

THDM Series MT Connector System



The THDM is a MIL-PRF-28876 derived mechanical transfer (MT) rugged fiber optic connector for military and aerospace applications.

THDM is modular, allowing multiple combinations of fiber types to be used in the same connector. The THDM connectors are available in 2, 4 and 8- MT configurations, which can support 24 to 192 fiber channels using industry standard MT ferrules. The connector features M28876 or M38999 strain relief options.

The THDM connectors also feature a ratcheting coupling nut, as well as insert to insert bottoming to provide superior optical performance in high shock and high vibration applications. The connectors are sealed to IP68 standards to resist fluids and dust penetration. A variety of protective finishes are available to ensure durability over a wide range of environmental conditions. As with most AFSI products, they are available in stainless steel, brass or marine bronze.

Features & Benefits :

- 3 configurations: 2, 4 and 8 MT ferrules for up to 192 fiber channels
- Ratcheting coupling nut for high vibration environments (derived from M28876)
- IP 68 sealing
- Removable and replaceable MT ferrules
- Expanded beam capable
- Environmental :
 - Operating temperature -54C to + 65C
 - 500 cycles mating durability
 - Vibration per MIL-STD-1344, method 2005
- Available in cadmium and nickel plated aluminum, stainless steel, PTFE and black anodize
- Performance :
 - IL: 0.5dB nominal MM
 - IL: 0.65dB nominal SM

Applications :

- Military and Aerospace
- Shipboard
- Oil & Gas

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Amphenol Fiber Systems International (AFSI), a division of Amphenol Military & Aerospace Operations (AMAO), is the largest manufacturer of harsh environment fiber optic cable assemblies & connectors in the world. Visit AMAO at amphenolmao.com.

Blade Technology :

The heart of the THDM connectors are AFSI's MT carrier blades. The blades make each MT ferrule easily removable from the connector, as with traditional fiber optic termini. This allows for re-pinning, thorough cleaning, and light re-polishing when necessary. Each blade carries an MT ferrule compliant with IEC Standard 61754-5 (fiber pitch 0.25mm) providing low optical insertion loss (typically 0.5dB) and excellent return loss when angle polished (typically >65dB).

Performance :

Parameter	Typical
Attenuation (Insertion Loss)	0.75dB max per connection (1.5 total), T IA/EIA-455-171
Return Loss	-65dB Max RL HD-Optyx™ APC, TIA/EIA-455-107
Mating Durability	500 Cycles, TIA/EIA-455-21
Vibration	TIA/EIA-455-11, Test Conditions II and VI
Mechanical Shock	TIA/EIA-455-14, Test Condition A
Thermal Shock	-55 C to +85 C, MIL-STD-1344A
Thermal Cycling	-40 C to 85 C, TIA/EIA-455-A
Ozone Exposure	Per MIL-STD-1344, Method 1007
Humidity	TIA/EIA-455-5, 10 cycles
Fluid Immersion	TIA/EIA-455-11
Cable Retention	400 pounds, TIA/EIA-455-6
Impact	TIA/EIA-455-2
Crush Resistance	MIL-STD-1344, Method 2008.1, 7 tests @ 1250 Newton
Cable Sealing Flexing	MIL-STD-1344, Method 2017
Corrosion Resistance	500 hour TIA/EIA-455-14 (CAD)
Connector, Backshells, & Dust Cover	Aluminum alloy, cad plate, 316 stainless steel, 303 stainless steel
Cable Sealing Strain Relief	Polyolefin, self-encapsulating

Amphenol Fiber Systems International (AFSI) :



Amphenol Fiber Systems International (AFSI) designs, manufactures, markets and supports reliable and innovative fiber optic interconnect solutions that withstand the harsh environments of military, oil & gas, mining and broadcast applications. After more than two decades in business, AFSI continues to uphold its position as a global leader in fiber optic interconnect components and systems such as termini, M28876, MIL-ST, TFOCA and the TFOCA-II® connector, which AFSI developed and patented.

AFSI has delivered millions of fiber optic connectors in more than 34 countries. Whenever there is a need for superior, cost-effective fiber optic systems and products that will stand up to demanding operating environments, you can rely on AFSI for engineering know-how, top-quality products and expert technical support.

Visit www.amphenol-fsi.com for more information.

How to Order :

For more information on how to order or to obtain a price quote on our THDM products, call toll free (U.S. only) at 800.472.4225, international calls please use 1.214.547.2400 or e-mail info@fibersystems.com.

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