User Manual

Industrial Gigabit Media Converter,
with 1 x 10/100/1000M TX + 1 x 100/1000M SFP, 12-56 VDC input

FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55032/35 class A for ITE, the essential protection requirement of Council Directive 2014/30/EU on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

Key Features

- ➢ Hardened design enclosure

- ➢ Supports 12V-56VDC

- ➢ Supports Link Fault Pass through (LFP) function

- ➢ Supports automatically switch mode and converter mode

- ➢ Adjustable SFP speed 100M or 1000M

- ➢ Surge protection on power input

- ➢ ESD protection on RJ-45 port

- ➢ Provides Far End Fault function on FX

- ➢ Provides increased Noise Immunity

Introduction

This small, hardened Industrial Gigabit Media Converter is designed for Security, Transportation and Telco applications to extend your network distances. It can be powered by wide range of VDC. With its multi-purpose design, it can also be Din-Rail or wall mounted. It is an ideal unit for IP surveillance, traffic monitoring and Security applications in critical environment. It can tolerate -40°C to 75°C in harsh environment to perform a reliable network.

Installation package

This unit can be din-rail or wall mounted. Din-rail brackets and wall mount brackets are included.

Wall Mount Bracket x 2

Din Rail Bracket x 1

Philips Head Screw x 4

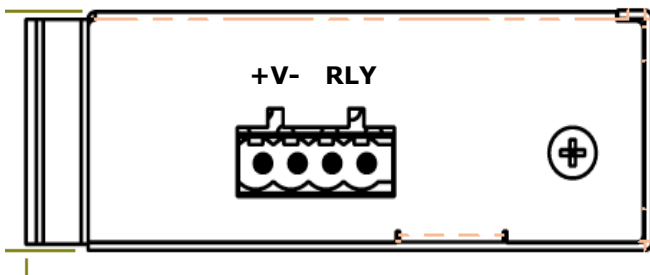4-pin Terminal Block x 1
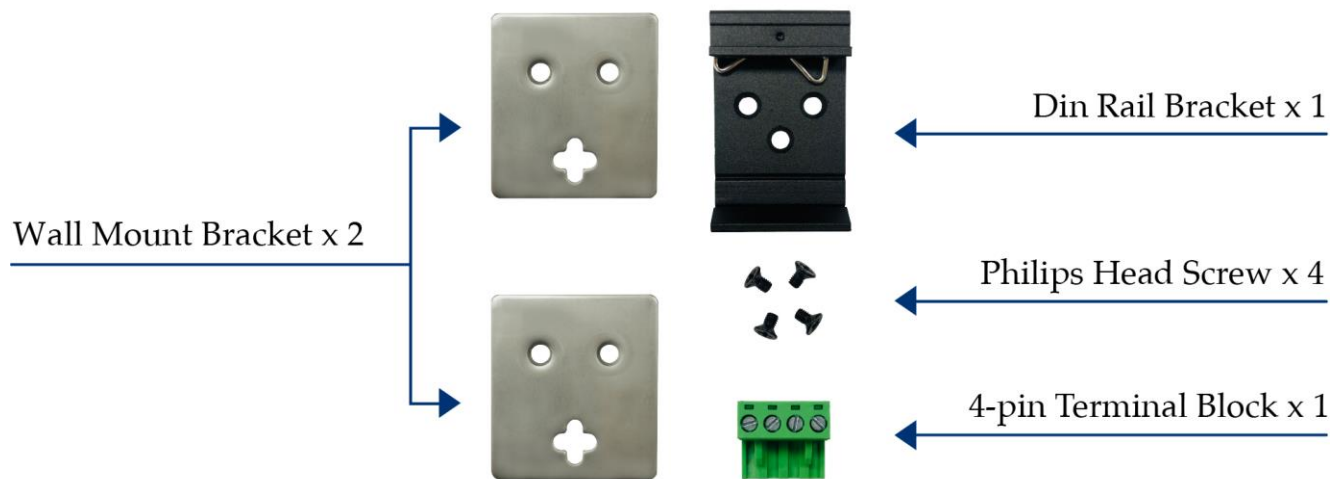
Power connection

This unit provides a 4 pin terminal block. It can be operated using 12-56VDC power source. Always make sure your input voltage is within this supported voltage range.

