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## Industrial Grade Gigabit Media Converter, SC12FE2ISG

### Overview



SC12FE2ISG is an Unmanaged Ethernet switch/Converter with 2 of 10/100/1000 Mbps RJ45 ports and 1 Gigabit fiber port. It extends the transmission distance from 100m to many Km's easily. It is Industrial design with working temperature range is -40 to 85°C, low power consumption, and great EMC protection. It can be widely used in the field of Power, Railways, Mines, CCTV Surveillance and other industrial automation fields

### Features

- 2x10/100/1000Base-T(X) RJ-45 port, 1x1000Base-X fiber port
- SC connector (with optional ST, and SFP)
- Auto 10/100/1000Mbps, Full/half-duplex, Auto Negotiation
- Auto MDI/MDI-X
- Built-in store-and-forward, 1MB buffer
- Power: DC 12-48V, Reverse polarity protected
- MTBF>400,000 hours
- IP40 protection grade with rugged high-strength metal enclosure
- DIN Rail installation

### Specification

Standards : IEEE 802.3, IEEE 802.3ab, IEEE 802.3u, IEEE 802.3z  
Flow control : IEEE802.3x, Back Pressure control

### Ports

RJ45 port : 2x10/100/1000Base-T(X), auto detection, full/half-duplex  
: Auto MDI/MDI-X  
Fiber port : 1x1000Base-FX port SC/ST/FC

### Fiber Cable

Multi-mode : 50/125, 62.5/125  
: 1310nm  
Single-mode : 8.3/125, 8.7/125, 9/125, 10/125µm  
: 1310 / 1550 nm for 80Km

### Transmission distance

Multi-mode : 2km  
Single-mode : 20km, with optional 40Km, 80km  
Cat.5e : 100m

### Fiber Port

Transmission distance (Km)	2	20	40	80
Tx Power (dbm)	-6 to -1	-9 to -3	-2 to 3	-2 to 3
Rx Sensitivity (< dbm)	-21	-23	-23	-24
Optical Saturation	0	-3	-3	-3

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#### **Switching performance**

Forwarding rate : 1488,095 pps  
Transmission mode : Store-and-forward  
MAC address table : 1K  
Buffer : 1Mb  
Bandwidth : 12G  
Max. frame length : 10KB

**LED indication** : PWR, FDX, ACT, LINK

#### **Power Requirement**

Input voltage : 12 to 48VDC. Range 10.8 to 52.8V DC  
Terminal block : 3-pin terminal block  
Power consumption : 100mA @ 24V. Max. 4 Watts  
Surge protection Lightning : Power : 5000A (8/20 $\mu$ s)  
Overload protection, Reverse polarity protection

#### **Mechanical Characteristics**

IP rating : IP40  
Installation : DIN-Rail/wall-mounted  
Dimension (H x D x W) : 100mm×80mm×35mm

#### **Environment**

Operating temperature : -40°C to 85°C  
Storage temperature : 40°C to 85°C  
Relative humidity : 5 to 95% (non-condensing)

#### **Industrial Standards tested for**

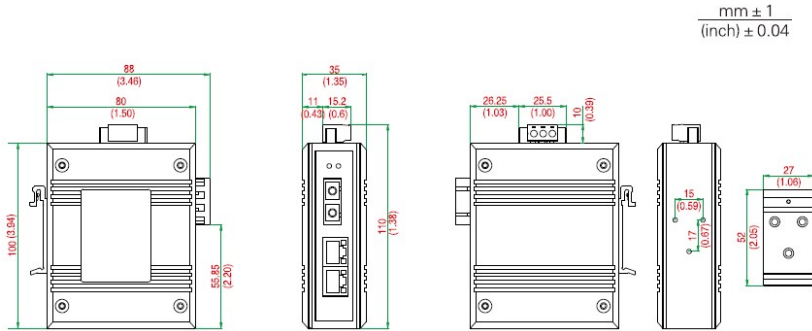
EMI : FCC Part 15 Subpart B class A, EN55022 class A  
EMS:  
IEC (EN) 61000-4-2(ESD)  
IEC (EN) 61000-4-3(RS)  
IEC (EN) 61000-4-4(EFT)  
IEC (EN) 61000-4-5(Surge)  
IEC (EN) 61000-4-6(CS)  
IEC (EN) 61000-4-8  
IEC 60068-2-27(Shock)

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**Dimension (mm/inches)**



**Model No Selection SC12FE2ISG M/SXXX SC/ST**

SC12FE2ISG : Base Model. Industrial Grade Giga Media Converter with 2 Ethernet Ports  
 M / S : M : Multimode, S : Singlemode  
 XXX : Distance in Km. 020 km as default in Singlemode  
 SC/ST : Connector type SC/ST