



# IMC-100-PD

## 10/100Base-TX to 100Base-FX Fiber Converter with PoE PD

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Industrial FE  
Converter with PoE

IMC-100-PD are industrial media converters designed for conversion between electrical 10/100Base-TX and optical 100Base-FX transmission medium, which also provide PoE (Power over Ethernet) PD (Power Device) function. Simple DIP switch settings allow configuring the UTP port for auto-negotiation or for forced 10/100 speed and half/full duplex as well as for enabling LFPT (Link Fault pass through), Ethernet Flow Control (802.3x) and selecting Switch Mode (store & forward) or Converter Mode (Pass-through). Industrial designed converters feature rugged design with metal housings for DIN Rail mounting, highly reliable electrical design to support very long MTBF (mean time between failure), enhanced safety and surge protection, better EMS (Electro Magnetic Susceptibility), as well as expanded operating temperature ranges.

### Features

- Redundant dual DC input power 12/24/48VDC (9.6~58VDC) with additional power input capability via PoE
- Complies with 802.3af PoE/PD standard
- IP30 rugged metal housing
- Wide operating temperature -40 ~75°C (IMC-100-PDE)
- UL60950-1, CE, FCC, Rail traffic EN50121-4 certification
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Store-and-Forward mode and Pass-through mode (set by DIP SW)
- Conversion between 10/100Base-TX and 100Base-FX cable interface
- Provides a 6 Pole DIP-Switch to set functions

### Specifications

<b>Standard</b>	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3x Flow Control and Back pressure IEEE 802.3af PoE (Power Device PD)
<b>RJ45 Ports</b>	10/100Base-TX
<b>Fiber Ports</b>	100Base-FX (SC/ST connectors)
<b>Switch Architecture</b>	Store and Forward in Switch mode Supports 1024 MAC addresses in Switch mode
<b>Ethernet Packet length</b>	2046Byte (Max) in Switch mode
<b>Jumbo Frame</b>	9K bytes in Pass through (Converter mode)
<b>Fiber Parameters</b>	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)
<b>Link Fault Pass Through (LFPT)</b>	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
<b>DIP Switch</b>	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 DIP Switch: ON: Enables LFPT(Link Fault Pass through) OFF: Disables LFPT(Link Fault Pass through) DIP Switch: ON: Flow Control Enable OFF: Flow Control Disable DIP Switch: OFF: Switching mode ON: Pass through Converter mode
<b>Connector</b>	Fiber: SC (Multi-mode, 2km), SC (Single-mode, 30km, 50KM) ST (Multi-mode, 2km), ST (Single-mode, 30km, 50KM) RJ-45 Socket: CAT-3/5 (10/100Mbps) Twisted Pair cable Auto MDI/MDI-X and Auto-Negotiation Function Support
<b>LED</b>	PWR 1 (Green): ON: Power1 active/ OFF: Power1 is inactive PWR 2 (Green): ON: Power2 active/ OFF: Power2 is inactive Fault (Red): ON : Fiber or TP has failed OFF: Fiber and TP are functional  Fiber(Green): ON: Connected to network OFF: Not connected to network/ BLK: Receive/Transmit Data 100(Amber): ON: 100Mbps/ OFF: 10Mbps  LAN (Green): ON: Connected to network OFF: Not connected to network/ BLK: Networking is active  PoE (Green) : ON: PSE Connect OFF: PSE Disconnect

<b>Reserve Polarity Protection</b>	Present
<b>Overload Current Protection</b>	Present
<b>Power Supply</b>	12/24/48VDC(9.6~58VDC), Redundant power with polarity reverse protect function and removable terminal block Provide DC Power JACK adapter cable for external power adapter Supports IEEE 802.3af Power over Ethernet (PoE) Power Device (PD)
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1 A @24VDC
<b>Removable Terminal Block</b>	Provide 2 Redundant power, Alarm relay contact
<b>Power Consumption</b>	2.9 W
<b>Operating Humidity</b>	5% ~ 95% (Non-condensing )
<b>Operating Temperature</b>	-10 ~ 60°C (IMC-100-PD), -40 ~ 75°C (IMC-100-PDE)
<b>Storage Temperature</b>	-40 ~ 85°C
<b>Housing</b>	Rugged Metal, IP30 Protection and fanless
<b>Dimensions</b>	106 x 38.6 x 142mm (D X W X H)
<b>Weight</b>	0.63 kg
<b>Installation Mounting</b>	DIN Rail mounting and Wall Mounting
<b>Certifications</b>	
<b>EMI</b>	FCC Part 15 Subpart B Class A EN 55022 Class A EN 61000-6-4 – Emission for industrial environment
<b>EMS</b>	EN 61000-6-2 – Immunity for Industrial environment EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (EFT) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A EN61000-4-8 (Magnetic Field) Level 3, Criteria A
<b>Safety</b>	UL60950-1
<b>Rail traffic</b>	EN50121-4
<b>Shock</b>	IEC 60068-2-27
<b>Freefall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-6 (Operating, Packing )
<b>MTBF</b>	755,114 Hrs
<b>Warranty</b>	5 years

