

IMC-21 Series

Entry-level industrial 10/100BaseT(X) to 100BaseFX media converters



- Multi-mode or single-mode, with SC or ST fiber connector
- Link Fault Pass-Through (LFP)
- DIP switches to select FDX/HDX/10/100/Auto/Force



Introduction

The IMC-21 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 are a cost-effective solution that run on either a 12 to 48 VDC power input

and can operate reliably in temperatures ranging from -10 to 60°C. The rugged hardware design ensures that your Ethernet equipment can withstand demanding industrial conditions. The IMC-21 converters are easy to mount on a DIN rail or in distribution boxes.

Specifications

Technology

Standards:

IEEE 802.3 for 10BaseT
 IEEE 802.3u for 100BaseT(X) and 100BaseFX
 IEEE 802.3x for Flow Control

Interface

RJ45 Ports: 10/100BaseT(X)
Fiber Ports: 100BaseFX (SC/ST connectors)
LED Indicators: Power, 10/100M (TP port), 100M (fiber port), FDX/ COL (fiber port)
DIP Switches: TP port's 10/100M, Half/Full modes, and Force/Auto modes, fiber connection's Full/Half mode, Link Fault Pass-Through (LFP)

Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 μm 800 MHz*km	G.652
Typical Distance		4 km	5 km	40 km
Wave-length	Typical (nm)	1300		
	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).

Physical Characteristics

Housing: Plastic, IP30 protection
Dimensions: 25 x 109 x 97 mm (0.98 x 4.29 x 3.82 in)
Weight: 125 g (0.27 lb)
Installation: DIN-rail mounting

Environmental Limits

Operating Temperature: -10 to 60°C (14 to 140°F)
Storage Temperature: -40 to 70°C (-40 to 158°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements

Input Voltage: 12 to 48 VDC
Rated Voltage: 300 mA @ 48 VDC max.
Connection: Removable 3-contact terminal block
Overload Current Protection: 1.1 A
Reverse Polarity Protection: Present

Standards and Certifications

Safety: UL 508
EMC: EN 55022/24
EMI: CISPR 22, FCC Part 15B Class A
EMS:
 EN 61000-4-2 (ESD): Contact: 6 kV; Air: 8 kV
 EN 61000-4-3 (RS): 80 MHz to 1 GHz: 1 V/m
 EN 61000-4-4 (EFT): Power: 1 kV; Signal: 1 kV
 EN 61000-4-5 (Surge): Power: 1 kV; Signal: 1 kV
 EN 61000-4-6 (CS): 150 kHz to 80 MHz: 3 V/m
 EN 61000-4-8 (PFMF)
 EN 61000-4-11
Green Product: RoHS, CRoHS, WEEE
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6

MTBF (mean time between failures)

Time: 353,000 hrs

Standard: MIL-HDBK-217F

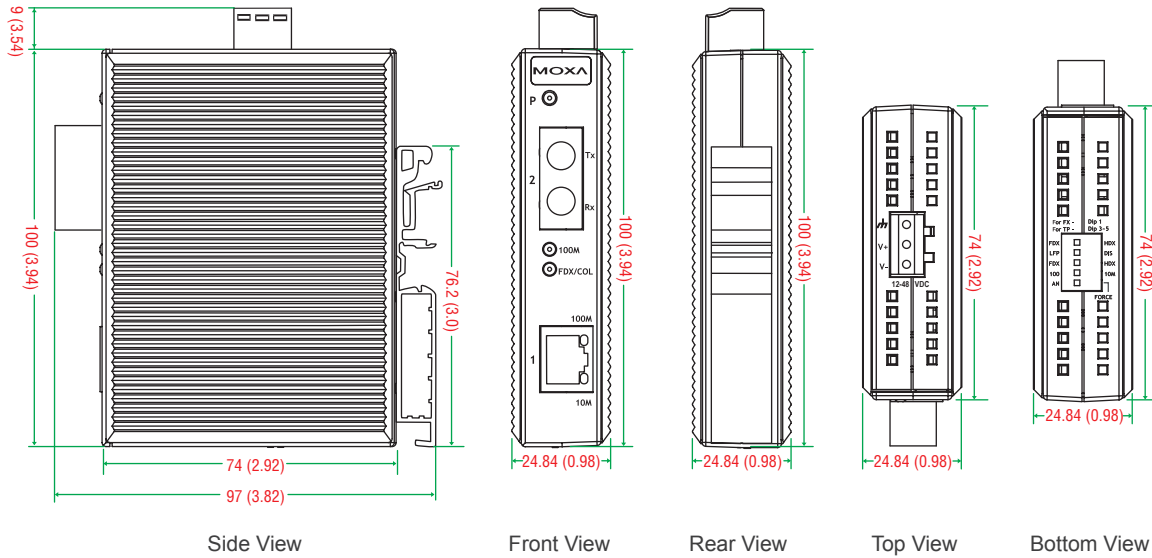
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Ordering Information

Available Models

IMC-21-M-SC: Industrial 10/100BaseT(X) to 100BaseFX media converter, multi-mode, SC connector

IMC-21-M-ST: Industrial 10/100BaseT(X) to 100BaseFX media converter, multi-mode, ST connector

IMC-21-S-SC: Industrial 10/100BaseT(X) to 100BaseFX media converter, single-mode, SC connector

Package Checklist

- 1 IMC-21 media converter
- Quick installation guide (printed)
- Warranty card

Fiber Accessories

: Fiber Optic Adapters

SC male to ST female duplex adapters



These SC male to ST female duplex adapters are provided as an optional accessory to give users of Moxa industrial Ethernet switches more fiber optic connection options. Simply plug the adapters directly into the SC connector of any Moxa industrial Ethernet switch to convert the original SC connector into an ST connector. This allows you to use an ST connector with any MOXA industrial Ethernet switch, but without the need for an extra patchcord.

ADP-SCm-STf-S

SC male to ST female duplex adapter for single-mode fiber

Single-mode: 9/125 μm

Ferrules and Sleeves: Zirconia Ceramic

Body Color: Blue

Insertion Loss: 0.5/1.1 (TYP/MAX)

SC-side Connector: SC male

ST-side Connector: ST female

ADP-SCm-STf-M

SC male to ST female duplex adapter for multi-mode fiber

Multi-mode: 62.5/125 μm

Ferrules and Sleeves: Zirconia Ceramic

Body Color: Gray

Insertion Loss: 0.1/0.3 (TYP/MAX)

SC-side Connector: SC male

ST-side Connector: ST female