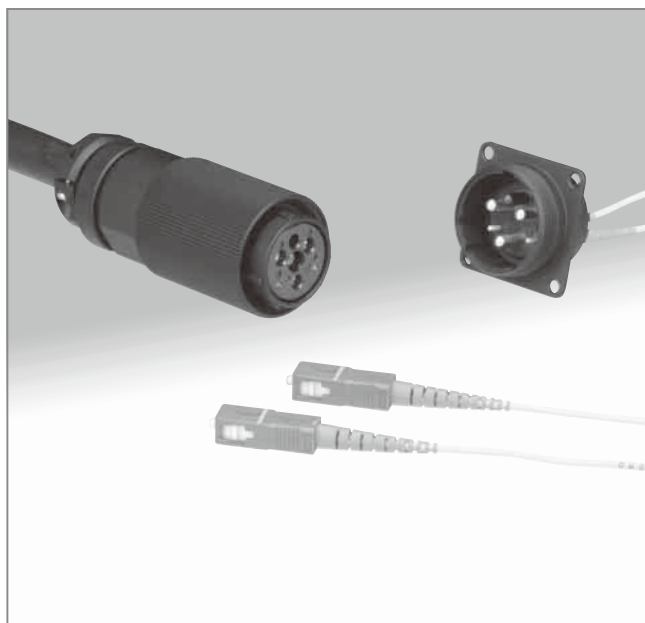


Waterproof Connectors Combining Optical and Electrical Connections

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.

■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℃ to +75℃	Storage temperate range:-40℃ to +85℃
	Current rating: 30A	Voltage rating: 300V AC, 420V DC

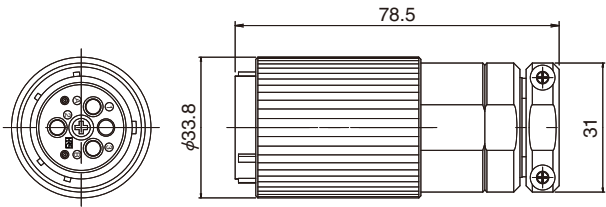
Item		Test Method (IEC 61300)	Specifications
Optical/electrical Characteristics	Insertion Loss	SM Wavelength 1310±30nm (LD)	0.4dB max.
		MM(GI) Wavelength 1310±30nm (LED)	0.3dB max. (Note)
	Return Loss	SM Wavelength 1310±30nm (LD)	40dB min.
		MM(GI) Wavelength 1310±30nm (LD)	22dB min.
	Insulation resistance	500V DC	1000 M ohms min.
Mechanical Characteristics	Withstanding voltage	1000V AC / one minute	No flashover or insulation breakdown
	Durability (cycles, mating/un-mating)	500 times	Insertion loss after test: 0.4dB max. (SM) Insertion loss after test: 0.3dB max. (MM:GI) Return loss after test: 40dB min. (SM) No visible damage or dislocation of any component or cable.
	Vibration	Frequency: 10 to 500MHz, single amplitude of 0.75mm, 3 hours in each of the 3 axis.	
	Shock	Acceleration of 490m/s ² , 11ms duration, sin half-wave waveform, ration, half sine shock pulse, 3 cycles in each of the 3 axis.	
Environmental Characteristics	Humidity	-71±2℃, humidity: 95±5%, 336 hours	Insertion loss after test: 0.4dB max. (SM) Insertion loss after test: 0.3dB max. (MM:GI) Return loss after test: 40dB min. (SM) No visible damage, dislocation of clamp or cable.
	Temperature cycle	-40℃ to +75℃ 42 cycles	
	Dry heat	240 hours at 85℃	
	Cold	240 hours at -40℃	No corrosions
	Salt spray	5% salt solutions for 500 hours	
	Air tight	Air pressure: 4.9 kPa, Submerged for one minute	

Note: Measured with a 1.5 dB Mode scrambler.

Materials

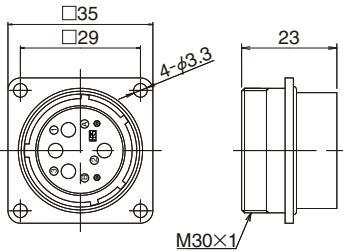
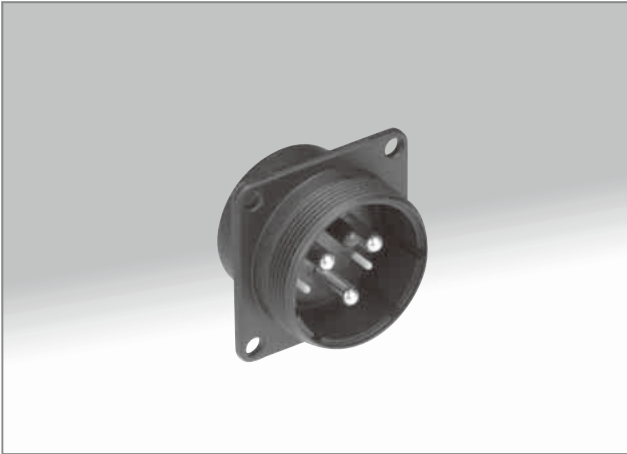
Part	Material	Finish	Remarks
Housing	Aluminum die-casting	Chrome plated (Black)	_____
	Brass	Chrome plated (Black)	_____
Electrical contacts	Brass	Silver plated	_____
Insulator, Retainer plate	Synthetic resin	_____	UL94V-0
O-ring, gasket, bushing	Synthetic rubber	_____	_____
Screw	Stainless steel	_____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

Plug housing



Part Number	CL No.	Number of positions
MF25S-WP14S02-0203	709-0209-9-00	3 pos. (Electrical), 2 pos. (Optical)

Receptacle housing



Part Number	CL No.	Number of positions
MF25S-WRF02-0203	709-0208-6-00	3 pos. (Electrical), 2 pos. (Optical)

Recommended panel cut-out dimensions

