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

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm	G.652
			800 MHz x km	
Typical Distance		4 km	5 km	40 km
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm	G.652
			800 MHz x km	
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link Budget (dB)	12		29
	Dispersion Penalty (dB)	3		1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

Magnetic Isolation Protection	1.5 kV (built-in)
PoE Ports (10/100BaseT(X), RJ45 connector)	1

Power Parameters

Input Current	430 mA @ 46 to 57 VDC
Input Voltage	46 to 57 VDC
Overload Current Protection	Supported
Power Consumption	430 mA @ 46 to 57 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: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 10 V/m; Signal: 10 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

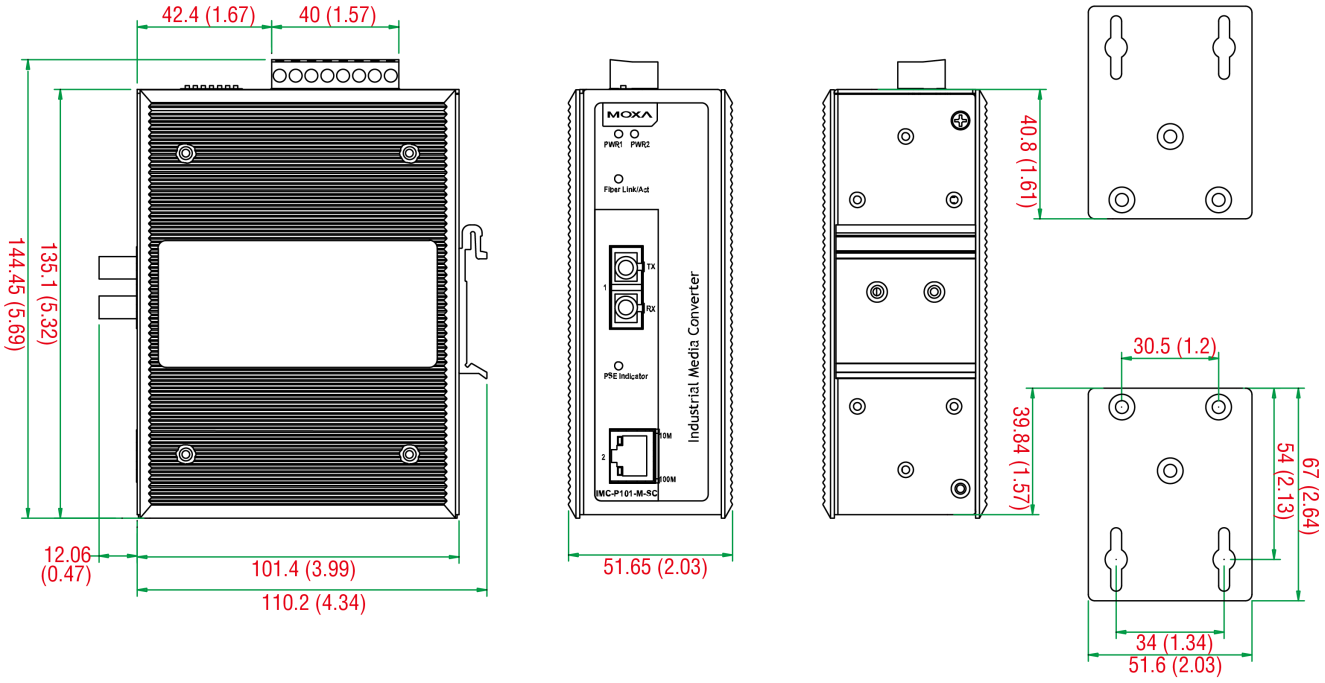
Warranty Period	5 years
Details	See www.moxa.com/warranty

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

Model Name	Operating Temp.	Fiber Module Type
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