User Manual: PC-PMC102-E-xy
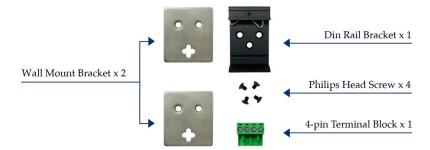# Industrial Media Converter with PoE+

Version 8.2019

Introduction

This Smart Link 3 port Industrial PoE Media Converter is designed for security, transportation and telco applications to extend link distance for your remote devices. It comes with 2 ports 10/100M TX PSE, 30Watts per port for IEEE802.3af/at. Its Smart Link feature acts as a watchdog for your critical ports by sending a port link fail signal to alarm relay when a link down is detected. It can also be set as a media converter to execute Link Fault Pass-Through (LFP) to notify remote site. This unit can be either Din-Rail or wall mounted. It is an ideal unit for IP surveillance, traffic monitoring and security applications, and can tolerate -40°C to 75°C in harsh environments to perform a reliable network.

Installation package

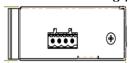This unit can be din-rail mounted or wall-mounted. Din-rail brackets and wall-mounted brackets are included.

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 48-56VDC power source. Always make sure your input voltage is within this supported voltage range. 56VDC input is suggested for optimal IEEE802.3at 30/60Watts power.

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

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.
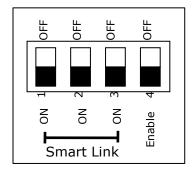STEP 3 – Plug into terminal block socket shown above. Polarity needs to match V+ and V-.

Relay: This unit includes an additional 24V@1A relay circuit for special purpose. When 2 powers are connected, the relay is in OPEN mode. If only one of the power sources is connected, the relay changes to SHORT mode. This relay will only work with PW1 and PW2. It is independent from PW3.

Dip Switch Function

SmartLink is a built-in programmed feature which detects port link status to report port link failure via local alarm relay and remote port. If designated port is selected, when link fails, local alarm relay will be triggered, meanwhile remote port (no matter fiber or TX port) will also link down. This feature is executed by enabling LFP via 4 pin Dip switch. If port is selected, Smart Link will monitor this port to local alarm relay and to remote site. It is a secure feature to keep your network safe from link down. WARNING – Always SHUT OFF the power source before adjusting the Dip Switch
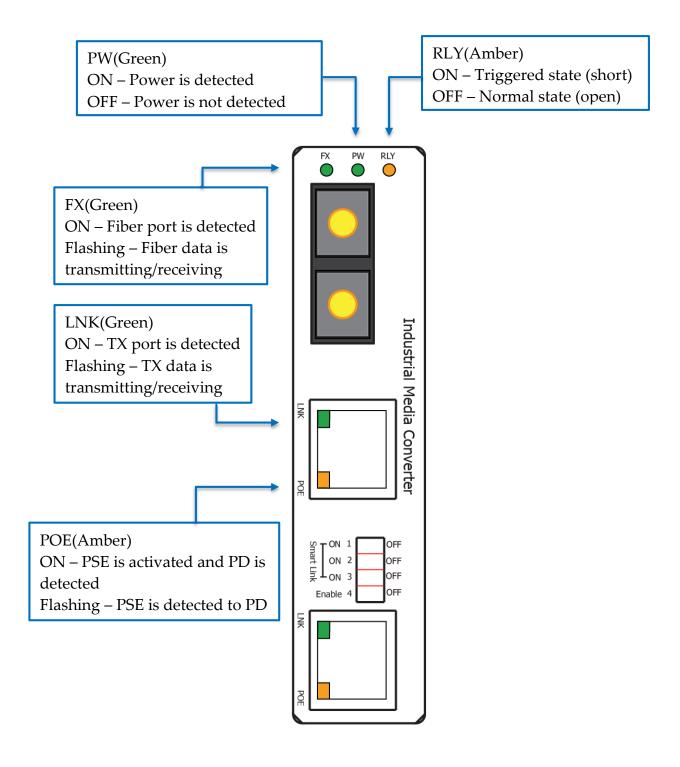
DIP 1	OFF	LFP function disabled (Default)
	ON	Port 1 Link fault pass through (LFP) enabled
DIP 2	OFF	LFP function disabled (Default)
	ON	Port 2 Link fault pass through (LFP) enabled
DIP 3	OFF	LFP function disabled (Default)
	ON	Port 3 Link fault pass through (LFP) enabled
DIP 4	OFF	LFP function turn off (Default)
	Enable	LFP function turn on

