

M28876 Connectors

Aptiv's MIL-DTL-28876 connectors are circular form factor fiber optic connectors intended for use in shipboard applications. Created for high bandwidth signal transmission and reliability in extreme environments, MIL-DTL-28876 connectors are built to military specifications to survive shock, vibration, immersion, and extreme temperature while also providing excellent optical performance.



KEY FEATURES & BENEFITS

- Naval Shipboard Qualified – Meets stringent MIL-DTL-28876 requirements for durability and performance.
- High Optical Performance – Low insertion loss and high return loss ensure dependable data transmission.
- Environmental Protection – Sealed against water, dust, and contaminants; immersion rated.
- Shock & Vibration Resistant – Withstands severe mechanical stresses common in shipboard use.
- Scoop-Proof Contacts – Prevents optical contact damage during mis-mating.
- Corrosion Resistant – Marine-grade materials and finishes resist saline environments.
- Flexible Configurations – Multiple shell sizes, fiber counts, and single-/multi-mode options.
- Field Repairable – Certain designs allow on-site termination and repair for reduced downtime.

PRODUCT SPECIFICATIONS

Electrical Properties	
Optical Insertion Loss	0.5 dB max (single-mode), 1.0 dB max (multi-mode)
Optical Return Loss	40 dB min (single-mode)
Dielectric Withstanding Voltage (DWV)	1000 VAC (sea level)
Insulation Resistance	5000 MΩ min @ 500 VDC

Environmental Properties	
Operating Temperature	to +85°C
Thermal Shock	MIL-STD-202, Method 107
Humidity	MIL-STD-202, Method 103
Salt Spray / Corrosion	MIL-STD-202, Method 101
Vibration	MIL-STD-202, Method 204
Shock	MIL-STD-202, Method 213
Fluid Immersion	MIL-STD-202, Method 104
Shipboard Shock	MIL-S-901D

PRODUCT SPECIFICATIONS CONTD.

Mechanical Properties	
Mating Cycles	500 cycles min
Shell Material	Stainless Steel, Aluminum Alloy
Coupling Mechanism	Threaded, Bayonet
Contact Retention (Axial)	10 lbs (45 N) min
Fiber Types	Single-mode, Multi-mode
Keying & Polarization	Ensures correct optical alignment
Cable Retention	High cable retention force