User Manual

Industrial Gigabit PoE Media Converter,
with 1 x 10/100/1000M TX 30W PSE + 1 x 100/1000M SFP, 48-56 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/EC 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

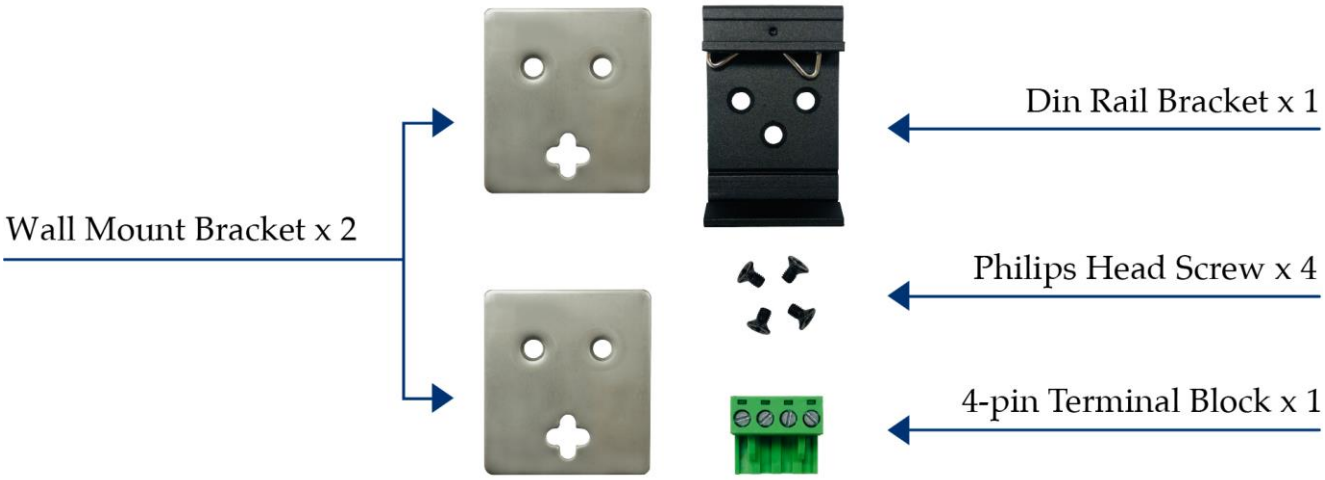
- Hardened Industrial graded Marvell IC
- Rugged design Aluminum enclosure 103.5x32x81.5mm (LxWxD)
- Supports 30Watts PSE on TX port
- Supports SFP fiber speed 100M or 1000M dual mode
- Surge protection diodes on power input.
- ESD protection diodes on RJ-45 port
- Provides increased noise immunity
- Works in extreme environment -40°C to 75°C

Introduction

This Rugged Industrial PoE Media Converter is designed with hardened Marvell IC, delivering 30Watts of PoE power to your PD while tolerating extreme temperatures in a harsh environment. Our Cold Design technology will not only power up your PD device, but also reduce the excessive heat problem to a minimum. It accepts input voltages from 48VDC to 56VDC to meet IEEE802.3af/at required voltage. It has been rigorously tested for your security, transportation, and telco applications.

Installation package

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



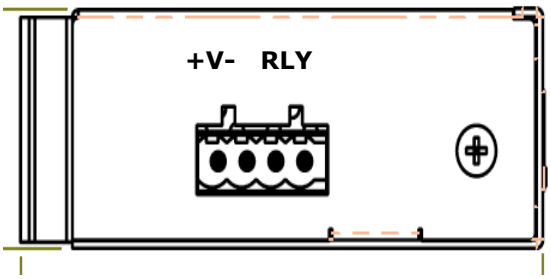
Power connection

This unit provides a 4-pin terminal block. It can be operated using 48-56VDC power source. Always make sure your input voltage is within this supported voltage range. 56VDC input is suggested for optimal IEEE802.3at 30Watts power.

