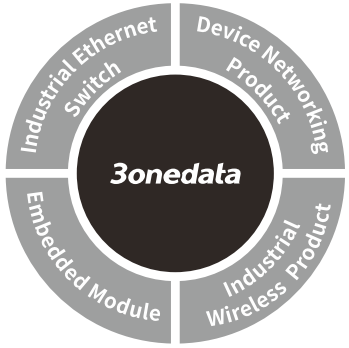
3onedata
Make network communication more reliable

IMC100 Series Industrial Unmanaged Media Converter Quick Installation Guide



3onedata Co., Ltd.

Address: 3/B, Zone 1, Baiwangxin High Technology Industrial Park, Xili, Nanshan District, Shenzhen

Website: www.3onedata.com

Tel: +86 0755-26702688

Fax: +86 0755-26703485

【Package Checklist】

Please check whether the package and accessories are intact while using the media converter for the first time.

1. Media Converter (with wiring terminal block)
2. Quick installation guide
3. DIN-Rail mounting attachment
4 Warranty card
5 Certification

If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

This series products are industrial media converters. For convenience, the products of this series adopt the following number on the left in this guide, please affirm the number of your product.

Model I. IMC100-1T1F-P48 (1 100M copper port + 1 100M fiber port + 1 48VDC power supply)

Model II. IMC100-1T1F-P220 (1 100M copper port + 1 100M fiber port + 1 220VAC power supply)

Model III. IMC100-2T1F-P48 (2 100M copper ports + 1 100M fiber port + 1 48VDC power supply)

Model IV. IMC100-2T1F-P220 (2 100M copper ports + 1 100M fiber port + 1 220VAC power supply)

Model V. IMC100-1GT1GF-P48 (1 Gigabit copper port + 1 Gigabit fiber port + 1 48VDC power supply)

Model VI. IMC100-1GT1GF-P220 (1 Gigabit copper port + 1 Gigabit fiber port + 1 220VAC power supply)

Model VII. IMC100-1GT1GS-P48 (1 Gigabit copper port + 1 Gigabit SFP + 1 48VDC power supply)

Model VIII. IMC100-1GT1GS-P220 (1 Gigabit copper port + 1 Gigabit SFP + 1 220VAC power supply)

Model IX. IMC100-2GT1GF-P48 (2 Gigabit copper ports + 1 Gigabit fiber port + 1 48VDC power supply)

Model X. IMC100-2GT1GF-P220 (2 Gigabit copper ports + 1 Gigabit fiber port + 1 220VAC power supply)

Model XI. IMC100-2GT1GS-P48 (2 Gigabit copper ports + 1 Gigabit SFP + 1 48VDC power supply)

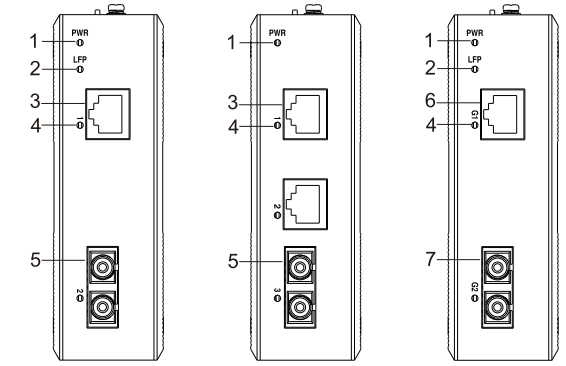
Model XII. IMC100-2GT1GS-P220 (2 Gigabit copper ports + 1 Gigabit SFP + 1 220VAC power supply)

Model XIII. IMC100-1T1F-2P48 (1 100M copper port + 1 100M fiber port + 2 48VDC power supplies)

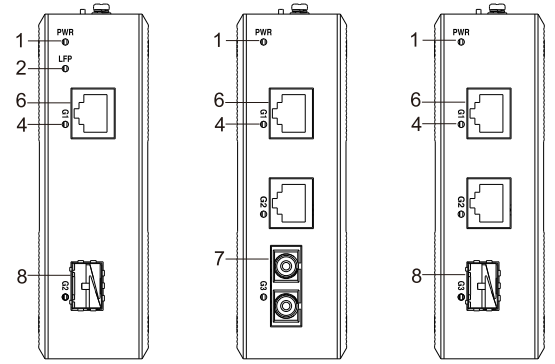
Model XIV. IMC100-2T1F-2P48 (2 100M copper ports + 1 100M fiber port + 2 48VDC power supplies)

