

TMC-F Series



The Ethernet media converter series are one-channel Ethernet electrical to optical media converters. These auto-negotiating devices accept a 10/100 Mbps electrical input and convert this to a 100 Mbps optical output. This series of media converters use multimode and single-mode optical fiber and one and two fiber SC and ST optical connectors. LED indicators confirm operational status. All models are environmentally hardened with no electrical or optical adjustments (Plug and Play). The standard size units may be either wall or rack mounted. Non-PoE units are powered by an included DC power supply. PoE models provide full compliance with IEEE 802.3at as Power Sourcing Equipment (PSE), with a maximum power of 30 watts, making them ideal for those applications where the remote equipment draws significant power.

The TMC-F Series standard size units may be directly plugged into the SBP-C14 / SBP-C03 Rack or operated as a standalone module. The TMC-F-M small size units operate as standalone modules only.

FEATURES

- › 10/100 Mbps Ethernet
 - 10/100 BASE-T/TX electrical port
 - 100 BASE-FX optical port
- › Electrical port supports Auto-Negotiation for 10 Mbps or 100 Mbps, full duplex or half duplex data.
- › Power Sourcing Equipment (PSE): Provides IEEE 802.3af/802.3at 30 watts PoE+ for high output demand applications of remote Ethernet equipment
- › Optical port supports 100 Mbps full duplex data
- › Automatic MDI/MDI-X crossover
- › Distances up to: 3 km (2 mi) Multimode
20 km (12 mi) Single Mode
- › Transparent to data encoding/compatible with major data protocols
- › Tested and certified by an independent laboratory for full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/ TS-2 and CALTRANS Traffic Signal Control Equipment Specifications
- › ST or SC optical connectors
- › 1 or 2 fiber design
- › PoE Models DC powered, non-PoE models AC/DC powered
- › Voltage transient protection on all power and signal input/output lines provides protection from power surges and other voltage transient events.
- › No in-field optical adjustments required
- › LED Indicators
- › Standard size is hot-swappable rack module
- › Standard size is interchangeable between stand-alone or rack mount use
- › IEEE 802.3 compliant

APPLICATIONS

- › 10/100 Mbps Ethernet Media Converter
- › High Speed Computer Links

SPECIFICATIONS

Ethernet

Data Rate	10/100 Mbps IEEE 802.3 Compliant Full Duplex or Half Duplex Electrical Port/Full Duplex Optical Port
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Connectors

Optical	SFP; ST or SC, 1 or 2 Fibers
Power	Terminal Block RJ45
Electrical	

Power

Operating Voltage Range	Non-PoE models: AC: 22 to 27 VAC DC: 8 to 24 VDC PoE Models 48 to 57 VDC @ 0.85A
Power Consumption	Non-PoE: 3W Max, PoE 33W
Current Protection	Automatic Resettable Solid-State Current Limiters
PoE Pin Assignment	RJ-45 port supports IEEE802.3af/802.3at End-point Positive (VCC+): RJ45 pin 1, 2 or 4, 5 Negative (VCC-): RJ45 pin 3, 6 or 7, 8 Data: (1, 2, 3, 6)

Maximum PoE Current 625 mA continuous per mode

Electrical & Mechanical

LED Indicators	Optical Link/Data Activity Electrical Link/Data Activity Power
Circuit Board Size (L×W×H)	Meets IPC Standard 6.1 × 5.3 × 1.1 in (15.5 × 13.5 × 2.8 cm) Mini: 3.3 × 2.5 × 1.1 in (8.4 × 6.4 × 2.8 cm)
Shipping Weight:	<2 lb /0.9 kg

Environmental

MTBF	>100,000 hours
Operating Temp	-40° C to +75° C
Storage Temp	-40° C to +85° C
Relative Humidity	0% to 95% (non-condensing)



ORDERING INFORMATION

Part Number	Description
TMC-FSTM1ACM-A	Small 100Mbps Media Converter (A), ST Connector, AC/DC Power, mm, 1 fiber
TMC-FSTS1ACM-A	Small 100Mbps Media Converter (A), ST Connector, AC/DC Power, sm, 1 fiber
TMC-FSTM1POEM-A	Hardened 100Mbps Media Converter, ST Connector, mm, 1 fiber, "A" Unit, (requires "A" and "B" units) 48V, 30W POE output, Power Supply Not Included
TMC-FSTS1POEM-A	Hardened 100Mbps Media Converter, ST Connector, sm, 1 fiber, "A" Unit, (requires "A" and "B" units) 48V, 30W POE output, Power Supply Not Included
TMC-FSTM1-B	100Mbps Media Converter (B), ST Connector, mm, 1 fiber
TMC-FSTS1-B	100Mbps Media Converter (B), ST Connector, sm, 1 fiber
TMC-FSCM1ACM-A	Small 100Mbps Media Converter (A), SC Connector, AC/DC Power, mm, 1 fiber
TMC-FSCS1ACM-A	Small 100Mbps Media Converter (A), SC Connector, AC/DC Power, sm, 1 fiber
TMC-FSCM1POEM-A	Hardened 100Mbps Media Converter, SC Connector, mm, 1 fiber, "A" Unit, (requires "A" and "B" units) 48V, 30W POE output, Power Supply Not Included
TMC-FSCS1POEM-A	Hardened 100Mbps Media Converter, SC Connector, sm, 1 fiber, "A" Unit, (requires "A" and "B" units) 48V, 30W POE output, Power Supply Not Included
TMC-FSCM1-B	100Mbps Media Converter (B), SC Connector, mm, 1 fiber
TMC-FSCS1-B	100Mbps Media Converter (B), SC Connector, sm, 1 fiber
TMC-FSFPPOE30M	Hardened 100Mbps Media Converter, SFP Required, 48V, 30W POE output, Power Supply Included
Accessories	DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included, for benign 0 to 50°C applications only. Hardened power supply PWR-DR12033 available)
Options	PoE Power Supply (PWR-DR48060), DIN-Rail Mounting Adaptor Plate Kit - With mounting hardware (SBP-UDR), Card Cage Racks (SBP-C14 / SBP-C03)

Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth.

NOTE: This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended. Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J.

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

TYPICAL APPLICATION

