Media Converters

# Quick Start Guide

# iMC4 Series

# Industrial Media Converter

## Introduction

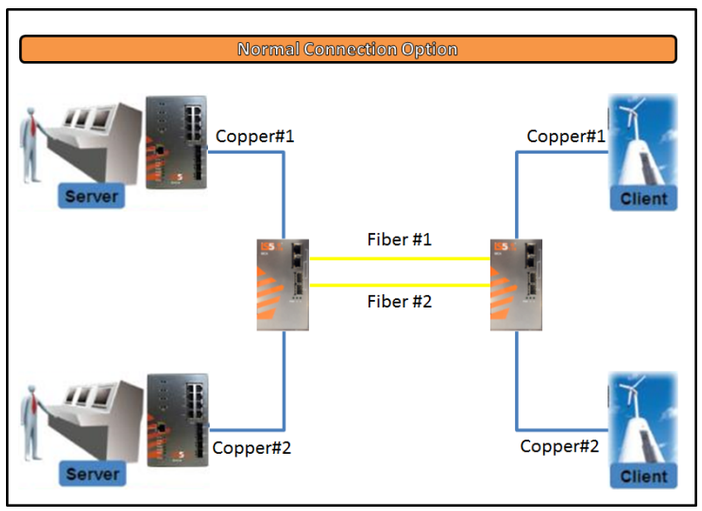
**IMC4 Series** is a cost-effective solution for the conversion between 10/100Base-T ( X ) and 100Base-FX interface, it allows you to extend communication distance by optical fiber. **IMC4 series** supports MDI/MDIX auto detection, so you don't need to use crossover wires.

**IMC4 Series** with wide operating temperature range from -40~ +85C and accepts a wide voltage range from dual 10 ~ 48 VDC power inputs, so it is suitable for harsh operating environments.

## Features

- Supports 2 port 10/100Base-T(X) auto-negotiation and auto-MDI/MDI-X
- Supports Ethernet to fiber or Ethernet to SFP port
- Supports full/half duplex operation mode
- Supports store and forward transmission
- Provided DIP-Switch to setting function (future implemenatton)
- High reliability and rigid IP-30 housing
- DIN-Rail and wall-mount enabled

## Media Converter - Concept of Operation




## Specifications

| Model Number | iMC4 |
|---|---|
| **Physical Ports** | |
| 10/100 Base-T(X) Port in RJ45 Auto MDI/MDIX | 2 |
| 100Base-(X) SFP port | 2 |
| **Technology** | |
| Ethernet Standards | IEEE 802.3 for 10Base-T,<br>IEEE 802.3u for 100Base-T(X) and 100Base-FX,<br>IEEE 802.3x for Flow control |
| Processing | Store-and-Forward |
| **Power** | |
| Input power | Single DC inputs 10 to 48VDC, Single DC Inputs 36-72VDC, or Single input universal supply 88-370VDC or 85-264VAC with a single 10-48VDC Backup |
| Power consumption (Typ.) | 5 Watts (include SFPs) |
| Overload current protection | Present |
| Reverse polarity protection | Present on terminal block |

| Physical Characteristics | |
|---|---|
| Enclosure | IP-40 Galvanized Steel |
| Dimension (W x D x H) | 76.2(W) x 90.2(D) x 148.3(H)mm (3.0 x 3.55 x 5.84 inches) |
| Weight (g) | -1000 g |
| **Environmental** | |
| Storage Temperature | -40°C to +85°C (-40°F to +185°F) |
| Operating Temperature | -40°C to +85°C (-40°F to +185°F) No Fans |
| Operating Humidity | 5% to 95% Non-condensing |
| **Regulatory approvals** | |
| EMI | FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) |
| 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** | |
| Warranty | 5 Years |