To connect power: Follow the printed polarity for V+, V- and Ground. Connect positive wire to V+, connect negative wire to V- and connect neutral wire to ground.

+V- is for power input connection, this unit has only one power input.
RLY is for relay connection.

Power connecting procedure:

+V-   RLY

STEP 1 – Take out 4 pin terminal block located in the included mounting kit package.
STEP 2 – Connect power wire to +V- with correct polarity and connect RLY for relay. **Connect the grounding wire to the ground screw.**
STEP 3 – Plug into terminal block socket shown above. Polarity needs to match V+ and V-.
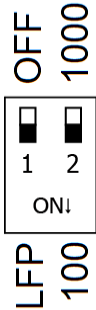
<u>WARNING</u> **-- Always SHUT OFF power source to connect power wire.**
<u>WARNING</u> **-- Any exceeded input voltage will not make this unit function and may damage this unit.**
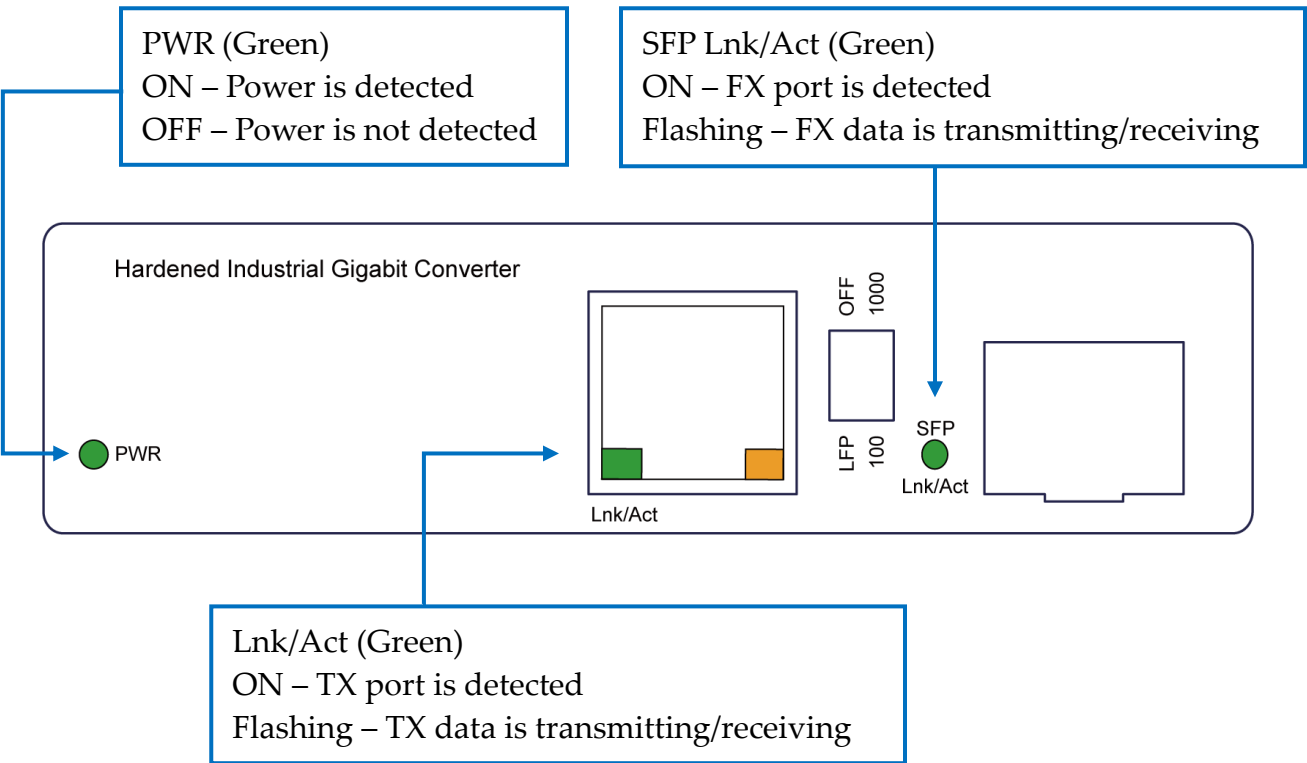
Dip switch function

