Tactical Connector Fiber Optic Modems For Military Communications

TYPICAL APPLICATIONS

- Mobile Command Post Platforms
- Satellite Communications
- Fiber Optic Infrastructures
- Vehicles
- Radar

FEATURES

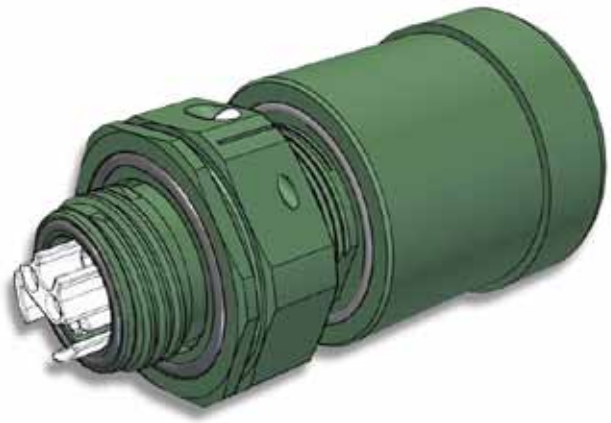
TFOCA-II or Expanded Beam Fiber Optic Modem - Optical Ethernet Data Transmission Modules

- Provide 1.0 Gbps or 10 Gbps Ethernet optical to electrical conversion inside TFOCA-II or Expanded Beam connector backshell
  - Modular technology allows packaging of fiber modem inside TFOCA-II or Expanded Beam connectors
  - Provides for a simple upgrade path for fielded TFOCA-II or Expanded Beam connector systems
  - Expands bandwidth for future requirements
  - Fiber conversion to single and multiple copper Ethernet ports available
- Provides 1.0 Gbps or 10 Gbps Ethernet transmission over singlemode or multimode fiber
  - Eliminates the need to replace your existing optical cable infrastructure
  - Interoperable with existing TFOCA-II or Expanded Beam optical cable and connector assemblies

Micro-Flex Multiplexers and Media Converters

- Provides conversion of 1.0 Gbps or 10 Gbps Ethernet to 10/100/1000 Ethernet, serial data and custom protocols
  - Provides compatibility / interoperability with existing signal requirements
  - Allows for expansion and flexibility as signal requirements change
  - Designed to interoperate with TFOCA-II or Expanded Beam Fiber Optic Modem - Optical Ethernet Data Transmission Modules

Preliminary



Moog provides the military ground communications market a new family of best-in-class interconnect and optical / media conversion products integrated into a connector-based solution.

Leveraging Moog's military fiber optic capabilities, we have developed micro components that are assembled into the jam nut receptacle of a TFOCA-II® or Expanded Beam connector to produce a connector based fiber-to-copper Ethernet converter operating at data rates up to 10 Gbps.

In addition, the Moog Micro-Flex™ line of multiplexers connects directly to the Fiber Optic Modem (FOM) and adds Ethernet switching or mixed signal multiplexing of many discrete signals to the FOM. Our flexible, building block approach allows communication systems engineers and Moog's applications engineers to work together and develop the exact solution that provides optimal benefits to the end customer.

Moog and Amphenol Fiber Systems are working collaboratively to provide innovative tactical communication solutions.

TFOCA-II and Expanded Beam connector based capabilities include:

- Connector-based transmit and receive optical sub-assemblies (TOSA / ROSA)
- Connector-based optical to electrical media converter
- Connector-based, add-on multiplexers (Moog Micro-Flex multiplexers)
- Optical data transport rates up to 10 Gbps (1.0 Gbps and 10 Gbps are standard)
- Optical to electrical conversion at rates up to 10 Gbps (via 10 Gbps Ethernet)

