

IMC-P101 Series

PoE Ethernet-to-fiber media converters



Features and Benefits

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- IEEE 802.3af and PoE standard compliance
- IEEE 802.3at and PoE+ standard compliance (HW Rev. 1.1.0 and later¹)
- Power failure alarm by relay output
- Supports store-and-forward mode and pass-through mode
- -40 to 75°C operating temperature range (-T model)
- Redundant dual DC power inputs

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 30 Watts to 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	
		Typical Distance		
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
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

1. HW Rev, 1.1.0 complies with 802.23at (PoE Plus) and Rev. 1.0.1 802.23af (PoE)

	100BaseFX		
	Multi-Mode		Single-Mode
	Fiber Cable Type	OM1	50/125 μm
			800 MHz x km
	Dispersion Penalty (dB)	3	1
<p>Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.</p> <p>Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).</p>			

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

Input Current	360 mA @ 12 to 57 VDC (HW Rev. 1.1.0 and later) 430 mA @ 46 to 57 VAC (HW Rev. 1.0.1 and prior)
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Input Voltage	12 to 57 VDC, (HW Rev. 1.1.0 and later), 46 to 57 VDC, (HW Rev. 1.0.1 and prior)
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Overload Current Protection	Supported
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Physical Characteristics

Housing	Metal
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Dimensions	144.5 x 122.3 x 51.65 mm (5.69 x 4.81 x 2.03 in)
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Weight	Product only: 532 g (1.17 lb) Packaged: 701 g (1.55 lb)
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Installation	DIN-rail mounting
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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)
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Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
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Ambient Relative Humidity	5 to 95% (non-condensing)
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Standards and Certifications

EMI	CISPR 32, FCC Part 15B Class A
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EMC	EN 55032/35
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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 to 1 V IEC 61000-4-8 PFMF
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Environmental Testing	IEC 60068-2-2 IEC 60068-2-3
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Safety	UL 508, EN 62368-1
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Vibration	IEC 60068-2-6
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MTBF

Time	2,892,595 hrs
Standards	Telcordia SR332

Warranty

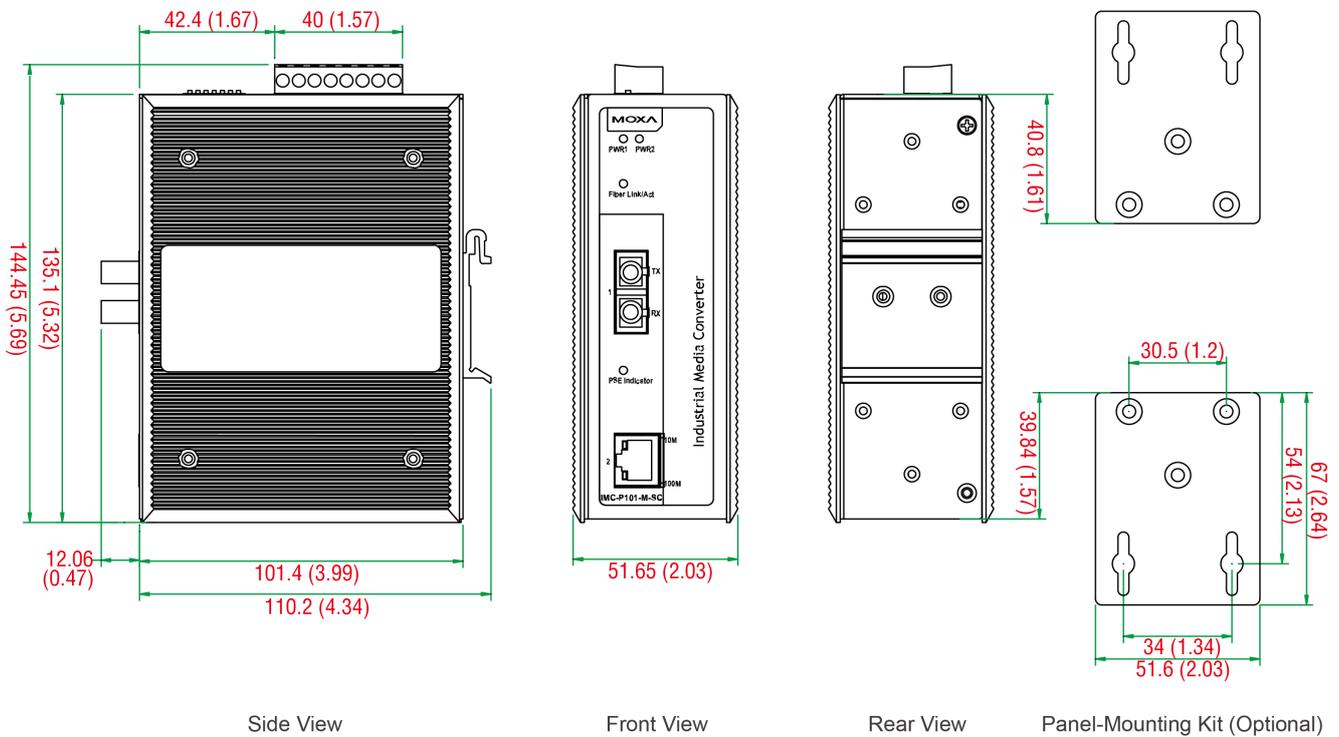
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

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

Dimensions

Unit: mm (inch)



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)

Wall-Mounting Kits

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

RK-4U	19-inch rack-mounting kit
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