This unit is equipped with dip switches, located on the front panel. Adjusting the dip switches will change the default function of this unit. This unit has set to manufacturer default as: SFP speed 1000M and LFP function OFF.

The table shown as you may change the dip switch setting to your desired environment.

(dip switch diagram)	Dip 1	OFF	LFP function turn off (Default)
		LFP	LFP function turn on
	Dip 2	1000	SFP Speed 1000M (Default)
		100	SFP Speed 100M

LED indicator

PWR (Green)
ON – Power is detected
OFF – Power is not detected

SFP Lnk/Act (Green)
ON – FX port is detected
Flashing – FX data is transmitting/receiving

Hardened Industrial Gigabit Converter

PWR

Lnk/Act

SFP
Lnk/Act

Lnk/Act (Green)
ON – TX port is detected
Flashing – TX data is transmitting/receiving
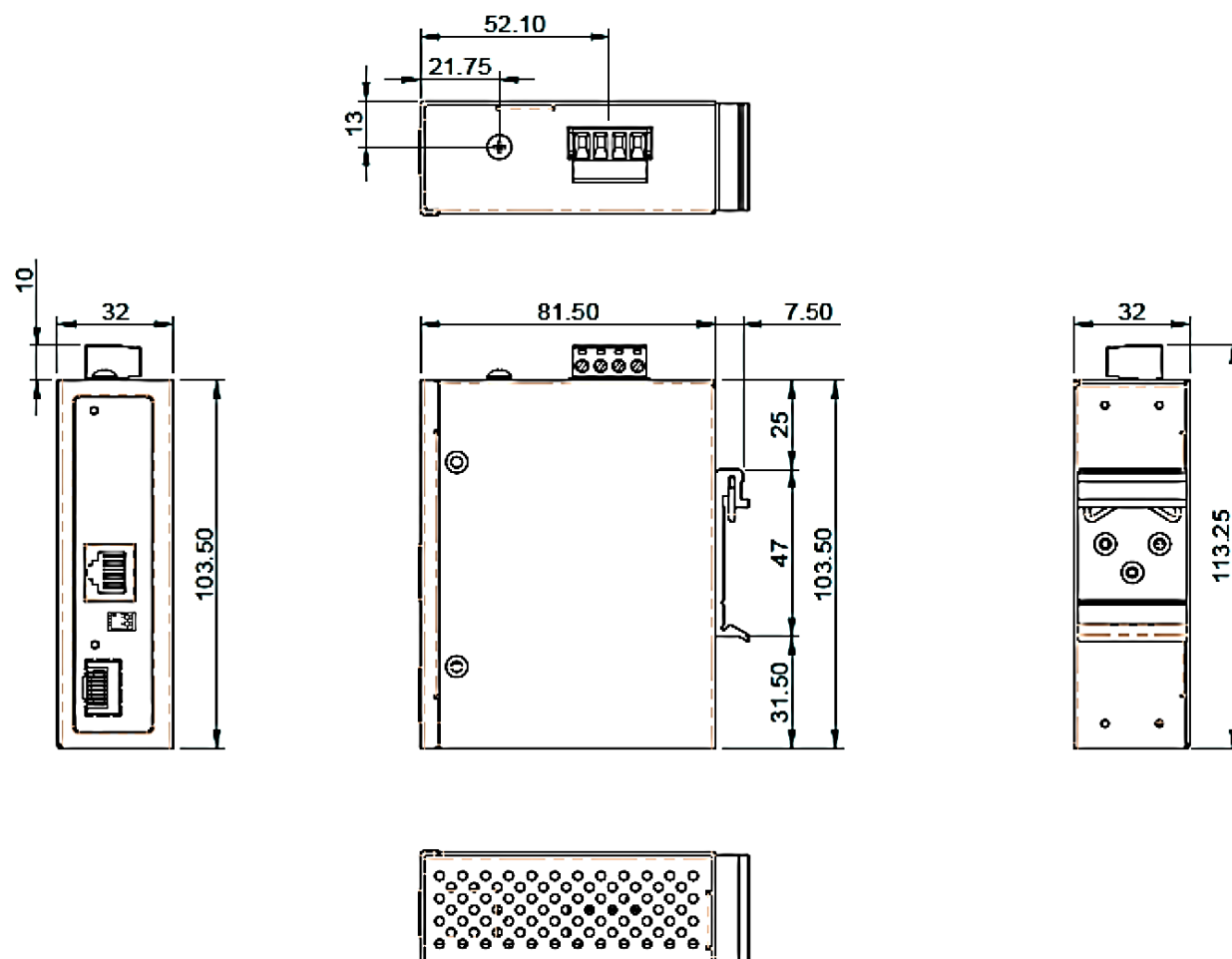
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Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet
Switch Architecture	Back-plane (Switching Fabric): 4Gbps
Data Processing	Store and Forward
Flow Control	IEEE 802.3x Flow Control and Back Pressure
Jumbo Frame	16KB
Network Connector	1 x RJ-45 10/100/1000 Base-T(X) Auto MDI/MDI-X function, Full/Half duplex 1 x 100/1000 Base-F(X) SFP
Network Cable	UTP/STP Cat.5e or above Cable EIA/TIA-568 (100m)
Protocol	CSMA/CD
LED	PWR (Green): ON－Power is detected OFF－Power is not detected
	RJ-45 Lnk/Act (Green): ON－TX port is detected Flashing－TX data is transmitting/receiving
	SFP Lnk/Act (Green): ON－FX port is detected Flashing－FX data is transmitting/receiving

