

IMC-21A Series

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



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



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

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, Force/Auto modes; fiber port's Half/Full modes, 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 | | 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).

Physical Characteristics

Housing: Metal, IP30 protection

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: -40 to 75°C (-40 to 167°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements

Input Voltage: 12 to 48 VDC

Input Current: 265 mA @ 12 VDC max.

Connection: Removable 3-contact terminal block

Overload Current Protection: 1.1 A

Reverse Polarity Protection: Present

Standards and Certifications

Safety: UL 60950-1

EMC: EN 55032/24

EMI: CISPR 32, 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)

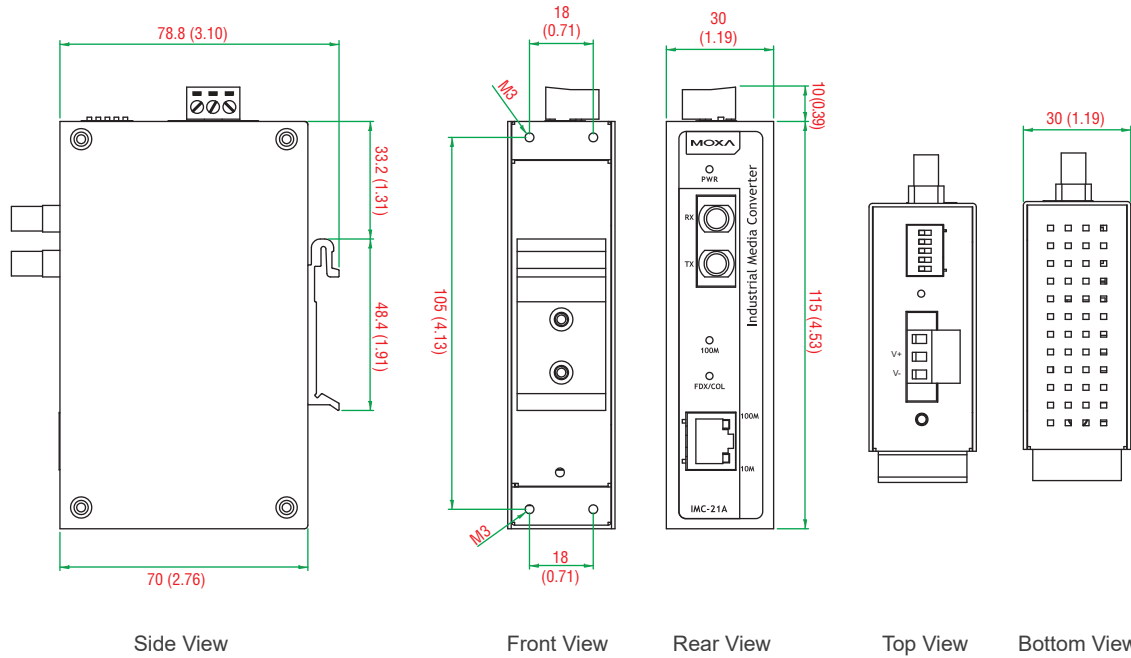
Time: 634,838 hrs
Standard: MIL-HDBK-217F

Warranty

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

Dimensions

Unit: mm (inch)



Ordering Information

Available Models

IMC-21A-M-SC: Industrial 10/100BaseT(X) to 100BaseFX media converter, multi-mode, SC connector, -10 to 60°C operating temperature

IMC-21A-M-ST: Industrial 10/100BaseT(X) to 100BaseFX media converter, multi-mode, ST connector, -10 to 60°C operating temperature

IMC-21A-S-SC: Industrial 10/100BaseT(X) to 100BaseFX media converter, single-mode, SC connector, -10 to 60°C operating temperature

IMC-21A-M-SC-T: Industrial 10/100BaseT(X) to 100BaseFX media converter, multi-mode, SC connector, -40 to 75°C operating temperature

IMC-21A-M-ST-T: Industrial 10/100BaseT(X) to 100BaseFX media converter, multi-mode, ST connector, -40 to 75°C operating temperature

IMC-21A-S-SC-T: Industrial 10/100BaseT(X) to 100BaseFX media converter, single-mode, SC connector, -40 to 75°C operating temperature

Optional Accessories (can be purchased separately)

SC to ST Connectors: See Appendix A

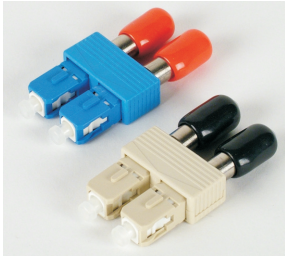
Package Checklist

- 1 IMC-21A 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