

# IMC-100-PH12

## Industrial GbE PoE Media Converter

### 1x FE RJ45 to 1x 100Base-FX Fiber (SC/ST) with PoE PSE (30W, 12/24/48VDC)

- » 12/24/48VDC (9.6~57VDC) Redundant Dual Power Input with Power Booster
- » Regulate PoE Output Voltage (52VDC) to Stabilize PoE Device, and Guarantee Delivery PoE Power Distance to 100Meter
- » Supports Remote PD Reset by Fiber port Link Down
- » Supports LFPT (Link Fault Pass Through) and FEF (Far End Fault)



IMC-100-PH12 is a 10/100Base-TX to Fixed 100Base-FX unmanaged Ethernet media converter that also injects PoE+/PoE power through the electrical RJ-45 port. Housed in rugged DIN rail or wall mountable enclosures, the converter is designed for harsh environments, such as industrial networking, intelligent transportation systems (ITS) and is also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications.

## Features

- Conversion between 10/100Base-TX and 100Base-FX SC or ST Fiber interface
- Provides IEEE 802.3at PoE output (30Watts)
- Provides a DIP-Switch to set functions
- IP30 rugged metal housing and fanless
- Wide operating temperature -20~75°C
- Supports Jumbo frame 9K bytes packet

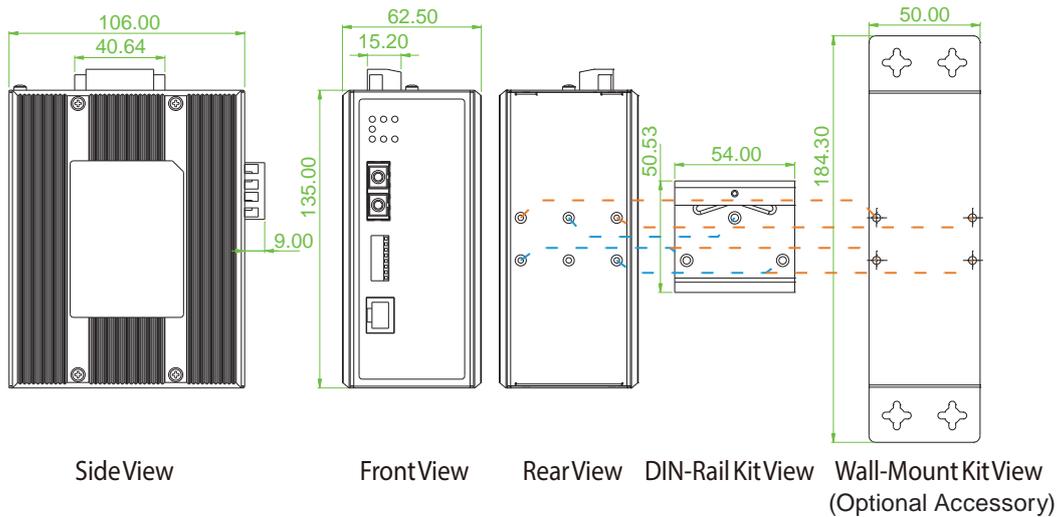
## Specifications

<b>Standard</b>	IEEE 802.3	10Base-T 10Mbit/s Ethernet
	IEEE 802.3u	100Base-TX, 100Base-FX, Fast Ethernet
	IEEE 802.3x	Flow Control and Back pressure
	IEEE 802.3at	PoE+ (Power over Ethernet enhancement)
	IEEE 802.3af	PoE (Power over Ethernet)
	IEEE 802.1q	Tag VLAN
<b>RJ45 Ports</b>	10/100Base-TX Auto MDI/MDI-X and Auto-Negotiation Function Supports UTP CAT.5e Twisted Pair cable	
<b>Fiber Ports</b>	100Base-FX with SC or ST connector	
<b>Data Process Architecture</b>	Store and Forward mode or Pass Through mode (Set by DIP SW)	
<b>Jumbo Frame</b>	9K bytes	
<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>Far-End Fault (FEF)</b>	Work with LFPT to prevents data loss	