## Application

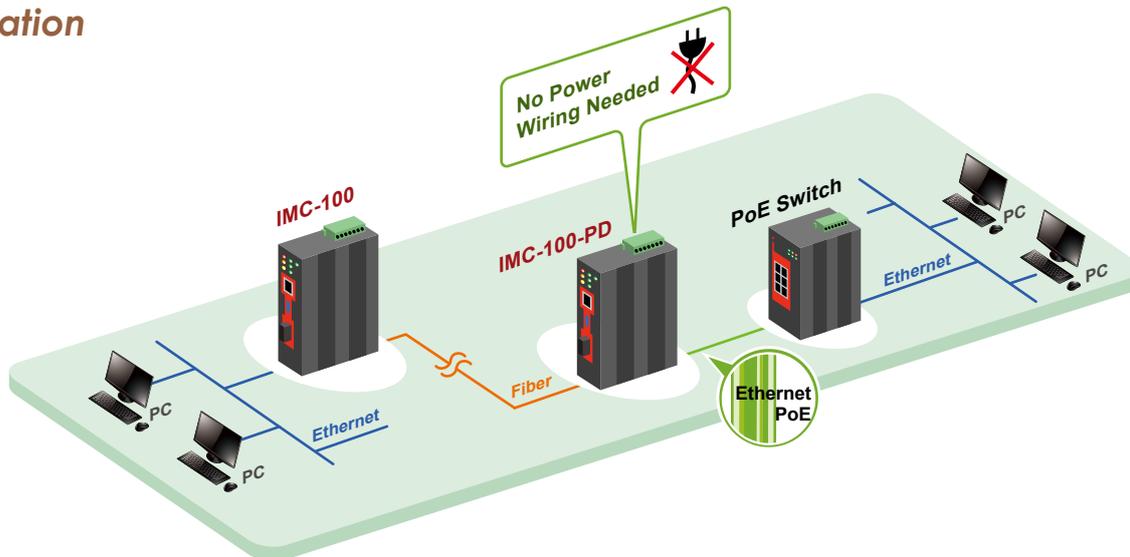
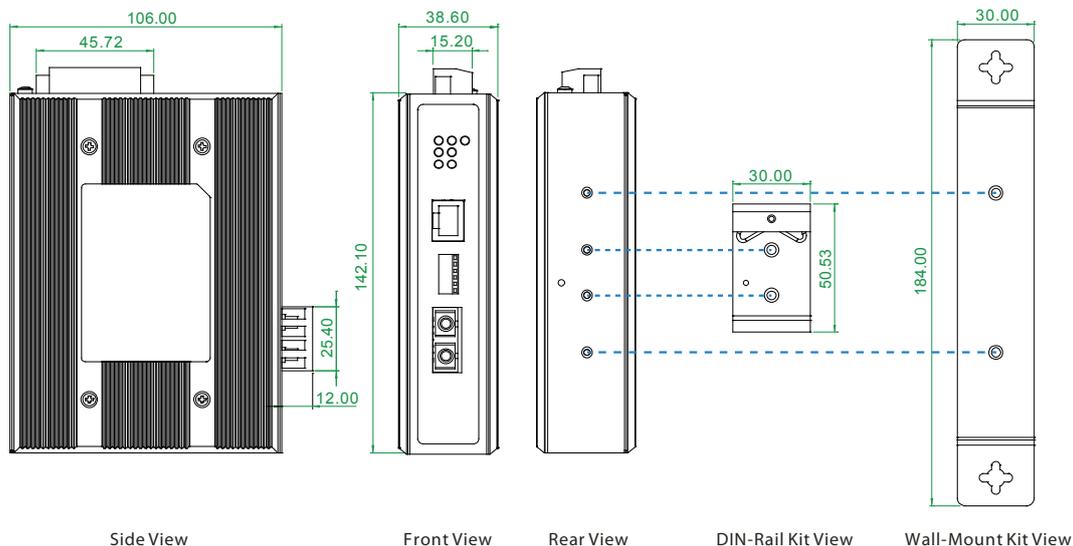


Figure : IMC-100-PD Industrial PoE Transmission

## Dimensions



## Ordering Information

Model Name	Description
IMC-100-PD	10/100-TX to 100-FX Fiber Converter with PoE PD; Temperature Range: -10 ~ 60°C
IMC-100-PDE	10/100-TX to 100-FX Fiber Converter with PoE PD; Temperature Range: -40 ~ 75°C

Fiber 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)

### Accessories

DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C
MDR-60-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 60W, -20 ~ +70°C

Temperature Connector Type Connectivity Distance  
**IMC-100-PD**  -   
 Example: IMC-100-PDE - SC002