

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
Wavelength	1300 nm	1310 nm
Max. TX	-14 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km ^a 4 km ^b	40 km ^c
Saturation	-6 dBm	-3 dBm

a. 50/125 μm, 800 MHz*km fiber optic cable
 b. 62.5/125 μm, 500 MHz*km fiber optic cable
 c. 9/125 μm, 3.5 PS/(nm*km) fiber optic cable

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

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,
 135 mA @ 24 VDC,
 75 mA @ 48 VDC

Connection: Removable 3-contact terminal block

Overload Current Protection: 1.1 A

Reverse Polarity Protection: Present

Standards and Certifications

Safety: UL 60950-1

EMC: CE, FCC

EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A

EMS:

EN 61000-4-2 (ESD) Level 3,
 EN 61000-4-3 (RS) Level 2,
 EN 61000-4-4 (EFT) Level 2,
 EN 61000-4-5 (Surge) Level 2,
 EN 61000-4-6 (CS) Level 2

Shock: IEC 60068-2-27

Freefall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Green Product: RoHS, CRoHS, WEEE

MTBF (mean time between failures)

Time: 353,000 hrs

Database: MIL-HDBK-217F, GB 25°C

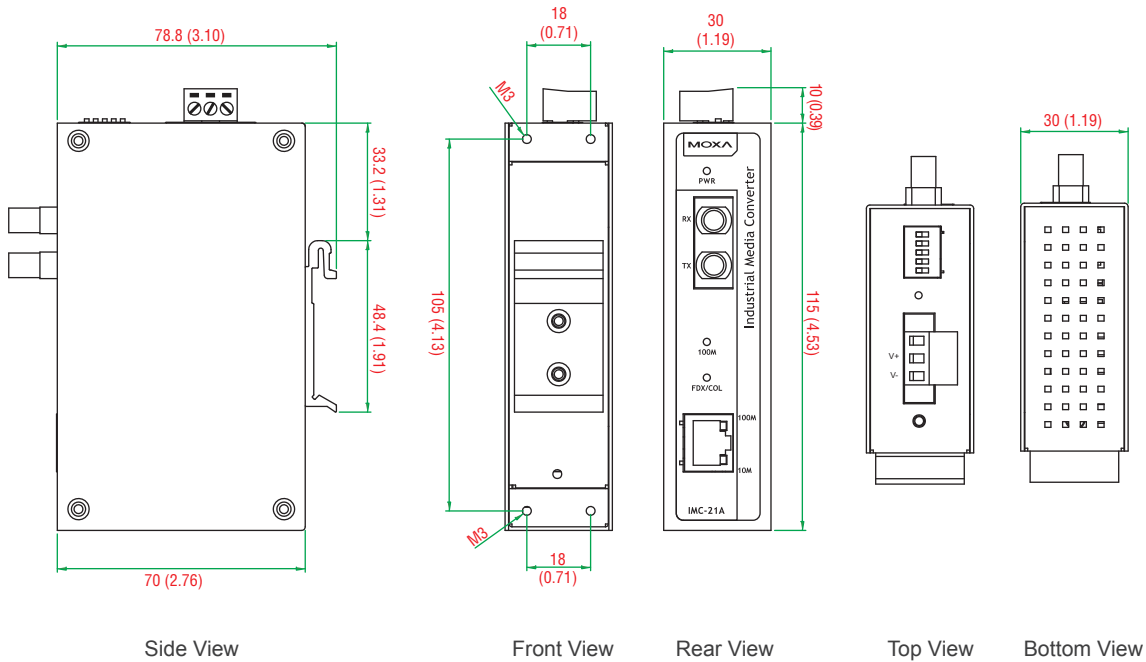
Warranty

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 Adaptors

SC male to ST female duplex adaptors



These SC male to ST female duplex adaptors are provided as an optional accessory to give users of Moxa industrial Ethernet switches more fiber optic connection options. Simply plug the adaptors 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 adaptor for single-mode fiber

Specifications

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 adaptor for multi-mode fiber