<b>DIP Switch</b>	ON: Disable Alarm For Power Loss OFF: Enable Alarm For Power Loss ON: Disable Alarm For Port Link-Failure OFF: Enable Alarm For Port Link-Failure ON: LFPT Enable, OFF: LFPT Disable Data process Architecture : ON : Pass through mode OFF : Store and Forward Switch mode PoE Output OFF: Enable PoE output ON: Disable PoE output Remote PD reset (Figure 2) OFF : Disable Remote PD reset ON: Enable Remote PD reset by fiber port link down																				
<b>Fiber Connector</b>	Fiber: SC / ST (Multi-mode, 2KM), SC / ST (Single-mode, 30KM, 50KM)																				
<b>RJ45 Connector and Pin Assignment</b>	RJ-45 Socket: CAT.5e (10/100Mbps) Twisted Pair cable Auto MDI/MDI-X and Auto-Negotiation Function Support RJ-45 Port support IEEE 802.3at/af End-Span, Alternative A mode. PoE (V+): RJ-45 pin 1, 2. PoE (V-): RJ-45 pin 3, 6. Data (1,2,3,6)																				
<b>LED</b>	Per Unit : Power 1 (Green ), Power 2 (Green), Fault (Amber ) Fiber LNK/ACT (Green): ON: Connected to network OFF: Not connected to network BLK: Receive /Transmit Data Fiber Speed :Green : 100 Base- X RJ-45 Port: Speed: 10 (OFF), 100 (Green) LNK/ACT for RJ45(Green): ON: Connected to network OFF: Not connected to network BLK: Networking is active PoE States (Green) Flash: PoE Fault (Over-load or short ) ON: PoE normal working, OFF: PoE No Power output																				
<b>Reverse Polarity Protection</b>	Supported for Power Input																				
<b>Overload Current Protection</b>	Supported																				
<b>Power Supply</b>	12/24/48VDC (9.6~57VDC), Redundant power with polarity reverse protect function and removable terminal block Built-in very high efficiency booster(97~99%) to rise up 52VDC for PoE output Regulated PoE output voltage (52VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter (Figure 1)																				
<b>PoE Power Budget</b>	30W																				
<b>Power Consumption</b>	Power consumption & Boost efficiency																				
	<table border="1"> <thead> <tr> <th>Input Voltage</th> <th>Total Power Consumption</th> <th>Device Power Consumption</th> <th>PoE Budget</th> <th>Boost Efficiency</th> </tr> </thead> <tbody> <tr> <td>12VDC</td> <td>34W</td> <td>3.5W</td> <td>30W</td> <td>98.4%</td> </tr> <tr> <td>24VDC</td> <td>34.4W</td> <td>4.1W</td> <td>30W</td> <td>99.0%</td> </tr> <tr> <td>48VDC</td> <td>34.9W</td> <td>4.3W</td> <td>30W</td> <td>98.0%</td> </tr> </tbody> </table>	Input Voltage	Total Power Consumption	Device Power Consumption	PoE Budget	Boost Efficiency	12VDC	34W	3.5W	30W	98.4%	24VDC	34.4W	4.1W	30W	99.0%	48VDC	34.9W	4.3W	30W	98.0%
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<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1A @24VDC																				
<b>Removable Terminal Block</b>	Provides 2 redundant power, alarm relay contact, 6 Pin																				
<b>Operating Humidity</b>	5% ~ 95% (Non-condensing )																				
<b>Operating Temperature</b>	-20 ~ 75°C																				
<b>Storage Temperature</b>	-40 ~ 85°C																				
<b>Housing</b>	Rugged Metal IP30 Protection and fanless																				
<b>Dimensions</b>	106 x 62.5 x 135mm (D x W x H)																				
<b>Weight</b>	655g																				
<b>Installation</b>	DIN Rail mounting or wall mounting (Optional)																				
<b>MTBF</b>	801,948 Hours MIL-HDBK-217																				
<b>Certification</b>																					
<b>EMC</b>	CE																				
<b>EMI</b>	FCC Part 15 Subpart B Class A, CE																				

<b>EMS (Electromagnetic Susceptibility) Protection Level</b>	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 (PFMF) Field strength 300A/m Criteria A
<b>Shock</b>	IEC 60068-2-27
<b>Freefall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-6

## Dimensions



## Ordering Information

Model Name	RJ45	Fiber	PoE		Power Input	Certification	Operating Temperature
	10/100Base-TX	100Base-FX	IEEE802.3at (PSE)	Power Budget	Redundant Power	CE, FCC	
IMC-100-PHE12	1	SC/ST	1	30W	12/24/48VDC	V	-20~75°C
Connector Type	Connectivity Distance						
SC, ST	002: 2km (M/M)    030: 30km (S/M)    050: 50km (S/M) 020A: WDM Bidi 20km A Type (TX:1310nm) 020B: WDM Bidi 20km B Type (TX:1550nm)						

\* MOQ is requested for ST type

## Optional Accessories

### ■ Wall Mount Kit

IND-WMK02      Wall Mount kit for Industrial product, 184 x 50mm

### ■ Industrial Power Supply

MDR-40-48      Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ 70°C