

MIL-ST Fibre Optic Connectors

MIL-C-83522

TechOptics

Tech Optics offers rugged military fibre optic ST connectors for deployable and fixed communication systems.

The M83522 connector features a higher spring force than commercial ST connectors, allowing it to meet the shock and vibration requirements of the MIL spec. Stainless steel construction provides excellent mechanical strength and superior corrosion resistance.

There are two versions of the boot which attaches either by compression ring or by a threaded adaptor.

Features and Benefits

- Increased spring force for superior optical performance in extreme environmental conditions
- Robust construction
 - High grade stainless steel body (17-4 SS)
 - Zirconia ceramic ferrules and sleeves
 - Fungus resistant, self-extinguishing boot
- MIL-qualified series, shock and vibration resistant for critical military applications
- Navy approved COTS (Commercial Off The Shelf) variant for moderate shock and vibration environments
- RoHS compliant
- DFAR 252.225-7014 (US domestic speciality metals) compliant



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

MIL-C-83522 Connector Performance Specifications

Specification	Measurement Requirements
Insertion Loss	<0.75dB (MIL-C-83522 allows for <1.0dB)
Return Loss	>30dB (multimode)
Tensile Load	>230N
Mating Durability	>500 cycles
Impact	8 impacts, 1.5m
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 Operational -65°C to +200°C Non-operational
Shock	MIL-STD-901D, Grade A, Type A, Class 1
Fungus resistance	MIL-STD-810, Method 508

ST Connector Typical Performance Specifications

Specification	Measurement Requirements	Singlemode	Multimode
Insertion Loss (typical)	EIA/TIA-455-34 Method A	-0.2dB	-0.3dB
Return Loss	EIA/TIA-455-107	-50dB	-30dB

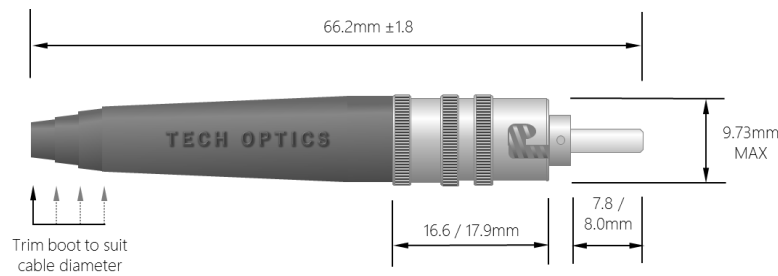
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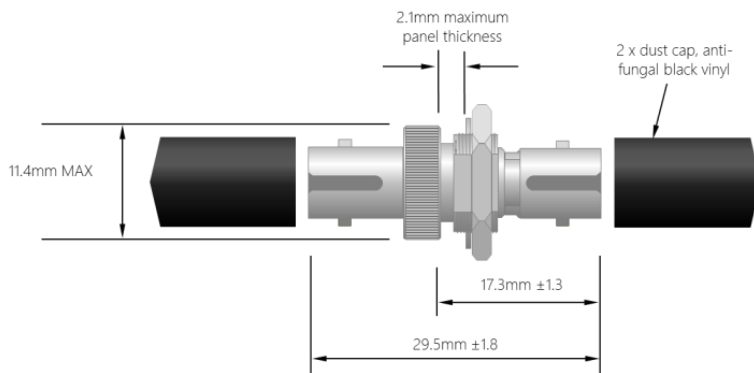
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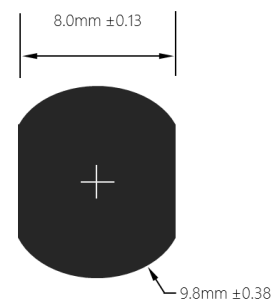
Military ST Connector



Adaptor



Panel Cut Out



Part Numbers and Descriptions

Description	MIL-SPEC Part Number	Tech Optics 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 Adaptor, SM & MM	M83522/17NY	MSTA2000

COTS Ordering Numbers

Description	Tech Optics 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 Connector, MM, Closed Bayonet	MSTC1110

For further information and to discuss your application please contact:-

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TechOptics

THE FIBRE OPTICS EXPERTS

ISO9001:2015
for the distribution
of fibre optic
products and the
manufacture of
fibre optic
assemblies.



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Specifications subject to change without notice.

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