

IMC-101 Series Industrial Media Converter

Industrial 10/100BaseT(X) to 100BaseFX Media Converter

Features

- Supports Link Fault Pass-Through
- Supports 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- Multi mode, single mode with SC or ST connector available
- Power failure, port break alarm by relay output
- Operating temperature (0 to 60°C), extended operating temperature (-40 to 75°C)
- For hazardous location (Class 1 Div. 2/Zone 2)
- Long-haul transmit distance of 40 km or 80 km



Overview

MOXA Industrial Media Converter, which is specially designed for reliable and stable operation in harsh industrial environments, provides industrial grade media conversion between 10/100BaseT(X) and 100BaseFX. Its reliable industrial design is excellent for keeping your industrial automation applications running continuously, and comes with a relay output warning alarm to help prevent damage and loss.

These products have been designed for harsh industrial environments, such as in hazardous locations (class I division 2 or zone 2), and comply with FCC, TÜV, UL, and CE standards. IMC-101 series is available in models that support an operating temperature of 0 to 60°C, and an extended operating temperature of -40 to 75°C. They are designed for standard and extended operating temperature ranges, respectively, and are subjected to a 100% burn-in test. These two models meet the needs of industrial automation control.

Link Fault Pass-Through

IMC-101's "Link Fault Pass-Through" feature overcomes a problem encountered when using traditional media converters. The problem is this. When one side of the link fails, the other side continues transmitting packets, and then waits for a

response that never arrives from the disconnected side. What IMC-101 does is force the link to shut down as soon as it notices that the other link has failed, giving the application software a chance to react to the situation.

Redundant Power Inputs

IMC-101 provides two power inputs that can be connected simultaneously to live DC power sources. If one power input

fails, the other source acts as a backup, and automatically satisfies IMC-101's power needs.

Relay Output Alarm by Port Break, Power Failure

IMC-101 provides relay contact outputs to warn technicians on the shop floor when the power fails or a port link is

disconnected, so they can respond quickly with appropriate emergency operation procedures.

Specifications

Technology

Standards: IEEE802.3, 802.3u

Interface

RJ45 ports: 10/100BaseT(X)

Fiber ports: 100BaseFX (SC, ST connectors available)

LED Indicators: Power, Fault, 10/100, Full/Half Duplex, Collision

Dip Switch: 100BaseFX Full/Half duplex selection, Port break alarm mask

Alarm Contact: One relay output with current carrying capacity of 1A @ 24 VDC

Specifications

Optical Fiber

Distance:

Multi mode:

0 to 5 km, 1310 nm (50/125 μm , 800 MHz*km)

0 to 4 km, 1310 nm (62.5/125 μm , 500 MHz*km)

Single mode:

0 to 15 km, 1310 nm (9/125 μm , 3.5 PS/(nm*km))

0 to 40 km, 1310 nm (9/125 μm , 3.5 PS/(nm*km))

0 to 80 km, 1550 nm (9/125 μm , 19 PS/(nm*km))

Min. TX Output:

Multi mode : -20 dBm

Single mode: 0 to 15 km, -15 dBm; 0 to 40 km, -5 dBm
0 to 80 km, -5 dBm

Max. TX Output:

Multi mode : -14 dBm

Single mode: 0 to 15 km, -6 dBm; 0 to 40 km, 0 dBm
0 to 80 km, 0 dBm

Sensitivity: -36 to -32 dBm (IMC-101-M)

-34 to -32 dBm (IMC-101-S)

Power

Input Voltage: 24 VDC (12 to 48 VDC); Redundant inputs

Input Current (@24V): 0.2A

Connection: Removable Terminal Block

Overload Current Protection: 1.1A

Reverse Polarity Protection: Present

Mechanical

Casing: IP30 protection, metal case

Dimensions: 53.6 x 135 x 105 mm (W x H x D)

Weight: 0.63 kg

Installation: DIN-Rail, Wall Mounting

Environmental

Operating Temperature: 0 to 60°C (32 to 140°F)

-40 to 75°C (-40 to 167°F) for -T models

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 90% (non-condensing)

Regulatory Approvals

Safety: UL60950 (E212360), UL 508, CSA C22.2 No. 60950, EN60950

Hazardous location:

UL/cUL Class1, Division 2, Groups A, B, C and D (E238559)

ATEX Class1, Zone 2, EEx nC IIC (03CA24537)

EMI: FCC Part 15, CISPR (EN55022) Class A,

EMS: EN61000-4-2 (ESD), level 3

EN61000-4-3 (RS), level 3

EN61000-4-4 (EFT), level 3

EN61000-4-5 (Surge), level 3

EN61000-4-6 (CS), level 3

Shock: IEC60068-2-27

Free Fall: IEC60068-2-32

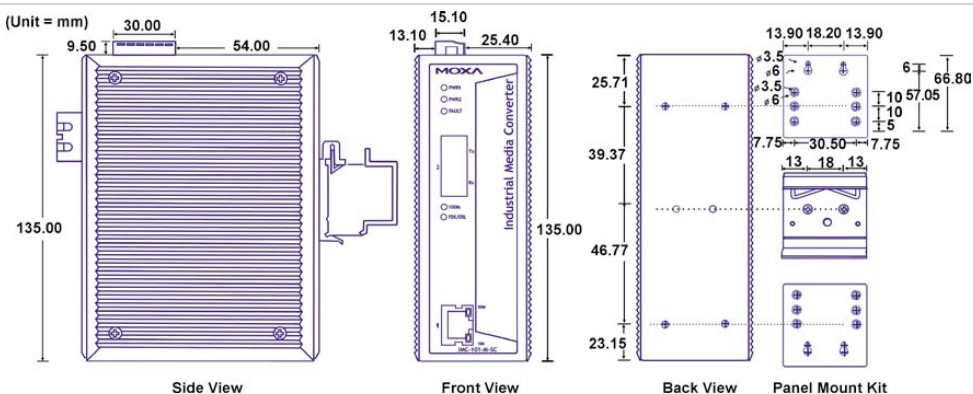
Vibration: IEC60068-2-6

MTBF: 810,000 hrs

Data Base: MIL-HDBK-217F, GB

WARRANTY: 5 years

Dimensions



Ordering Information

IMC-101-M-SC: Industrial 10/100BaseT(X) to 100BaseFX Media Converter, multi mode, SC connector, 0 to 60°C

IMC-101-M-ST: Industrial 10/100BaseT(X) to 100 BaseFX Media Converter, multi mode, ST connector, 0 to 60°C

IMC-101-S-SC: Industrial 10/100 BaseT(X) to 100 BaseFX Media Converter, single mode, SC connector, 0 to 60°C

Extended Operating Temperature Models (-40 to 75°C)

IMC-101-M-SC-T: Industrial 10/100BaseT(X) to 100BaseFX Media Converter, multi mode, SC connector, -40 to 75°C

IMC-101-M-ST-T: Industrial 10/100BaseT(X) to 100 BaseFX Media Converter, multi mode, ST connector, -40 to 75°C

IMC-101-S-SC-T: Industrial 10/100 BaseT(X) to 100 BaseFX Media Converter, single mode, SC connector, -40 to 75°C

Long haul 40 km and 80 km transmit models with Single mode optical fiber are also available.

Optional Accessories

WK-46: Wall Mounting Kit

* All items include: User's Manual