## Default Configuration

| Dip Switch | Combination | Description |
|---|---|---|
| P0_CFG | 1-ON, 2-OFF<br>1-OFF, 2-ON | PORT 0 FORCED 100BASE-FX FULL DUPLEX<br>PORT 0 FORCED 100BASE-FX HALF DUPLEX |
| P1_CFG | 1-ON, 2-OFF<br>1-OFF, 2-ON | PORT 1 FORCED 100BASE-FX FULL DUPLEX<br>PORT 1 FORCED 100BASE-FX HALF DUPLEX |
| LED_FEFI_CFG | 5-ON, 6-OFF<br>5-OFF, 6-ON | LED MODE 3, FEFI ENABLED<br>LED MODE 3, FEFI DISABLED |
| FD_FLOW_DIS | 7-ON | ENABLE PAUSE BASED FLOW CTRL ON ALL FD PORTS |
| E_DIN_HD_FLOW_DIS | 8-ON | ENABLE FORCED COLLISION FLOW CTRL ON ALL HD PORTS |
| MDIX_CLB_EDENA_CFG | 9-ON, 10-OFF<br>9-OFF, 10-ON | AUTO-CROSSOVER, CLASS B DRIVERS, ENERGY DETECT ENABLED<br>AUTO-CROSSOVER, CLASS B DRIVERS, ENERGY DETECT DISABLED |

## Installation

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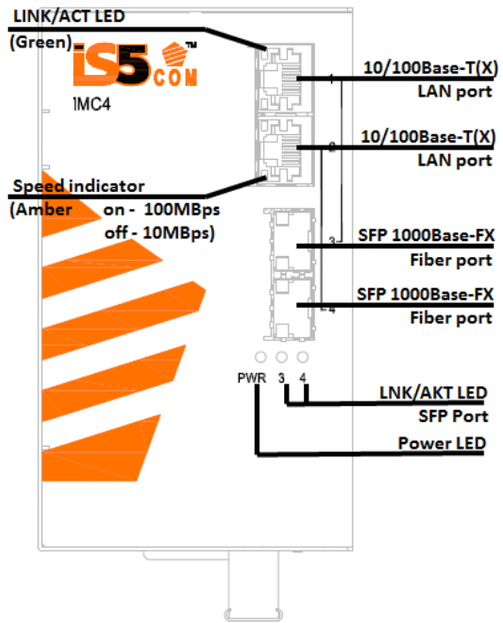
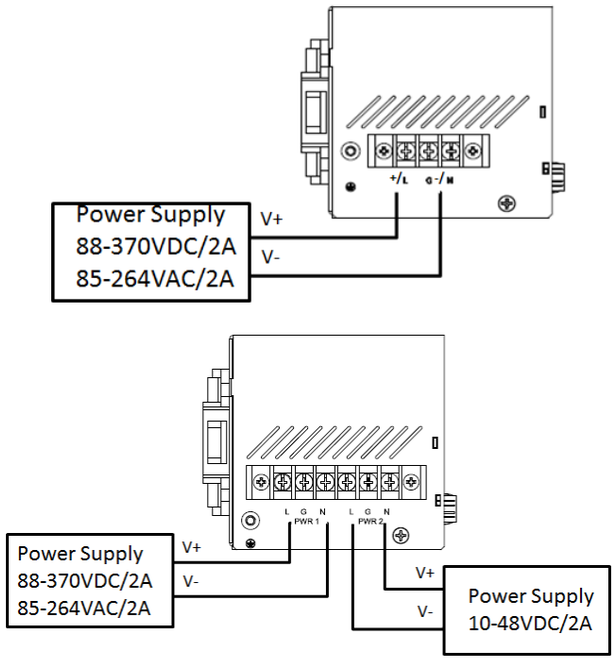
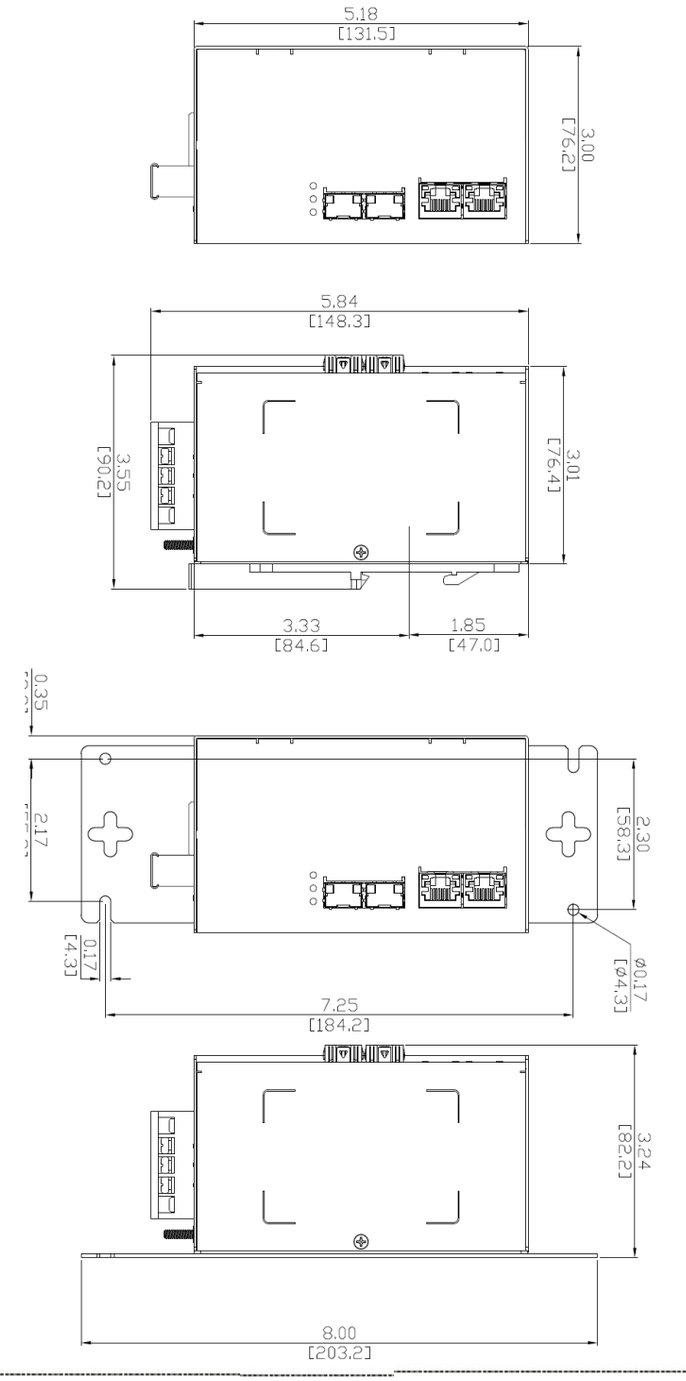
## Front Panel




