

MIL-ST Fiber Optic Connectors

For Military & Commercial Use



Amphenol



*Fiber Systems
International*

MIL-ST Connectors

About Mil-ST Connectors

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

Materials

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

MIL-C-83522 Connector Performance Specifications

Specification

Insertion loss
Return loss
Tensile loading
Mating durability
Impact
Dust
Thermal shock
Vibration
Temperature humidity
Salt spray
Flammability
Temperature cycling
Shock
Fungus resistant

Measurement Requirement

< 0.75 dB (MIL-C-83522 allows for <1.0 dB)
> 30 dB (multimode)
> 230 N
> 500 cycles
8 times, 1.5 meters
MIL-STD-202, Method 110
MIL-STD-1678, Method 4020
MIL-STD-1344, Method 2005
DOD-STD-1678, Method 4030
MIL-STD-1344, Method 1001
MIL-STD-1344, Method 1012
-55°C to 125°C Op, -65°C to +200°C Non-Op
MIL-STD-901D, Grade A, Type A, Class I
MIL-STD-810, Method 508

ST Connector Typical Performance Specifications

Specification

Insertion loss (typical)
Return loss

Inspection Detail

EIA/TIA-455-34, Method A
EIA/TIA-455-107

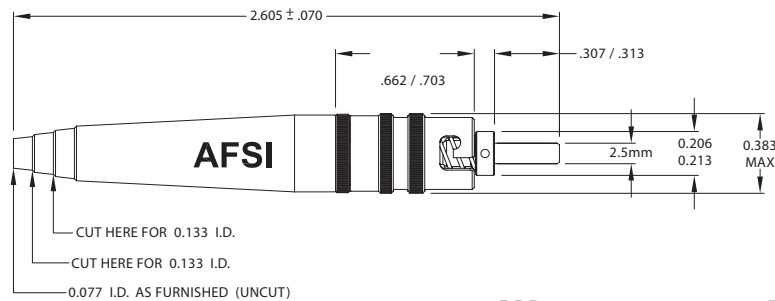
Single Mode

-0.2 dB
-50 dB

Multimode

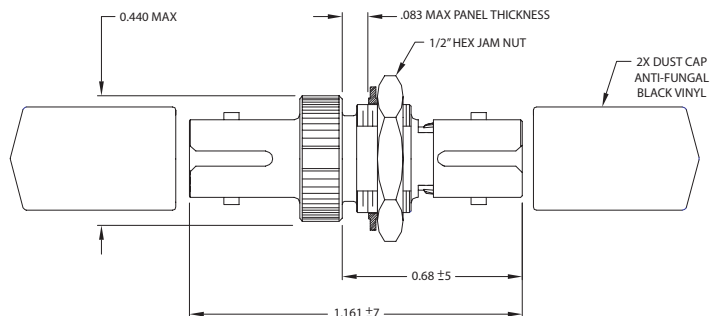
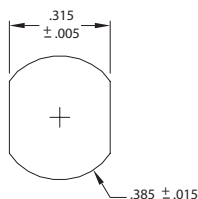
-0.3 dB
-30 dB

Military ST Connector



Military ST Adapter

Panel Cut-Out



MIL-ST Connectors

Part Numbers & Descriptions

Description	MIL-SPEC Part Number	AFSI Part Number
MIL-ST Connector, MM, Compression Ring Boot	M83522/16DNX	MSTC1000
MIL-ST Connector, MM, Screw On Boot	M83522/16DNX	MSTC1001
MIL-ST Connector, SM, Compression Ring Boot	M83522/16DNY	MSTC2000
MIL-ST Connector, SM, Screw On Boot	M83522/16DNY	MSTC2001
MIL-ST Adapter, SM & MM	M83522/17NY	MSTA2000

COTS Ordering Numbers

Description	COTS Numbers
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 Connector, MM, Closed Bayonet	MSTC1110

How to Order

For more information on how to order or to obtain a price quote, please call us at 800.472.4225. For international calls please dial 1.214.547.2400 or email us at info@fibersystems.com

About 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 a decade 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. Altogether, AFSI has delivered millions of fiber optic connectors in more than 22 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.

For more information about AFSI, please visit our web site at www.fibersystems.com