Specifications

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

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 FD/HD/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), FD/HD/ 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
Wavelength	1300 nm	1310 nm
Max. TX	-14 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km ^a 4 km ^b	40 km ^c
Saturation	-6 dBm	-3 dBm

a. 50/125 μm, 800 MHz*km fiber optic cable
 b. 62.5/125 μm, 500 MHz*km fiber optic cable
 c. 9/125 μm, 3.5 PS/(nm*km) fiber optic cable

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

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
Input Current: 150 mA @ 24 VDC
Connection: Removable 3-contact terminal block
Overload Current Protection: 1.1 A
Reverse Polarity Protection: Present

Standards and Certifications

Safety: UL 508
EMC: CE, FCC
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:

EN 61000-4-2 (ESD) Level 3,
 EN 61000-4-3 (RS) Level 2,
 EN 61000-4-4 (EFT) Level 2,
 EN 61000-4-5 (Surge) Level 2,
 EN 61000-4-6 (CS) Level 2,
 EN 61000-4-8 (PFMF) Level 1

Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6
Green Product: RoHS, CRoHS, WEEE

MTBF (mean time between failures)

Time: 353,000 hrs
Database: MIL-HDBK-217F, GB 25°C

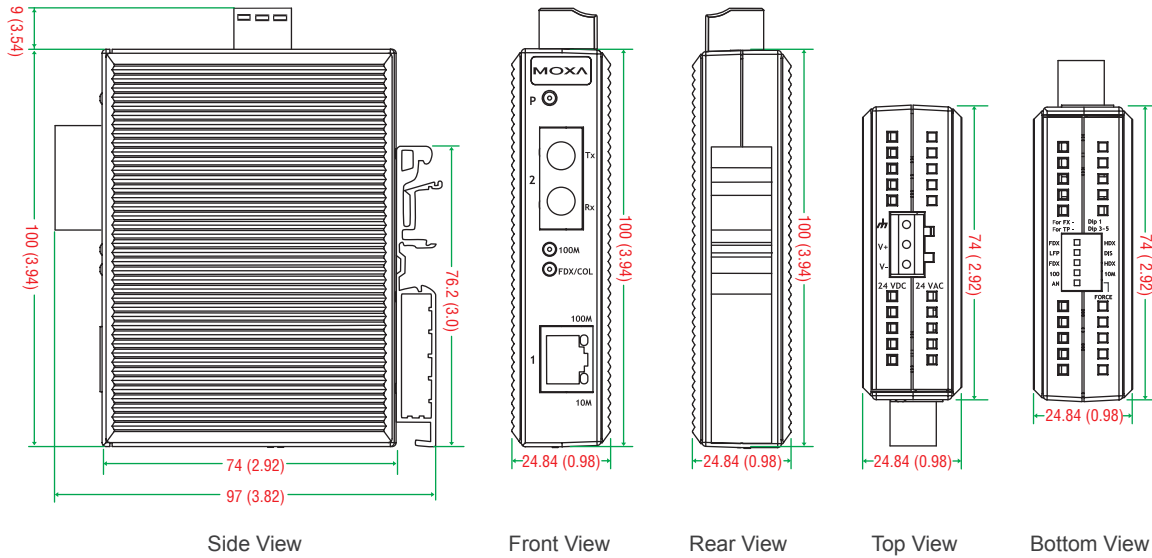
Warranty

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

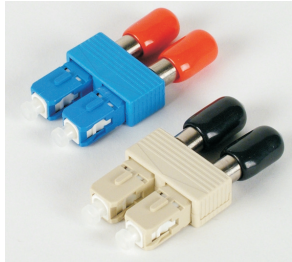
Package Checklist

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

Fiber Accessories

: Fiber Optic Adaptors

SC male to ST female duplex adaptors



These SC male to ST female duplex adaptors are provided as an optional accessory to give users of Moxa industrial Ethernet switches more fiber optic connection options. Simply plug the adaptors 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 adaptor for single-mode fiber

Specifications

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 adaptor for multi-mode fiber

Specifications

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