# IMC-100

## 1x 10/100Base RJ45 to 1x 100Base-FX Fiber (ST/SC)

◢ **Supports LFPT (Link Fault Pass Through) and FEF (Far End Fault)**
◢ **Provides a DIP-Switch to set functions**
◢ **Supports power failure alarm message by relay**
◢ **12/24/48VDC (9.6~60VDC) redundant dual input power**
◢ **UL60950-1, EN50121-4, EN61000-6-2,EN61000-6-4, CE and FCC certified**

UL60950-1    CE    FC    EN50121-4    EN61000-6-2 EN61000-6-4

The industrial grade unmanaged 100M Ethernet media converter that supports conversion between electrical 10/100Base-TX and optical 100Base-FX Ethernet. Housed in rugged DIN rail or wall mountable enclosures, the converter is designed for harsh environments, such as industrial networking and intelligent transportation systems (ITS) and is also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications. Wide operating temperature range models (-40 to 75°C) fulfill the special needs of industrial automation applications.

## Features

- IP30 rugged metal housing and fanless
- Wide operating temperature -40 ~ 75° C
- Store-and-Forward mode and Pass Through mode (set by DIP SW)
- Conversion between 10/100Base-TX and 100Base-FX cable interface
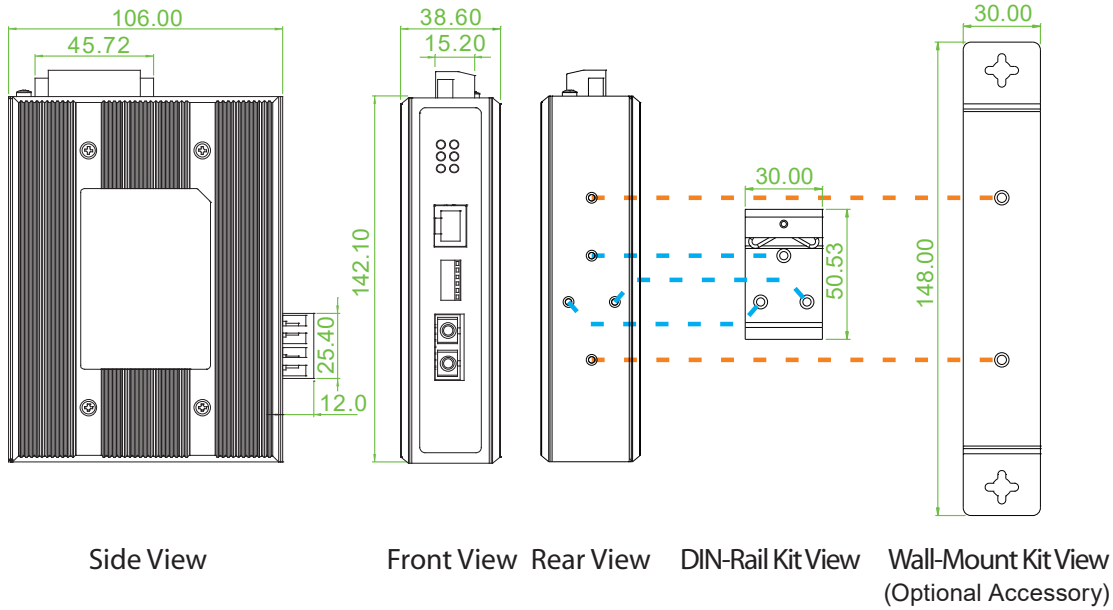
## Specifications

| | | |
|---|---|---|
| Standard | IEEE 802.3 | 10Base-T 10Mbit/s Ethernet |
| | IEEE 802.3u | 100Base-TX, 100Base-FX, Fast Ethernet |
| | IEEE 802.3x | Flow Control |
| RJ45 Ports | 10/100Base-TX Auto MDI/MDI-X and Auto-Negotiation Function Supports UTP CAT.5e Twisted Pair Cable | |
| Fiber Ports | 100Base-FX (SC/ST connectors) | |
| Switch Architecture | Store and Forward in Switch mode | |
| | Supports 1024 MAC addresses in Switch mode | |
| Ethernet Packet length | 2046Byte (Max) in Switch mode | |
| Jumbo Frame | 9K bytes in Pass through (Converter mode) | |
| Fiber Parameters | Fiber Cable (Multi-mode): 50/125um,62.5/125um | |
| | Fiber Cable (Single-mode): 9/125um | |
| | Wavelength: 1310nm (Multi-mode/Single-mode) | |
| | Available distance: 2KM (Multi-mode)  /  30KM (Single-mode)  /  50KM (Single-mode) | |
| Link Fault Pass Through (LFPT) | TX- Fiber: If TX port link down, the media converter will force Fiber port to link down | |
| | Fiber-TX: If Fiber port link down, the media converter will force TX port to link down | |
| Far-End Fault (FEF) | Work with LFPT to prevents data loss | |
| DIP Switch | **TP Auto Negotiation**  OFF: Auto Mode  /  ON: Force Mode | |
| | **Force TP Speed**  OFF: 100 Mbps  /  ON: 10 Mbps | |
| | **Force TP Duplex**  OFF: Full Duplex  /  ON: Half Duplex | |
| | **LFPT**  ON: Enables LFPT (Link Fault Pass Through)  /  OFF: Disables LFPT (Link Fault Pass through) | |
| | **Flow control**  ON: Flow control enable  /  OFF: Flow control disable | |
| | **Mode**  OFF: Switching mode  /  ON: Pass through converter mode | |