【Panel Design】

➢ **Front View**

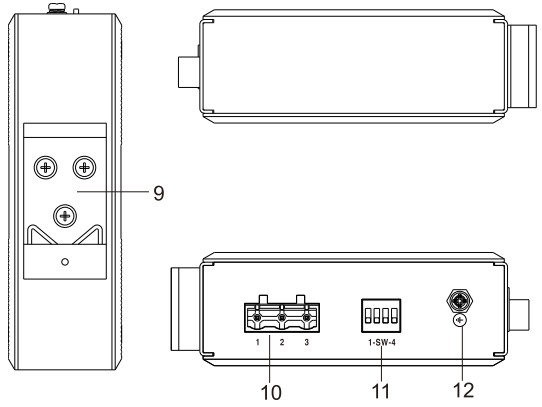


Model I, II, XIII　　Model III, IV, XIV　　Model V, VI

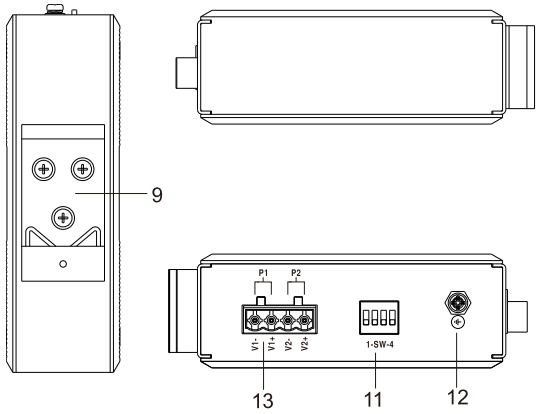


Model VII, VIII　　Model IX, X　　Model XI, XII

➢ **Rear view, Bottom view and Top view**



Model I-Model XII

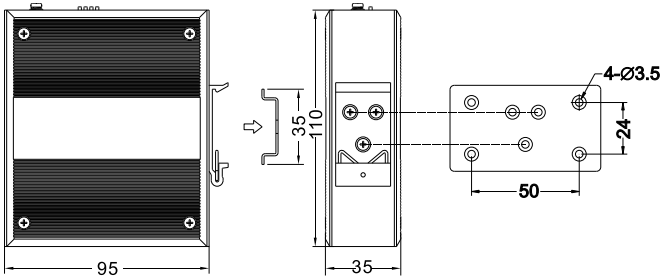


Model VIII-Model XIV

1. Power indicator
2. LFP indicator
3. 100M copper port
4. Interface connection indicator
5. 100M fiber port
6. Gigabit copper port
7. Gigabit fiber port
8. Gigabit SFP
9. DIN-Rail mounting kit
10. Input terminal block of single power supply
11. DIP switch
12. Grounding screw
13. Input terminal block of dual power supply

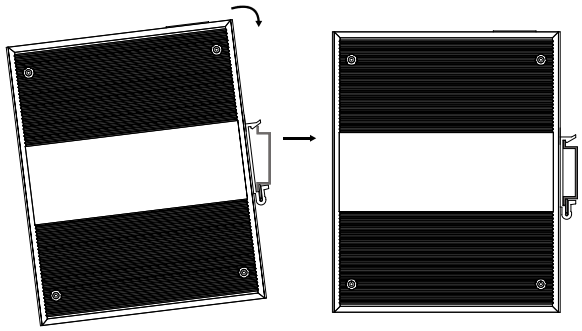
【Mounting Dimension】

Unit: mm



【DIN-Rail Mounting】

The product adopts 35mm standard DIN-Rail mounting which is suitable for most industrial scenes, mounting steps as follows:



Step 1 Check if the DIN-Rail mounting kit is installed firmly.

Step 2 Insert the bottom of DIN-Rail mounting kit (one side with spring support) into DIN-Rail, and then insert the top into DIN-Rail.

Tips:

Insert a little to the bottom, lift upward and then insert to the top.

Step 3 Check and confirm the product is firmly installed on DIN-Rail, then mounting ends.

【Disassembling DIN-Rail】

Step 1 Power off device.

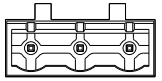
Step 2 After lifting the device upward slightly, first shift out the top of DIN-Rail mounting kit, and then shift out the bottom of DIN-Rail, disassembling ends.