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COMPONENTS GROUP

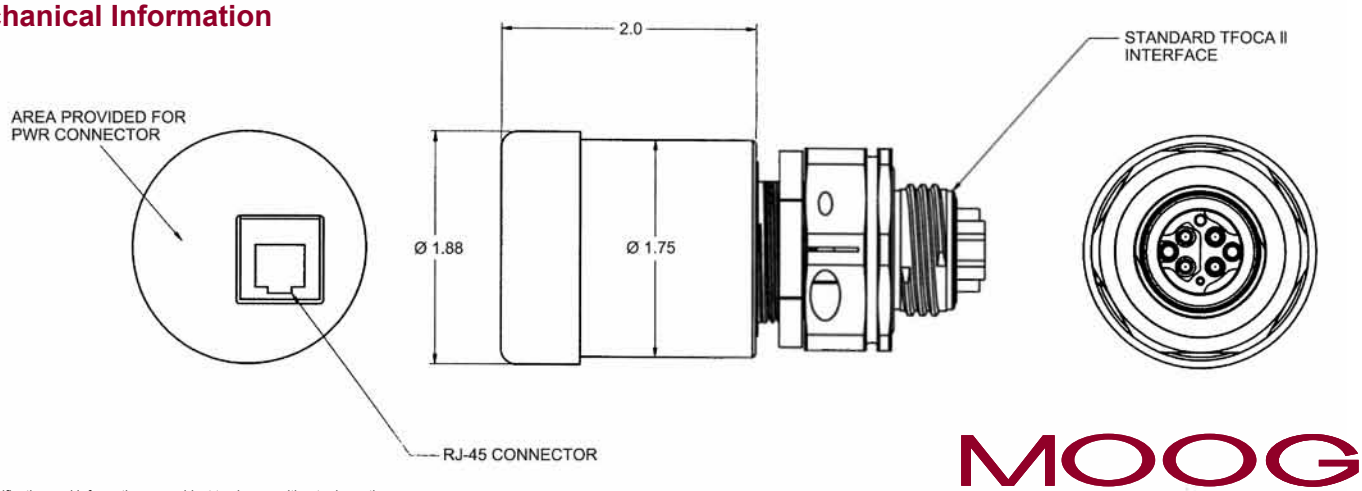
TFOCA-II® is a registered trademark of Amphenol Fiber Systems International

SPECIFICATIONS

Tactical Connector Fiber Optic Modems - Optical Ethernet Data Transmission Modules		
Optical Budget		
At 1.0 Gbps	**High Power Singlemode**	**Multimode**
Wavelength	1310 nm DFB	850 nm
Transmit Power	+2.5 dBm typical	-6.75 dBm typical
Receive Sensitivity	-34 dBm typical	-17 dBm typical
Optical Budget	36.5 dB typical	10.25 dB typical
At 10 Gbps	**High Power Singlemode**	**Multimode**
Wavelength	1310 nm DFB	1310 nm
Transmit Power	-3.8 dBm typical	-3.0 dBm typical
Receive Sensitivity	-14.4 dBm typical	-6.5 dBm typical
Optical Budget	10.6 dB typical	3.5 dB typical
Transmission Distance Over		
Fiber At 1.0 Gbps	**Singlemode**	**Multimode (50 Micron or 62.5 Micron)**
	Up to 120 kilometers	Up to 275 meters
Fiber At 10 Gbps	**Singlemode**	**Multimode (50 Micron or 62.5 Micron)**
	Up to 10 kilometers	Up to 220 meters
DC Power Requirements		
+5 VDC Power		
From < 500 mA to up to 1.0 A depending on configuration selected		
Copper Interface		
Signal	Custom - depending on number and type of signal channels	
Power	Custom - depending on voltage availability	
Micro-Flex Multiplexers and Media Converters		
DC Power Requirements		
+5 VDC Vehicle Power		
From < 500 mA to up to 1.0 A depending on configuration selected		
Copper Interface		
Custom - depending on number and type of signal channels		

These products are specifically engineered for military applications. They are developed, tested, manufactured and supported at Moog Components Group, Springfield, PA, Operations (AS / EN / JISQ 9001 and ISO 9001:2008 Certified).

Mechanical Information



Specification and information are subject to change without prior notice.
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