DIP Switch	DIP1: OFF－LFP disabled (Default)
	     ON－LFP enabled
	DIP 2: OFF－SFP speed 1000M (Default)
	     ON－SFP speed 100M
	Link Fault Pass Through (LFP) is when copper side signal lost or disconnect, fiber side link signal will actively off, when fiber side signal lost or disconnect, copper side link signal will also actively off.

Reverse Polarity Protection	Present
Overload Current Protection	Present
Power Input	4 pin terminal block with 12V-56V VDC Power Input RLY: Relay switch for alarm
Alarm Relay Contact	Relay outputs with current carrying capacity of 1A @24VDC, Relay in short circuit mode when power fails. in open circuit mode when power supply is connected

Power Consumption	3 W@48 VDC Without PoE
Removable Terminal Block	Provide 4 pin terminal block Wire range: 0.34mm^2 to 2.5mm^2 Solid wire (AWG):12-24/14-22 Stranded wire (AWG): 12-24/14-22 Torque:5lb-In/0.5Nm/0.56Nm Wire Strip length: 7-8mm
Operating Temperature	-40°C to 75°C
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40°C to 85°C
MTBF (mean time between failure)	569265.20 hrs (Telcordia (Bellcore), GB) at 50°C
Housing	Rugged Metal, IP30 Protection
Case Dimension (LxWxD) mm	103.5mmx32mmx81.5mm (LxWxD)
Installation	DIN Rail and Wall Mount options included
Certifications:	
Safety	LVD (EN62368-1)
EMC	CE, FCC, EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6KV; Air: 8KV IEC 61000-4-4 EFT: Power: 2KV; Signal: 2KV IEC 61000-4-5 Surge: Power: 2KV; Signal: 2KV
Vibration	EN 60068-2-6
Shock	EN 60068-2-27
Free Fall	EN 60068-2-32

Housing Dimension (mm)

NOTE:

Housing dimension is for purpose of showing product Length, Width, Height, din-rail, and terminal block's position and dimension. Please reference the LED Indicator Page for correct port order.