Notes:

- Don't place or install the device in area near water or moist, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before power on, first confirm the supported power supply specification to avoid over-voltage damaging the device.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【Power Supply Connection】

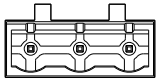
➢ **DC power supply**



Model I, III, V, VII, IX, XI devices of this series support DC power input, and provide 3-pin terminals with a spacing of 7.62 mm. The power supply has non-polarity function. Voltage range: 12~48VDC. The pin definitions of power supply are shown as follows:

PIN	1	2	3
Definition	V+	FG	V-

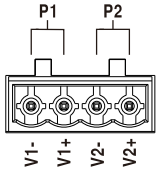
➢ **AC power supply**



Model II, IV, VI, VIII, X, XII devices of this series support AC power input, and provide 3-pin terminals with a spacing of 7.62 mm. Power supply range: 220VAC (100~240VAC/DC). The pin definitions of power supply are shown as follows:

PIN	1	2	3
Definition	L	FG	N

➢ **Dual power supply**

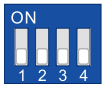


Model XIII, XIV devices of this series support dual DC power input, and provide 4-pin terminals with a spacing of 5.08 mm. The power supply supports power redundancy and has anti-reverse connection function. Power supply range: 12~48VDC. The pins of power supply terminal are shown in the left figure.

Notice:

- Power ON operation: First insert the power supply terminal block into the device power supply interface, and then plug the power supply plug and power on.
- Power OFF operation: First, remove the power plug, then remove the wiring section of terminal block. Please pay attention to the above operation sequence.

【DIP Switch Settings】



This series provide 4-pin DIP switch for function setting, where "ON" is the enabled end. DIP switches definition as follows:

DIP	Definition	Operation
1	Jumbo frame	Set the DIP to ON to enable jumbo frame function
2	Reserved (Only for 1 fiber port + 1 copper port product)	-
	Flow control (Only for 1 fiber port + 2 copper ports product)	Set the DIP to ON to enable flow control function
3	LFP (Only for 1 fiber port + 1 copper port product)	Set the DIP to ON to enable LFP function, when one end of the copper port or fiber port disconnects, close another port; when the port is reconnected, open another port.
	One-key VLAN (Only for 1 fiber port + 2 copper ports product)	Set the DIP to ON to enable VLAN function. ➢ Model III, Model IV, Model XIV: copper port 1 is interconnected with other interfaces, and other ports except copper port 1 are isolated from each other; ➢ Model IX-Model XII: fiber port is interconnected with other two copper ports, and the two copper ports are isolated from each other.
4	Reserved	-

【Checking LED Indicator】

The device provides LED indicators to monitor its operating status, which has simplified the overall troubleshooting process. The function of each LED is described in the table below:

LED	Indicate	Description
PWR	ON	PWR is connected and running normally
	OFF	PWR is disconnected or running abnormally
LFP (Only for 1 fiber port + 2 copper ports product)	ON	Fiber port and copper port have established valid network connection
	OFF	Fiber port or copper port hasn't established valid network connection
Link/ACT (1-3/G1-G3)	ON	Port has established valid network connection
	Blinking	Port is receiving/ transmitting data
	OFF	Port hasn't established valid network connection

【Specification】

Panel	
100M fiber port	100Base-FX, optional SC/ST/FC
100M copper port	10/100Base-T(X) self-adapting RJ45 port, half/full duplex self-adaption or forced working mode, support MDI/ MDI-X self-adaption
Gigabit fiber port	1000Base-FX, optional SC/ST/FC
Gigabit copper port	10/100/1000 Base-T(X) self-adapting RJ45 port, half/full duplex self-adaption or forced working mode, support MDI/ MDI-X self-adaption
Gigabit SFP	1000Base-FX SFP slot
Indicator	Power supply indicator, interface indicator, LFP indicator (Only for 1 fiber port + 1 copper port product)
Power Supply	
Input power supply	➢ DC power supply: 12~48VDC, support anti-reverse connection ➢ AC power supply: 220VAC（100~240VAC/DC） ➢ Dual power supply: 12~48VDC, support anti-reverse connection
Access terminal block	Single power supply: 3-pin 7.62mm pitch terminal blocks Dual power supply: 4-pin 5.08mm pitch terminal blocks
Switch Property	
Model I-Model IV, Model VIII-Model XIV	Backplane bandwidth: 1G MAC address table: 2K
Model V- Model XII	Backplane bandwidth: 18.2G MAC address table: 2K
Power Consumption	
Model I, Model XIII, Model XIV	No-load≤1.0W Full-load≤1.1W
Model IV	No-load≤1.2W Full-load≤1.5W
Model VIII	No-load≤1.5W Full-load≤2.0W
Model X	No-load≤1.5W Full-load≤2.5W
Working Environment	
Working temperature	-40~75℃
Storage temperature	-40~85℃
Working humidity	5%～95% (no condensation)
Protection grade	IP40 (metal shell)