IMC-111FB / IMC-111PB

IMC-111FB IMC-111PB

Industrial mini type Ethernet to fiber media converter with 1x10/100Base-T(X) to 1x100Base-FX fiber / 1x100Base-FX SFP socket

Features

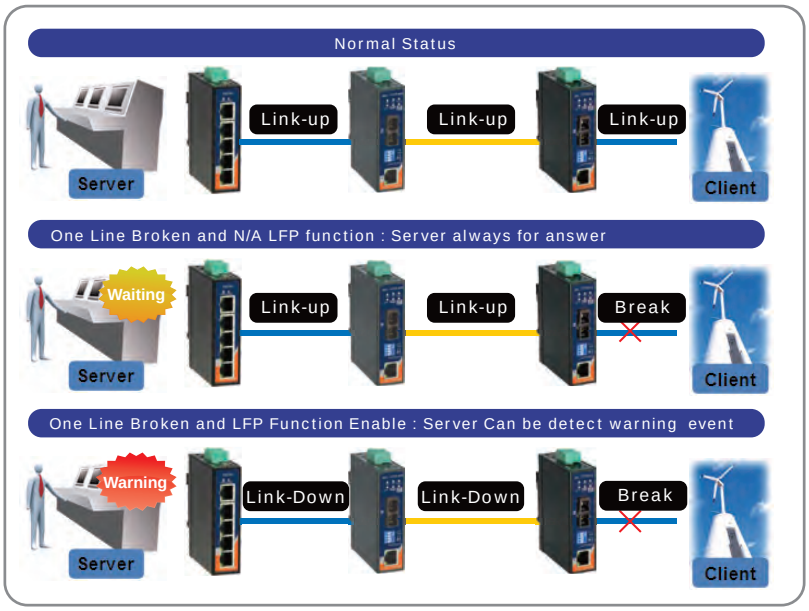
- Support 1 port 10/100Base-T(X) auto-negotiation and auto-MDI/MDI-X
- Support Ethernet to fiber or Ethernet to SFP port
- Support **LFP (Link Fault Pass-through)** function
- Support full/half duplex operation
- Support store and forward transmission
- Provide DIP-Switch to set functions
- High reliability and rigid IP-30 housing
- DIN-Rail and wall mounting enabled

Mini Type Redundant PWR -40~70°C Temperature RoHS Lead Free

Introduction

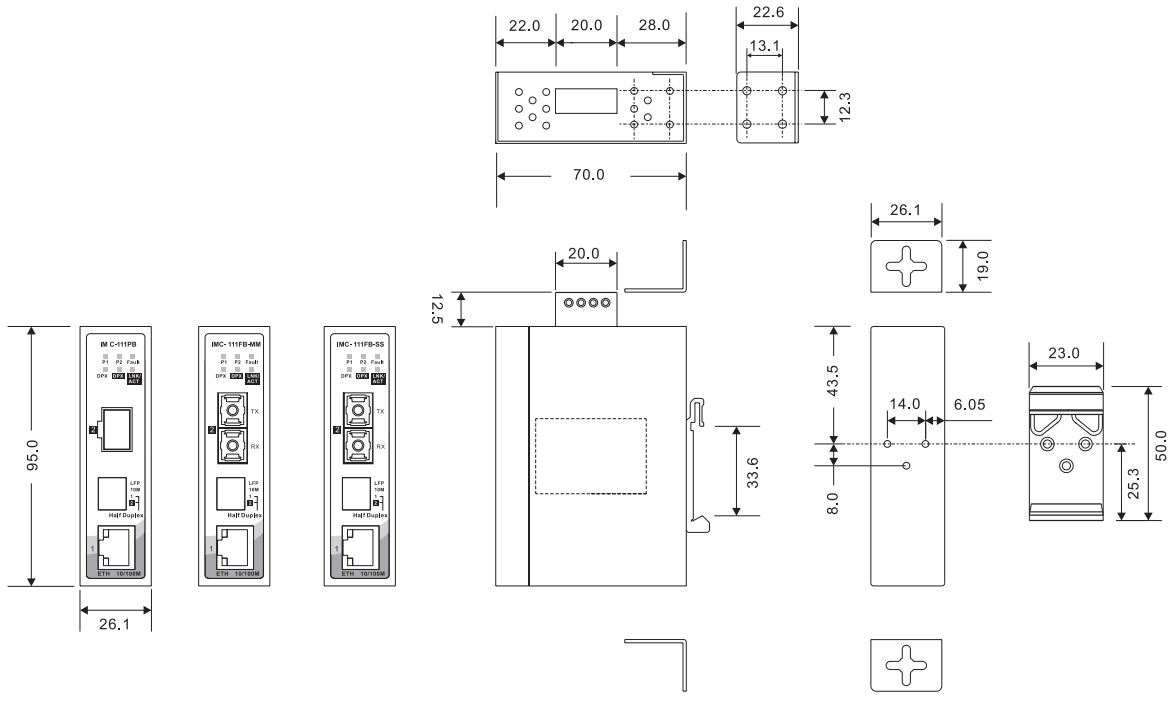
IMC-111 series are the cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, as they allow you to extend communication distance by optical fiber. IMC-111 series support MDI/MDIX auto detection, so you don't need to use crossover wires. IMC-111 series have wide operating temperature range from -40 ~ 70℃ and have dual power inputs, each accepting a wide voltage range from 12 ~ 48 VDC. Hence IMC-111 series are suitable for harsh operating environments.

