IMC-P101 Series

IEEE 802.3af PoE Ethernet-to-fiber media converters

Features and Benefits

• 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X

• IEEE 802.3af-compliant PoE PSE equipment

• Power failure alarm by relay output

• Supports store-and-forward mode and pass-through mode

• -40 to 75°C operating temperature range (-T models)

• Redundant dual DC power inputs

Certifications

Introduction

IMC-P101 Ethernet-to-fiber media converters provide Ethernet media conversion from 10/100BaseT(X) to 100BaseFX (with SC or ST connectors). These converters are classified as power source equipment (PSE), and when used in this way, they provide up to 15.4 watts to IEEE 802.3af-compliant powered devices (PDs), eliminating the need for additional wiring. The IMC-P101 converters support IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, and MDI/MDI-X auto-sensing, providing a complete solution for your industrial Ethernet network.

Specifications

Ethernet Interface

100BaseFX Ports (multi-mode SC connector)	IMC-P101-M-SC Series: 1
100BaseFX Ports (multi-mode ST connector)	IMC-P101-M-ST Series: 1
100BaseFX Ports (single-mode SC connector)	IMC-P101-S-SC Series: 1
100BaseFX Ports (single-mode ST connector)	IMC-P101-S-ST Series: 1

Optical Fiber

Low-Speed Fiber Module		Multi-Mode	Single-Mode
Fiber Cable Requirements		50/125 µm, 800 MHz	G.652
		62.5/125 µm, 500 MHz	
Typical Distance		5 km	40 km
Wavelength	Typical (nm)	850	1310
	TX Range (nm)	840 to 860	1290 to 1330
	RX Range (nm)	800 to 900	1100 to 1650
Optical Power	TX Range (dBm)	0 to -8	0 to -8
	RX Range (dBm)	0 to -25	0 to -25
	Link Budget (dB)	15	20
	Dispersion Penalty (dB)	1	1

Note: When using a power meter to measure the fiber TX power, set the baudrate to 9,600 bps and send data (00, ..., 0h) to the serial converter's serial port.
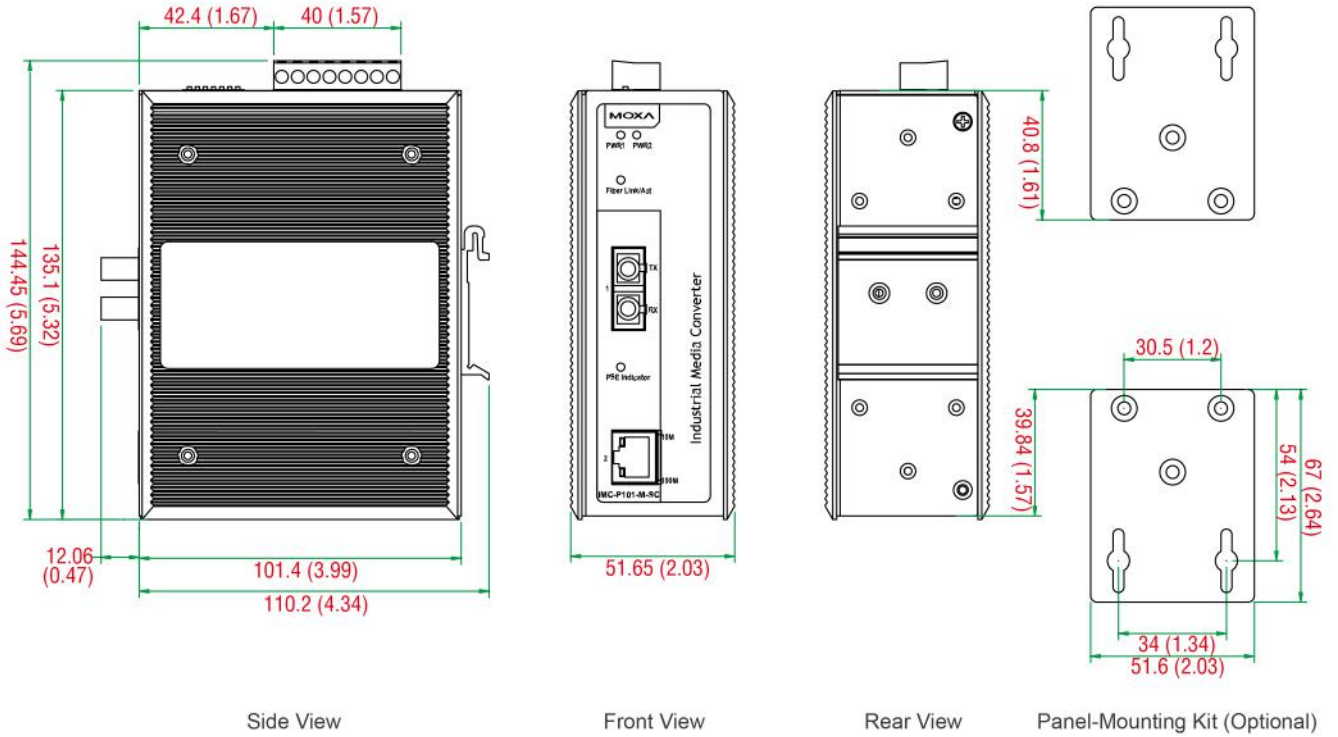
Magnetic Isolation Protection	1.5 kV (built-in)
PoE Ports (10/100BaseT(X), RJ45 connector)	1

Power Parameters

Input Current	130 mA @ 48 VDC
Input Voltage	46 to 57 VDC
Overload Current Protection	Supported
Power Consumption	130 mA @ 48 VDC

Physical Characteristics

Housing	Metal
Dimensions	144.5 x 122.3 x 51.65 mm (5.69 x 4.81 x 2.03 in)
Weight	710 g (1.56 lb)
Installation	DIN-rail mounting

Environmental Limits

Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs
Environmental Testing	IEC 60068-2-2 IEC 60068-2-3
Safety	EN 60950-1, UL 60950-1
Vibration	IEC 60068-2-6

MTBF

Time	435,210 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

Package Contents

Device	1 x IMC-P101 Series converter
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)

Side View   Front View   Rear View   Panel-Mounting Kit (Optional)

Ordering Information

Model Name	Operating Temp.	Fiber Module Type
IMC-P101-M-SC	0 to 60°C	Multi-mode SC
IMC-P101-M-ST	0 to 60°C	Multi-mode ST
IMC-P101-S-SC	0 to 60°C	Single-mode SC
IMC-P101-S-ST	0 to 60°C	Single-mode ST
IMC-P101-M-SC-T	-40 to 75°C	Multi-mode SC
IMC-P101-M-ST-T	-40 to 75°C	Multi-mode ST
IMC-P101-S-SC-T	-40 to 75°C	Single-mode SC
IMC-P101-S-ST-T	-40 to 75°C	Single-mode ST

Accessories (sold separately)

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

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