| Connector | Fiber<br>SC (Multi-mode, 2km), SC (Single-mode, 30km, 50KM)<br>ST (Multi-mode, 2km), ST (Single-mode, 30km, 50KM) |
|---|---|
| | RJ-45 Socket: CAT.5e (10/100Mbps) Twisted Pair cable |
| | Auto MDI/MDI-X and Auto-Negotiation Function |
| LED | PWR 1 (Green): ON: Power1 active  /  OFF: Power1 is inactive |
| | PWR 2 (Green): ON: Power2 active  /  OFF: Power2 is inactive |
| | Fault (Red):<br>ON: Fiber or TP has failed  /  OFF: TP are functional |
| | Fiber (Green):<br>ON : Connected to network  /  OFF: Not connected to network, BLK: Receive/Transmit data |
| | 100 (Amber):<br>ON: 100Mbps  /  OFF: 10Mbps |
| | LAN (Green):<br>ON : Connected to network  /  OFF: Not connected to network, BLK: Networking is active |
| Reverse Polarity Protection | Supported for power input |
| Overload Current Protection | Supported |
| Power Supply | 12/24/48VDC(9.6~60VDC), Redundant power with polarity reverse protect function and removable terminal block |
| Alarm Relay Contact | Relay outputs with current carrying capacity of 1 A @24VDC |
| Removable Terminal Block | Provides 2 redundant power, alarm relay contact |
| Power Consumption | 2.9 W |
| Operating Humidity | 5% ~ 95% (Non-condensing) |
| Operating Temperature | -40 ~ 75°C |
| Storage Temperature | -40 ~ 85°C |
| Housing | Rugged Metal, IP30 Protection and fanless |
| Dimensions | 106 x 38.6 x 142.1mm (D X W X H) |
| Weight | 0.62kg |
| Installation | DIN Rail mounting, or wall mounting (Optional) |
| MTBF | 1,199,572 Hours (MIL-HDBK-217) |
| Warranty | 5 years |

## Certifications

| EMI | CE |
|---|---|
| EMI (Electromagnetic Interference) | FCC Part 15 Subpart B Class A, CE |
| Railway Traffic | EN50121-4 |
| Immunity for Heavy Industrial Environment | EN 61000-6-2 |
| Emission for Heavy Industrial Environment | EN 61000-6-4 |
| EMS (Electromagnetic Susceptibility) Protection Level | EN61000-4-2 (ESD) Level 3, Criteria B |
| | EN61000-4-3 (RS) Level 3, Criteria A |
| | EN61000-4-4 (Burst) Level 3, Criteria A |
| | EN61000-4-5 (Surge) Level 3, Criteria B |
| | EN61000-4-6 (CS) Level 3, Criteria A |
| | EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A |
| Safety | UL60950-1 |
| Shock | IEC 60068-2-27 |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |

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*Product specifications and design subject to change without notice. Visit our website for the most up-to-date product information.*

12-34

## Dimensions

Side View    Front View   Rear View    DIN-Rail Kit View    Wall-Mount Kit View
(Optional Accessory)

## Ordering Information

| Model Name | RJ45 | Fiber | Power Input | Certification | | | | Operating Temperature |
| | 10/100Base-TX | 100Base-FX | Redundant | UL60950-1 | EN50121-4 | EN61000-6-2 EN61000-6-4 | CE, FCC | |
|---|---|---|---|---|---|---|---|---|
| IMC-100-E | 1 | 1 SC | 12/24/48VDC | V | V | V | V | -40~75℃ |

| Connector Type | Connectivity Distance |
|---|---|
| SC, ST | 002:2km (M/M)    030:30km (S/M)    050:50km (S/M) |
| | 020A: WDM 20km A type (TX:1310nm) |
| | 020B: WDM 20km B type (TX: 1550nm) |

## Optional Accessories

### ■ Wall Mount Kit

| IND-WMK01 | Wall Mount kit for Industrial product, 184 x 30mm |
|---|---|

### ■ Industrial Power Supply

| MDR-20-24 | Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 24VDC, 24W, -20 ~ +70℃ |
|---|---|
| MDR-40-48 | Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ +70℃ |

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12-35

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