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:



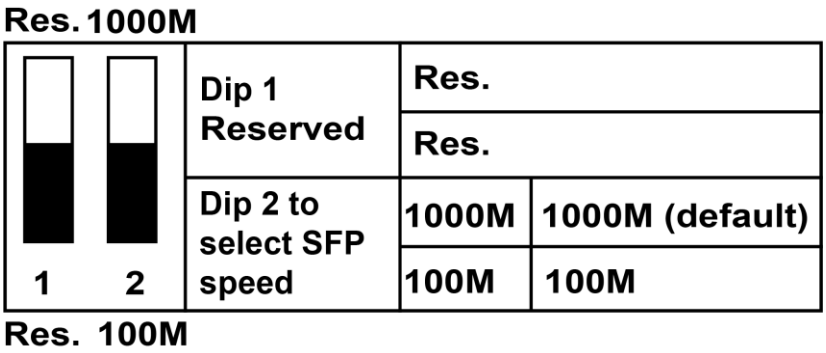
STEP 1 – Take out 4 pin terminal block located in the included mounting kit package.
STEP 2 – Connect power wire to +V- with correct polarity and connect RLY for relay. Connect the grounding wire to the ground screw.
STEP 3 – Plug into terminal block socket shown above. Polarity needs to match V+ and V-.

WARNING -- Always SHUT OFF power source to connect power wire.
WARNING -- Any exceeded input voltage will not make this unit function and may damage this unit.

Dip switch function

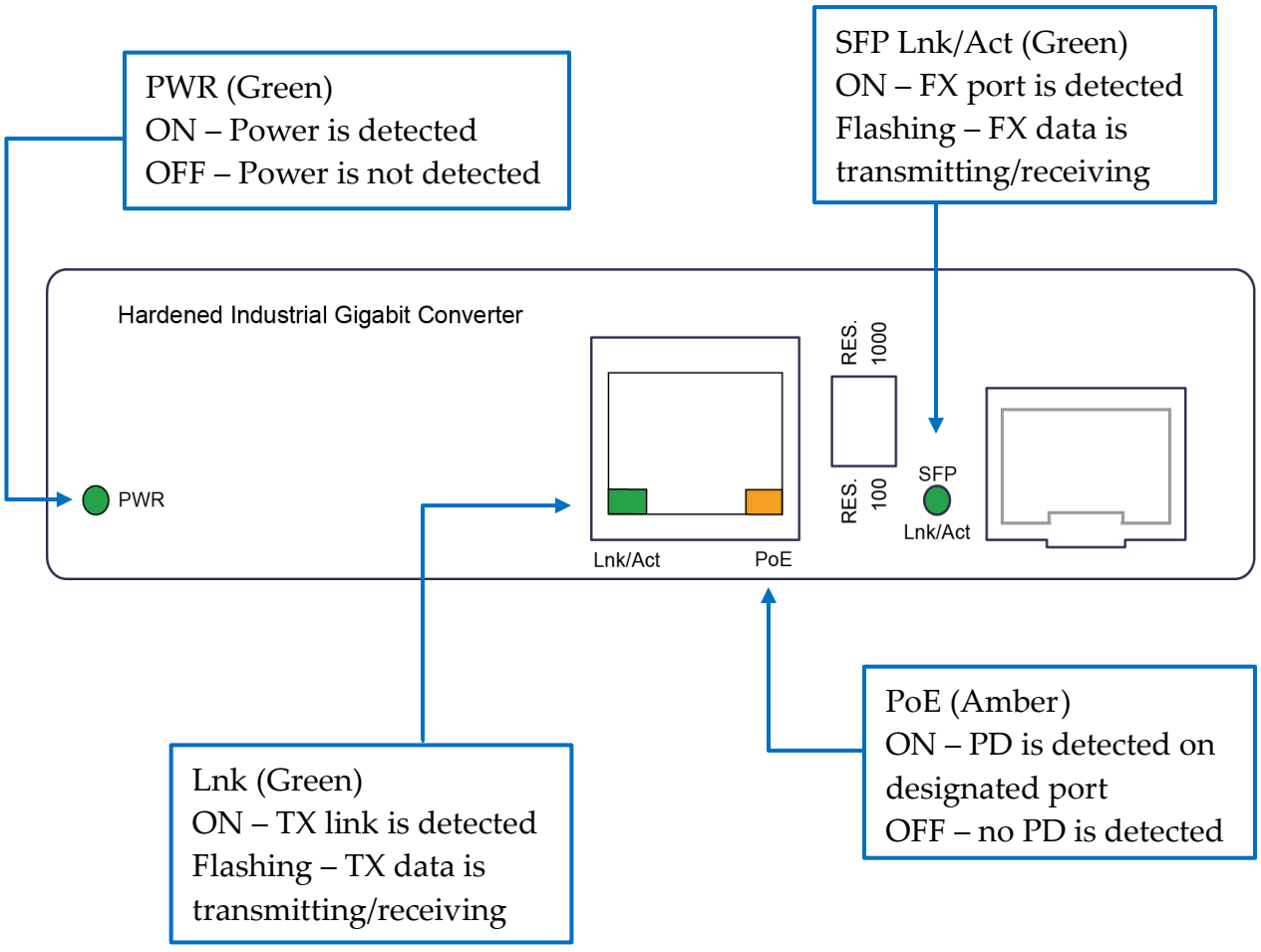
This unit is equipped with dip switches, located on the front panel. Adjusting the dip switches will change the default function of this unit. This unit has set to manufacturer default as: SFP speed 1000M.

