

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
- > M12 anti-vibration connector
- > -40 to 85°C operating temperature range



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

RJ45 Ports: 10/100BaseT(X)

Fiber Ports: 100BaseFX (SC/ST connectors)

LED Indicators: PWR1, PWR2, Fiber Link (fiber port), 10/100M (TP port)

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

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 Through	Enable	Disable
5	Operating Mode	Store-and-Forward	Pass Through

The default setting for all DIP switches is ON.

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)

Conformal Coating: N/A

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

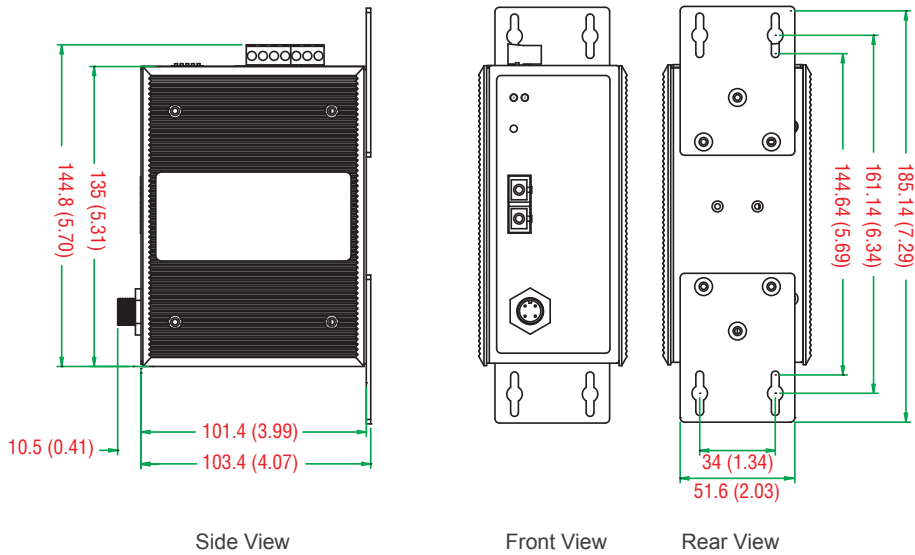
Warranty

Warranty Period: 5 years

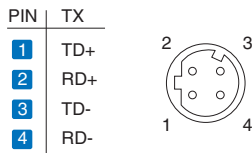
Details: See www.moxa.com/warranty

Dimensions & Pin Assignment

Unit: mm (inch)



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



: 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

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