

Industrial 10/100BaseT(X)-to-100BaseFX media converters



- Features and Benefits**
- Multi-mode or single-mode, with SC or ST fiber connector
 - Link Fault Pass-Through (LFPT)
 - -40 to 75°C operating temperature range (-T models)
 - DIP switches to select FDX/HDX/10/100/Auto/Force

Certifications



Introduction

The IMC-21A industrial media converters are entry-level 10/100BaseT(X)-to-100BaseFX media converters designed to provide reliable and stable operation in harsh industrial environments. The converters can operate reliably in temperatures ranging from -40 to 75°C. The rugged hardware design ensures that your Ethernet equipment can withstand demanding industrial conditions. The IMC-21A converters are easy to mount on a DIN rail or in distribution boxes.

Specifications

Ethernet Interface						
10/100BaseT(X) Ports (RJ45 connector)		1				
100BaseFX Ports (multi-mode SC connector)		IMC-21A-M-SC Series: 1				
100BaseFX Ports (multi-mode ST connector)		IMC-21A-M-ST Series: 1				
100BaseFX Ports (single-mode SC connector)		IMC-21A-S-SC Series: 1				
Magnetic Isolation Protection		1.5 kV (built-in)				
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
		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

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 μm	G.652
			800 MHz x km	
	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	12 to 48 VDC, 265mA (Max.)
Input Voltage	12 to 48 VDC
Overload Current Protection	Supported
Power Connector	Terminal block
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	30 x 125 x 79 mm (1.19 x 4.92 x 3.11 in)
Weight	170 g (0.37 lb)
Installation	DIN-rail mounting

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 75°C (-40 to 167°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: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 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
Environmental Testing	IEC 60068-2-1 IEC 60068-2-2 IEC 60068-2-3
Safety	EN 60950-1, UL 60950-1
Vibration	IEC 60068-2-6

MTBF

Time	353,000 hrs
Standards	MIL-HDBK-217F

Warranty

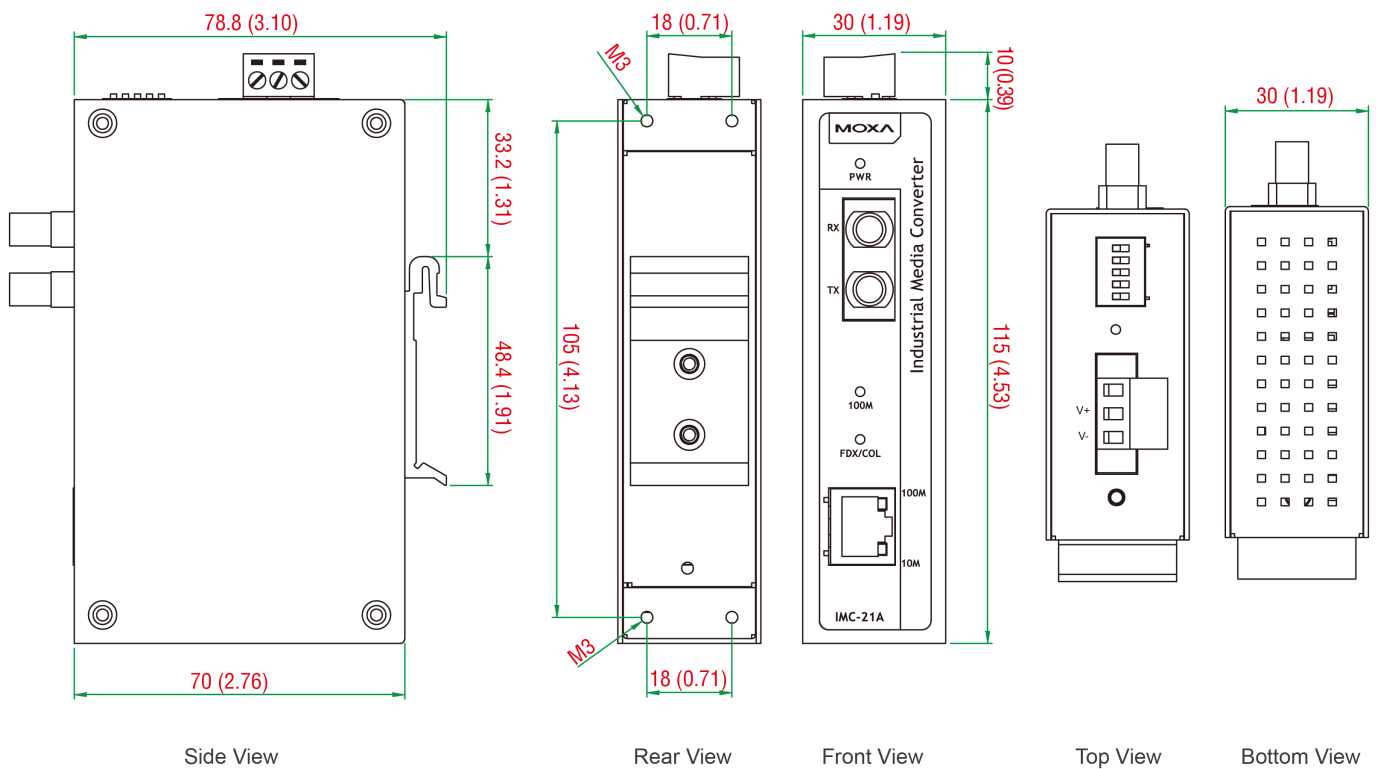
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x IMC-21A 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-21A-M-SC	-10 to 60°C	Multi-mode SC
IMC-21A-M-ST	-10 to 60°C	Multi-mode ST
IMC-21A-S-SC	-10 to 60°C	Single-mode SC
IMC-21A-M-SC-T	-40 to 75°C	Multi-mode SC
IMC-21A-M-ST-T	-40 to 75°C	Multi-mode ST
IMC-21A-S-SC-T	-40 to 75°C	Single-mode SC

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