

IMC-101 Series

Industrial Ethernet-to-fiber media converters



Features and Benefits

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- Link Fault Pass-Through (LFPT)
- Power failure, port break alarm by relay output
- Redundant power inputs
- -40 to 75°C wide operating temperature range (-T models)
- Designed for hazardous locations (Class 1 Div. 2/Zone 2, IECEx)

Certifications



Introduction

The IMC-101 industrial media converters provide industrial-grade media conversion between 10/100BaseT(X) and 100BaseFX (SC/ST connectors). The IMC-101 converters' reliable industrial design is excellent for keeping your industrial automation applications running continuously, and each IMC-101 converter comes with a relay output warning alarm to help prevent damage and loss. The IMC-101 media converters are designed for harsh industrial environments, such as in hazardous locations (Class 1, Division 2/Zone 2, IECEx), come with the DNV certification, and comply with FCC, UL, and CE standards. Models in the IMC-101 Series support an operating temperature from 0 to 60°C, and an extended operating temperature from -40 to 75°C. All IMC-101 converters are subjected to a 100% burn-in test.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1
100BaseFX Ports (multi-mode SC connector)	IMC-101-M-SC/M-SC-IEX Models: 1
100BaseFX Ports (multi-mode ST connector)	IMC-101-M-ST/M-ST-IEX Models: 1
100BaseFX Ports (single-mode SC connector)	IMC-101-S-SC/S-SC-80/S-SC-IEX/S-SC-80-IEX Models: 1

Magnetic Isolation Protection	1.5 kV (built-in)						
Optical Fiber			100BaseFX				
			Multi-Mode		Single-Mode (40 km)		
	Fiber Cable Type		OM1	50/125 μ m	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		
	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).						

Power Parameters

Input Current	200 mA @ 12 to 45 VDC
Input Voltage	12 to 45 VDC
Overload Current Protection	Supported
Power Connector	Terminal block
Power Consumption	200 mA @ 12 to 45 VDC

Physical Characteristics

IP Rating	IP30
Housing	Metal
Dimensions	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight	630 g (1.39 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 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 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
Hazardous Locations	IEX Models: UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2, IECEx All Other Models: UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2
Maritime	DNV
Safety	UL 60950-1 UL 508
Vibration	IEC 60068-2-6 IEC 60068-2-64
Shock	IEC 60068-2-27
Environmental Testing	IEC 60068-2-1 IEC 60068-2-2 IEC 60068-2-3
Freefall	IEC 60068-2-31 ISTA 2A

MTBF

Time	401,000 hrs
Standards	MIL-HDBK-217F

Warranty

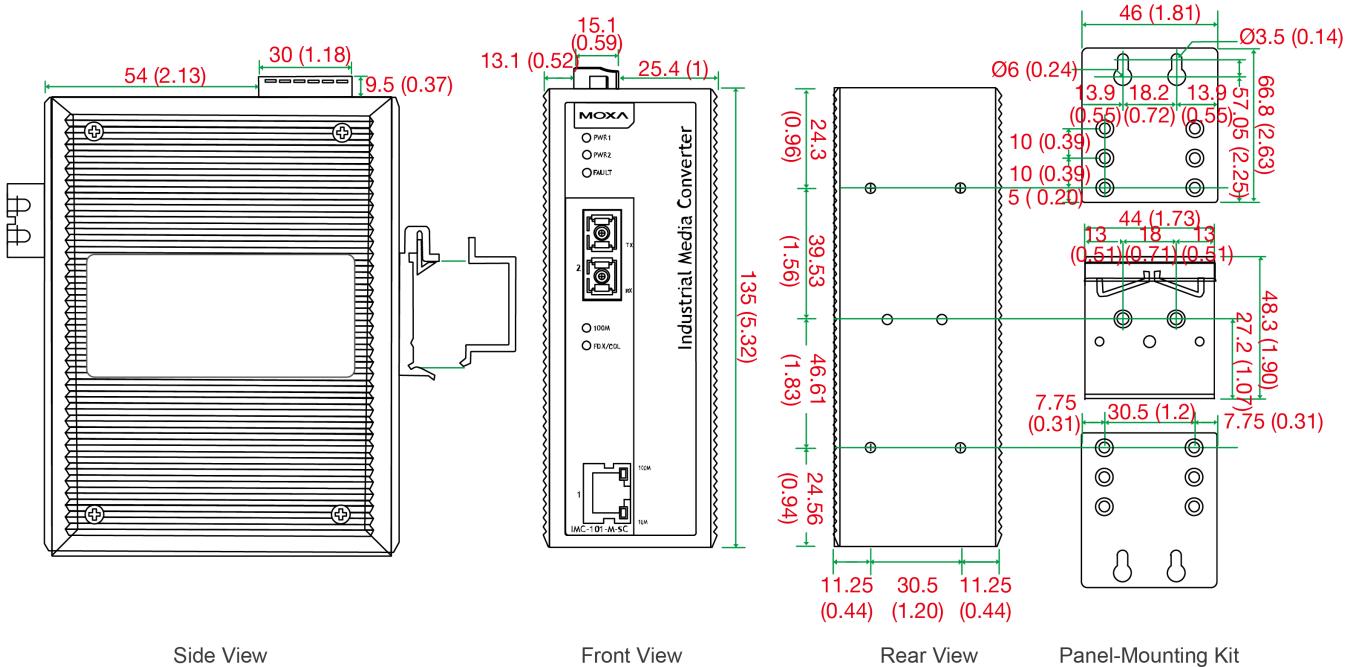
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x IMC-101 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

Ordering Information

Model Name	Operating Temp.	Fiber Module Type	IECEx	Fiber Transmission Distance
IMC-101-M-SC	0 to 60°C	Multi-mode SC	–	5 km
IMC-101-M-SC-T	-40 to 75°C	Multi-mode SC	–	5 km
IMC-101-M-SC-IEX	0 to 60°C	Multi-mode SC	✓	5 km
IMC-101-M-SC-T-IEX	-40 to 75°C	Multi-mode SC	✓	5 km
IMC-101-M-ST	0 to 60°C	Multi-mode ST	–	5 km
IMC-101-M-ST-T	-40 to 75°C	Multi-mode ST	–	5 km
IMC-101-M-ST-IEX	0 to 60°C	Multi-mode ST	✓	5 km
IMC-101-M-ST-T-IEX	-40 to 75°C	Multi-mode ST	✓	5 km
IMC-101-S-SC	0 to 60°C	Single-mode SC	–	40 km
IMC-101-S-SC-T	-40 to 75°C	Single-mode SC	–	40 km
IMC-101-S-SC-IEX	0 to 60°C	Single-mode SC	✓	40 km
IMC-101-S-SC-T-IEX	-40 to 75°C	Single-mode SC	✓	40 km
IMC-101-S-SC-80	0 to 60°C	Single-mode SC	–	80 km
IMC-101-S-SC-80-T	-40 to 75°C	Single-mode SC	–	80 km

Accessories (sold separately)

Power Supplies

NDR-120-24	120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
HDR-60-24	60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature

DIN-Rail Mounting Kits

DK-DC50131

DIN-rail mounting kit

Wall-Mounting Kits

WK-51-01

Wall mounting kit with 2 plates (51.6 x 67 x 2 mm) and 6 screws

WK-46

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

Rack-Mounting Kits

RK-4U

19-inch rack-mounting kit

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