IMC-111 series also support the **LFP (Link Fault Pass-through)** feature. When one side of the link fails, the other side continues transmitting packets and waits for a response that never arrives from the disconnected side. Use the DIP-Switch to enable the LFP function, and then IMC-111 series will force the link to shutdown as soon as noticed that the other link has failed, giving the application software a chance to react to the situation. Therefore the IMC-111 series are reliable media converters that can satisfy most demand of different operating environments.



Connections of Media Converter and LFP function

Dimensions



(Unit=mm)

Specifications

ORing Media Converter Model		IMC-111FB-MM	IMC-111FB-SS	IMC-111PB
Physical Ports				
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX		1	1	1
Fiber Ports				
Fiber Ports Specifications	Fiber Ports Number	1	1	-
	Fiber Ports Standard	100Base - FX	100Base - FX	-
	Fiber Mode	Multi-mode	Single-mode	-
	Fiber Diameter (μm)	62.5/125 μm 50/125 μm	9/125 μm	-
	Fiber Optical Connector	SC	SC	-
	Typical Distance (km)	2 km	30 km	-
	Wavelength (nm)	1310 nm	1310 nm	-
	Max. Output Optical Power (dBm)	-14 dBm	-8 dBm	-
	Min. Output Optical Power (dBm)	-23.5 dBm	-15 dBm	-
	Max. Input Optical Power (Saturation)	0 dBm	0 dBm	-
	Min. Input Optical Power (Sensitivity)	-31 dBm	-34 dBm	-
	Link Budget (dB)	7.5 dB	19 dB	-
100Base-FX SFP port		-	-	1

Technology			
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3x for Flow control		
Processing	Store-and-Forward		
DIP-Switch setting	DIP-Switch 1 for LFP mode selection : (ON) enable / (OFF) disable DIP-Switch 2 for Ethernet speed selection : (ON)10Mbps / (OFF) 10/100Mbps Auto-negotiate DIP-Switch 3 for Ethernet full/half duplex selection : (ON) Half-duplex / (OFF) Full/Half-Duplex Auto-negotiate DIP-Switch 4 for fiber full/half duplex selection : (ON) Half-Duplex / (OFF) Full-Duplex		
LED Indicators			
Power Indicator	Green : Power LED x 2		
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/Act – (ON) Link up / (Blinking) Acting / (OFF) Link down Amber for 100Mbps/10Mbps indicator – (ON) Link at 100Mbps / (OFF) Link at 10Mbps Green for port duplex indicator – (ON) Full-Duplex / (OFF) Half-Duplex		
100Base-FX Fiber Port Indicator	Green for fiber port Link/Act - (ON) Link up / (Flash) Acting / (OFF) Link down Green for fiber port duplex indicator – (ON) Full-Duplex / (OFF) Half-Duplex		
LFP status indicator	Amber LED – (ON) LFP function fail / (OFF) LFP function disable		
Power			
Input Power	Dual 12~48 VDC power input at 4-pin terminal block		
Power Consumption (Typ.)	2.2 Watts		
Overload Current Protection	Present		
Reverse Polarity Protection	Present on terminal block		

Physical Characteristics			
Enclosure	IP-30		
Dimensions (W x D x H)	26.1 (W) x 70 (D) x 95 (H)mm (1.03 x 2.76 x 3.74 inch)		
Weight (g)	218 g	218 g	213 g
Environmental			
Storage Temperature	-40 to 85°C (-40 to 185°F)		
Operating Temperature	-40 to 70°C (-40 to 158°F)		
Operating Humidity	5% to 95% Non-condensing		
Regulatory Approvals			
EMI	FCC Part 15, CISPR (EN55022) class A		
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11		
Shock	IEC60068-2-27		
Free Fall	IEC60068-2-32		
Vibration	IEC60068-2-6		
Safety	EN60950-1		
Warranty	5 years		

Ordering Information

IMC-1 A B C B - DD - EE

Code Definition	10/100Base-T(X) Port Number	Fiber Port Number	Fiber Port Type	Fiber Optical Mode	Fiber Optical Connector
Option	- **1** : 1 port	- **1**: 1 port	- **F** : 100Base-FX - **P**: 100Base-FX SFP	- **MM** : Multi-mode - **SS** : Single-mode	- **SC**: SC Connector

	Model Name	Description
Available Model	IMC-111FB-MM-SC	Industrial mini type Ethernet to fiber media converter with 1x10/100Base-T(X) and 1x100Base-FX, multi-mode, 2km/1310nm, SC connector
	IMC-111FB-SS-SC	Industrial min type Ethernet to fiber media converter with 1x10/100Base-T(X) and 1x100Base-FX, single-mode, 30km/1310nm, SC connector
	IMC-111PB	Industrial mini type Ethernet to fiber media converter with 1x10/100Base-T(X) and 1x100Base-FX, SFP socket

Packing List

- IMC-111FB / 111PB
- DIN-Rail Kit
- Wall-Mount Kit
- Quick Installation Guide

Optional Accessories

- SFP100 series : 100Mbps SFP optical transceiver
- DR-75 series : 75 Watts power supply
- DR-45 series : 45 Watts power supply
- DR-120 series : 120 Watts power supply
- SDR-240-48, 240W DIN-Rail power supply
- SDR-480-48, 480W DIN-Rail power supply
- FPC series : Fiber Patch cord