

MIL-ST Fiber Optic Connectors

For Military & Commercial Use



Amphenol Fiber Systems International (AFSI) manufactures a complete line of next generation fiber optic connectors designed to meet the needs of harsh environment applications.

Amphenol Fiber Systems International (AFSI) offers rugged military fiber optic ST connectors for deployable and fixed communication systems. These connectors meet the stringent requirements of MIL-C-83522. AFSI's connectors are designed to provide the best possible optical performance in applications with severe environmental conditions.

The M83522 connector features a higher spring force than commercial ST connectors, allowing it to meet the shock and vibration requirements of MIL-C-83522. Stainless steel construction provides excellent mechanical strength and superior corrosion resistance. The boot is attached either by compression ring or by a threaded adapter.

US Navy approved Commercial-off-the-Shelf (COTS) ST connectors provide the same robustness with a spring force more consistent with commercial ST connectors. The COTS product is designed for use in shock-isolated environments, or to interface with commercial electronics and non-mil-spec ST adapters. It is also appropriate for applications where corrosion resistance and mechanical strength are desirable.

Features and Benefits:

- DFAR 252.225-7014 (Domestic Specialty Metals) compliant
- RoHS compliant
- Superior optical performance in extreme environmental conditions
- Super and Ultra PC polish capabilities
- Robust construction:
- High grade stainless steel body (17-4 SS)
- Zirconia ceramic ferrules and sleeves
- Fungus-resistant, self-extinguishing boot
- Mil-qualified series: high spring force for shock and vibration resistance critical in military applications
- Navy approved COTS: for moderate shock and vibration environments

Applications:

- US Navy Shipboard, surface and submarine, mission critical combat and communications systems
- Mobile tactical shelters
- Electronic battlefield networks
- Mobile emergency telecommunications stations
- Deployable outdoor, harsh environment

Amphenol Fiber Systems International, Inc.

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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

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Materials:

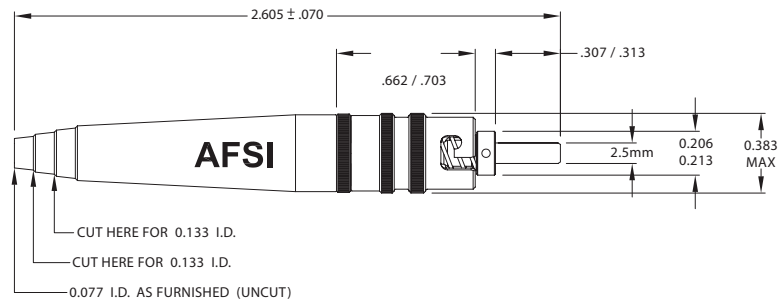
- Ferrule: Zirconia
- Body: Stainless steel
- Boot: Fungus resistant, self-extinguishing thermoplastic

MIL-C-83522 Connector Specifications:

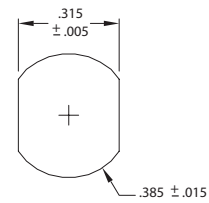
| Specification | Measurement/Detail |
|----------------------|--|
| Insertion Loss | <.75dB |
| Return Loss | >30dB (multimode) |
| Tensile Loading | >230 N |
| Mating Durability | 500 cycles |
| Impact | 8 times, 1.5 meters |
| Dust | MIL-STD-202, Method 110 |
| Thermal Shock | MIL-STD-1678, Method 4020 |
| Vibration | MIL-STD-1344, Method 2005 |
| Temperature Humidity | DOD-STD-1678, Method 4030 |
| Salt Spray | MIL-STD-1344, Method 1001 |
| Flammability | MIL-STD-1344, Method 1012 |
| Temperature Cycling | -55°C to 125°C Op, -65°C to +200°C Non-Op |
| Shock | MIL-STD-901D, Grade A, Type A, Class I |
| Fungus Resistant | MIL-STD-810, Method 508 |



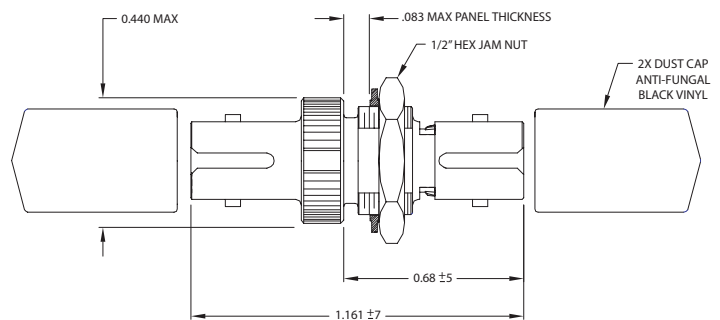
Military ST Connector:



Panel Cut-Out:



Military ST Connector:



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Part Numbers & Descriptions:

| Description | MIL-SPEC Part Number | AFSI Part Number |
|--|----------------------|------------------|
| COTS ST Connector, MM, Compression Ring Boot | M83522/16DNX | MSTC1000 |
| COTS ST Connector, MM, Screw On Boot | M83522/16DNX | MSTC1001 |
| COTS ST Connector, SM, Compression Ring Boot | M83522/16DNY | MSTC2000 |
| COTS ST Connector, SM, Screw On Boot | M83522/16DNY | MSTC2001 |
| ST Adapter, MM, Closed Bayonet | M83522/17NY | MSTA2000 |
| COTS ST Adapter, Split Ceramic Sleeve | MSTF2000 | MSTF2000 |
| COTS ST Adapter, Split Ceramic Sleeve | MSTF3000 | MSTF3000 |



Performance Specifications:

| Specification | Inspection Detail | Single Mode | Multimode |
|----------------|--------------------------|-------------|-----------|
| Insertion Loss | EIA/TIA-455-34, Method A | -0.2dB | -0.3dB |
| Return Loss | EIA/TIA-455-107 | -50dB | -30dB |

How to Order:

For more information on how to order or to obtain a price quote on any of our MIL-ST products, please call us at 800-472-4225. For international calls please dial 214-547-2400 or e-mail us at info@fibersystems.com.

COTS Ordering Numbers:

| Description | COTS Part Number |
|--|------------------|
| COTS ST Connector, MM, Compression Ring Boot | MSTC1100 |
| COTS ST Connector, MM, Screw On Boot | MSTC1101 |
| COTS ST Connector, SM, Compression Ring Boot | MSTC2100 |
| COTS ST Connector, SM, Screw On Boot | MSTC2101 |
| ST Adapter, MM, Closed Bayonet | MSTC1110 |
| COTS ST Adapter, Split Ceramic Sleeve | MSTA1300 |

About Amphenol Fiber Systems International:

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.fibersystems.com for more information

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