PTC-101-M12 Series

EN 50121-4 Ethernet-to-fiber media converters

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- Link Fault Pass-Through (LFP)
- Power failure alarm by relay output
- Redundant dual DC power inputs
- Compliant with EN 50121-4
- Complies with a portion of EN 50155 specifications
- M12 anti-vibration connector
- -40 to 85°C operating temperature range

EN 50121 RoHS c UL us LISTED CE FC

Overview

The PTC-101-M12 EN 50121-4 Ethernet-to-fiber media converters convert from 10/100BaseT(X) to 100BaseFX. The models are available with SC/ST connectors in fiber and M12 connector in Ethernet to provide a reliable communication. The PTC-101-M12 converters eliminate the need for additional wiring, and support IEEE 802.3 and IEEE 802.3u/x protocols with 10/100M, full/half-duplex, and MDI/MDI-X auto-sensing to provide a total solution for your industrial Ethernet networks. The PTC-101-M12 is compliant with EN 50121-4 and is well suited for high-vibration wayside locations of railway applications.

Specifications

Technology

Standards:
IEEE 802.3 for 10BaseT
IEEE 802.3u for 100BaseT(X), 100BaseFX

Interface

M12 Ports: 10/100BaseT(X)
Fiber Ports: 100BaseFX (SC/ST connectors)
LED Indicators: PWR1, PWR2, Fiber Link (fiber port), 10/100M (TP port)
DIP Switches:

DIP No.	Function	ON	OFF
1	Auto Negotiation	Enable	Disable
2	Force TP Speed	100 Mbps	10 Mbps
3	Force TP Duplex	Full Duplex	Half Duplex
4	Link Fault Pass Throuth	Enable	Disable
5	Operating Mode	Store-and-Forward	Pass Through

Alarm Contact: One relay output with current carrying capacity of 1 A @ 24 VDC

Optical Fiber

	100BaseFX
	Single-mode
Wavelength	1310 nm
Max. Tx	0 dBm
Min. Tx	-5 dBm
RX Sensitivity	-34 dBm
Link Budget	29 dB
Typical Distance	40 km [a]
Saturation	-3 dBm

Physical Characteristics

Housing: Metal
Dimensions: 124 x 145 x 67 mm (4.88 x 5.7 x 2.63 in)
Weight: 617 g
Installation: WK-51 (wall mount)

Environmental Limits

Operating Temperature: -40 to 85°C (-40 to 185°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements

Input Voltage: 20 to 72 VDC
Connection: Removable terminal block
Overload Current Protection: 1.6 A (protects against two signals shorted together)
Reverse Polarity Protection: Protects against V+/V- reversal

Standards and Certifications

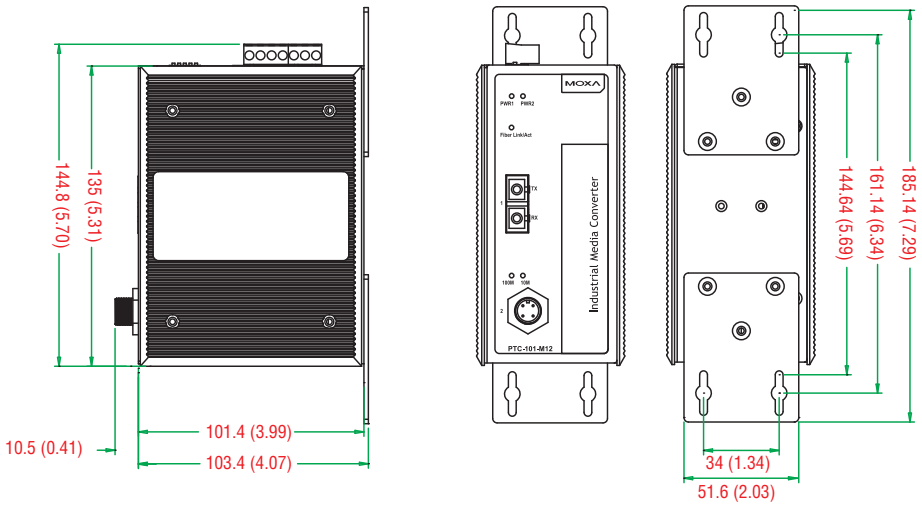
EMC: CE, FCC
EMI: EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 4,
EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 4,
EN 61000-4-5 (Surge) Level 4,
EN 61000-4-6 (CS) Level 3,
EN 61000-4-8 (PFMF) Level 5,
EN 61000-4-9
Rail Traffic: EN 50155, EN 50121-4
Vibration: EN 50125-3
Green Product: RoHS, CRoHS, WEEE

Warranty

Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions & Pin Assignment

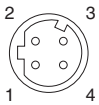
Unit: mm (inch)



Side View | Front View | Rear View

Pinouts for the 10/100BaseT(X) M12 Ports

PIN	TX
1	TD+
2	RD+
3	TD-
4	RD-



Ordering Information

Available Models

PTC-101-M12-S-SC-LV-T: Industrial 10/100BaseT(X) to 100BaseFX media converter, M12 connector, single-mode with SC connector, 20-72 VDC power input, -40 to 85°C operating temperature

PTC-101-M12-S-ST-LV-T: Industrial 10/100BaseT(X) to 100BaseFX media converter, M12 connector, single-mode with ST connector, 20-72 VDC power input, -40 to 85°C operating temperature

PTC-101-M12-S-SC-LV-CT-T: Industrial 10/100BaseT(X) to 100BaseFX media converter, M12 connector, single-mode with SC connector, 20-72 VDC power input, conformal coating, -40 to 85°C operating temperature

PTC-101-M12-S-ST-LV-CT-T: Industrial 10/100BaseT(X) to 100BaseFX media converter, M12 connector, single-mode with ST connector, 20-72 VDC power input, conformal coating, -40 to 85°C operating temperature

Optional Accessories (can be purchased separately)

DK-DC50131: DIN-Rail mounting kit

Package Checklist

- 1 PTC-101-M12 media converter
- Wall mounting kit
- Quick installation guide (printed)
- Warranty card