## Power Connection Guide




## Dimentiones

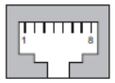



## Communication Connections

### 10/100Base-T(X) Ethernet Port Connection

■ RJ45 (8-pin, MDI) Port Pinouts

| Pin | Single |
|---|---|
| 1 | Tx+ |
| 2 | Tx- |
| 3 | Rx+ |
| 6 | Rx- |




■ RJ45 (8-pin, MDI-X) Port Pinouts

| Pin | Single |
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| 3 | Tx+ |
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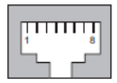
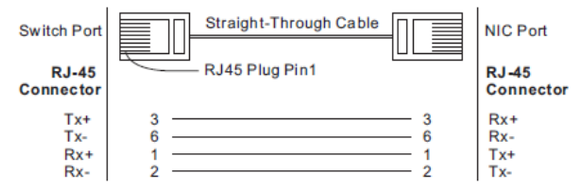
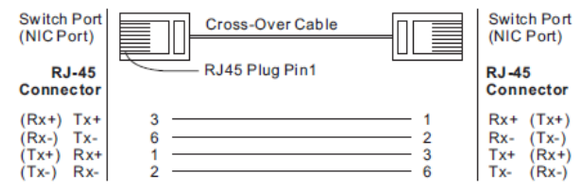


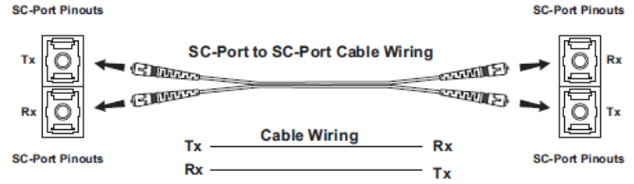

■ RJ45 (8-pin) to RJ45 (8-Pin) Straight-Through Cable Wiring

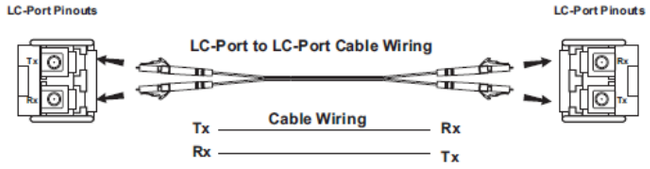



■ RJ45 (8-pin) to RJ45 (8-Pin) Cross-Over Cable Wiring




### 100Base-FX Connection




### 100Base-FX SFP Port Connection