL709-0209-9	3 pos. (Electrical), 2 pos. (Optical)	YES

■Receptacle housing



Part number	CL No.	Number of positions	RoHS
MF25S-WRF02-0203	CL709-0208-6	3 pos. (Electrical), 2 pos. (Optical)	YES

◆Recommended panel cut-out dimensions



MU

SC

FC

Harsh
Environment

Attenuators

Terminators

Splitter