

Introduction

The **IMC-B111ETB series** is a cost-effective solution for extending an Ethernet connection beyond its inherent distance limitation. The series includes models using -RJ45 or terminal block interfaces. The -RJ45 model extends the distance to 300 meters using a UTP cable or 200meters using a 24AWG cable, and the terminal block model extends the distance to 200meters using a 24AWG cable. The -RJ45 model supports 2/4/8-wired auto detecting transmission, and the TB model supports 2-wired transmission. The series provides a wide operating temperature range from -40~75°C, making it suitable for harsh operating environments.

Package Contents

The series is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
IMC-B111ETB-TB or IMC-B111ETB-RJ45		X 1
DIN-rail Kit		X 1
Wall-mount Kit		X 2
QIG		X 1
DC plug		X 1

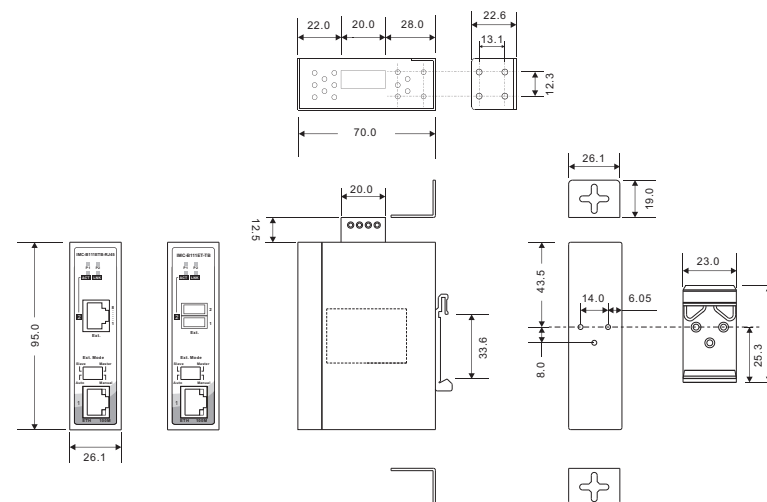
Preparation

Before installation, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

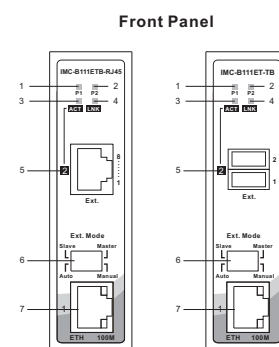
Safety & Warnings

- Elevated Operating Ambient:** If installed in a closed cabinet, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
- Reduced Air Flow:** Installation of the equipment should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical Loading:** Mounting of the equipment in the din-rail should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

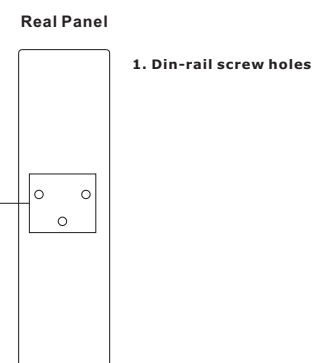
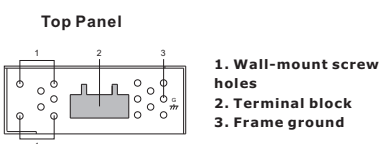
Dimension (Unit: mm)



Panel Layouts



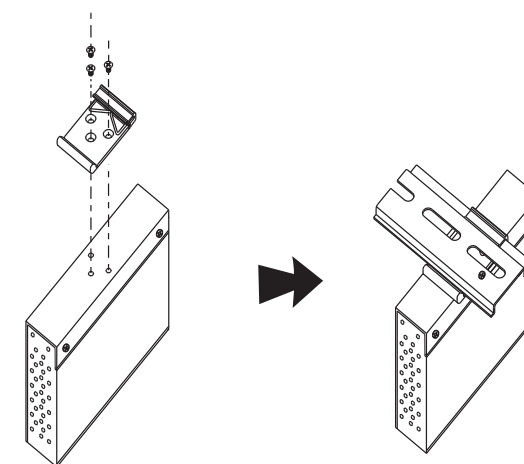
1. PWR1 LED
2. PWR2 LED
3. Indicator for extension port action
4. Indicator for extension port connection status
5. Extension port (terminal block for -TB model and RJ45 port for -RJ45 model)
6. DIP switch for mode selection of extension port
7. LAN Port