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



Dip 1 Reserved	Res.	
	Res.	
Dip 2 to select SFP speed	1000M	1000M (default)
	100M	100M

LED indicator

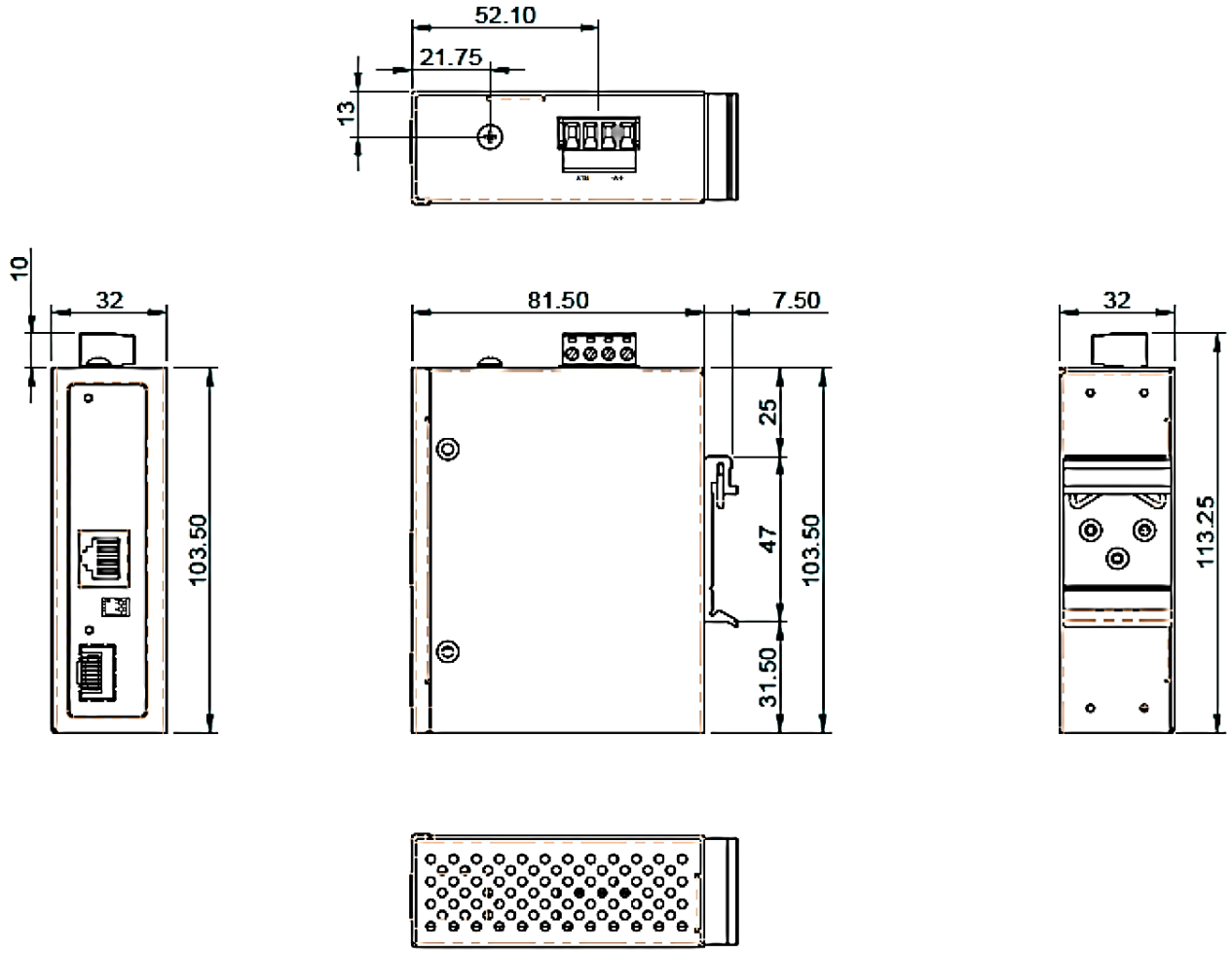


Specifications

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 IEEE802.3x Flow Control and Back Pressure, IEEE802.3af for PoE IEEE802.3at for PoE+
Switch Architecture	Back-plane (Switching Fabric): 4Gbps
Data Processing	Store and Forward
Flow Control	IEEE 802.3x Flow Control and Back Pressure
Jumbo Frame	9KB
Network Connector	1xRJ-45 10/100/1000BaseT(X) PSE with PoE Output power up to 30Watts 1 x 100/1000M SFP
Network Cable	UTP/STP above Cat.5e Cable
	EIA/TIA-568 10-ohm (100m)
Protocol	CSMA/CD
LED	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
	RJ-45 port: Lnk/Act (Green): ON－TX port is detected Flashing－TX data is transmitting PoE (Amber): ON – PD is detected on designated port. OFF – no PD is detected.
PoE Pin Assignment	30 watts 2 pairs Mode A End Span V+, V+, V-, V- for pin 1, 2, 3, 6
DIP Switch	DIP 1: Reserved DIP 2: 1000M－SFP speed 1000M (Default) 100M－SFP speed 100M
Reverse Polarity Protection	Present
Overload Current Protection	Present
Power Supply	4 pin terminal block with 48V-56V VDC Power Input RLY (Relay): Relay switch for alarm
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC

	Relay in short circuit mode when power fails. In open circuit mode when power supply is connected
Power Consumption	2 W@48 VDC full load, Without PoE
PoE power	Maximum PoE power 36 Watts at 56VDC input
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℃ to 75℃
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40℃ to 85℃
MTBF (mean time between failure)	510,304 hrs (MIL-HDBK-217F) at 25°C
Housing	Rugged Metal, IP30 Protection
Case Dimension (L X W X D) mm	103.5mmx32mmx81.5mm (LxWxD)
Installation mounting	DIN Rail and Wall Mount options included
Certifications:	
Safety	UL 60950-1
Safety	IEC EN62368-1
EMC/EMS	CE, FCC, VCCI
EMI	FCC Part 15 Subpart B Class A
EN 60068-2-6	Vibration
EN 60068-2-27	Shock
EN 60068-2-32	Free Fall

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.