Installation

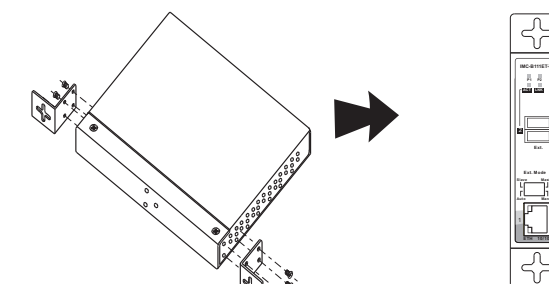
DIN-rail Installation

- Step 1:** Slant the switch and screw the Din-rail kit onto the back of the switch, right in the middle of the back panel.
- Step 2:** Slide the switch onto a DIN-rail from the Din-rail kit and make sure the switch clicks into the rail firmly.



Wall-mounting

- Step 1:** Screw the two pieces of wall-mount kits onto both sides of the switch. A total of eight screws are required, as shown below.
- Step 2:** Use the switch, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
- Step 3:** Insert four screw heads through the large parts of the keyhole-shaped apertures, and then slide the switch downwards. Tighten the four screws for added stability.



● Network Connection

The **IMC-B111ETB-RJ45** has a standard Ethernet port. According to the link type, the device uses CAT 3,4, 5,5e UTP cables to connect to any other network devices (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45

For pin assignments for different types of cables, please refer to the following tables.

100Base-TX RJ-45		100Base-TX MDI/MDI-X		
Pin Number	Assignment	Pin Number	MDI port	MDI-X port
1	TD+	1	TD+(transmit)	RD+(receive)
2	TD-	2	TD-(transmit)	RD-(receive)
3	RD+	3	RD+(receive)	TD+(transmit)
4	Not used	4	Not used	Not used
5	Not used	5	Not used	Not used
6	RD-	6	RD-(receive)	TD-(transmit)
7	Not used	7	Not used	Not used
8	Not used	8	Not used	Not used

100Mbps Extension port Terminal Block		100Mbps Extension port Terminal Block	
Pin Number	Assignment*	Pin Number	Assignment*
1	D1+	1	D1+
2	D1-	2	D1-
		3	D2+
		4	D3+
		5	D3-
		6	D2-
		7	D4+
		8	D4-

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.

DIP Switch Function

1	ON	Master Mode: Devices operates in master mode
	OFF	Slave Mode: Devices operates in slave mode
2*	ON	Manual Mode: Configures the master mode or slave mode manually based on DIP-switch 1 settings
	OFF	Auto Mode: Conducts auto negotiation and configuration for the master or slave mode

* Please notice Manual mode can't connect to Auto mode.

● Wiring

The switch supports dual redundant power supplies which are located on the 4-pin terminal block.

STEP 1: Insert the negative/positive wires into the V-/V+ terminals, respectively.

STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.



▣ Configurations

After installing the device and connecting cables, the green power LED should turn on. Please refer to the following table for LED indication.

● LED indication table

LED	Color	Status	Description
PW1	Green	On	DC power module 1 activated
PW2	Green	On	DC power module 2 activated
10/100Base-TX RJ45 Port			
LNK	Green	On	Port is linked
ACT	Amber	On	Transmitting data
Ethernet Extender Port			
LNK	Green	On	Port is linked
ACT	Amber	On	Transmitting data

▣ Specifications

ORing Extended Converter Model	IMC-B111ETB-TB	IMC-B111ETB-RJ45
Physical Ports		
100Base-TX Ports in RJ45 Auto MDI/MDIX	1	
100Mbps Ethernet Extender Ports	1 (support 2-wired on terminal block)	1 (support 2/4/8-wired auto detecting on RJ45 connector)
Technology		
Ethernet Standards	IEEE 802.3u for 100Base-TX	
Processing	Store-and-Forward	
Power		
Input power	Dual 12~48 VDC power inputs at 4-pin terminal block	
Power consumption(Typ.)	2Watts	
Overload current protection	Present	
Physical Characteristic		
Enclosure	IP-30	
Dimension (W x D x H)	26.1(W) x 70(D) x 95(H)mm (1.03x 2.76 x 3.74inch.)	
Weight (g)	240 g	242 g
Environmental		
Storage Temperature	-40 to 85°C (-40 to 185°F)	
Operating Temperature	-40 to 75°C (-40 to 167°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