DIP 4 is the primary DIP Switch to enable/disable alarm relay and LFP function for entire unit.
Once LFP function is enabled, Link status of one port is forwarded to the other ports.

Note1: When Smart link is enabled and there is a link down, the SmartLink signal takes 10 seconds to propagate to other ports. The 10 seconds setting is the default setting and cannot be changed. The purpose of this setting is to avoid the confliction of port speed detection.

LED indicator

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

RLY(Amber)
ON – Triggered state (short)
OFF – Normal state (open)

FX(Green)
ON – Fiber port is detected
Flashing – Fiber data is transmitting/receiving

LNK(Green)
ON – TX port is detected
Flashing – TX data is transmitting/receiving

POE(Amber)
ON – PSE is activated and PD is detected
Flashing – PSE is detected to PD

FX   PW   RLY

Industrial Media Converter

LNK

POE

Smart Link
ON   1   OFF
ON   2   OFF
ON   3   OFF
Enable 4   OFF

LNK

POE

Specifications

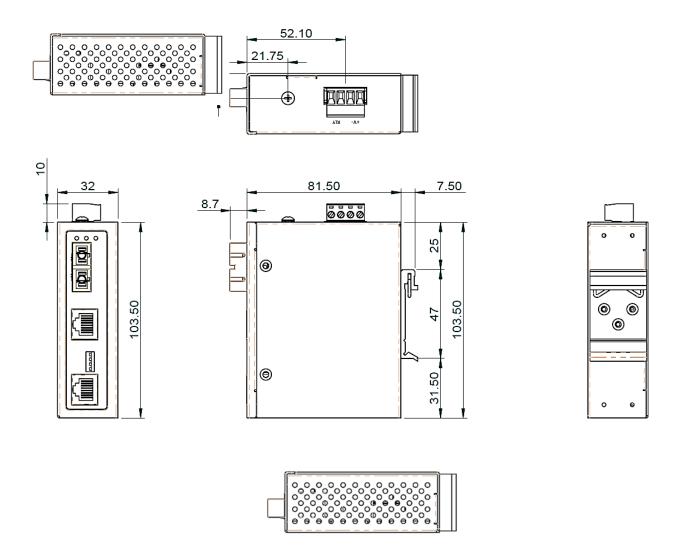|	
IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3u 100Base-FX Fast Ethernet IEEE802.3x Flow Control and Back Pressure IEEE802.3af for POE IEEE802.3at for POE+
Switch Architecture	Back-plane (Switching Fabric): 600Mbps
Data Processing	Store and Forward
Flow Control	IEEE 802.3x Flow Control and Back Pressure
MAC Address Table Size	1K
Packet Buffer Size	448Kbits
Network Connector	2 x RJ-45 10/100M BaseT(X) Auto negotiation, Auto MDI/MDI-X function, Full/Half duplex, 1 x 10/100M 30Watts PoE+ 802.3af/at PSE, 1 x 10/100M TX, 1 x 100BaseF(X) ST MM 2km
LED Indicators	RLY(Relay)(Amber): ON－Triggered states (short) 　　　　　　　　　　OFF－Normal state (open) PW(Power)(Green): ON－Power is detected FX(Green): ON－Fiber port is detected 　　　Flashing－Fiber data is transmitting/receiving RJ-45 port: LNK(Green): ON－TX port is detected Flashing－TX data is transmitting/receiving POE(Amber): ON－PSE is activated and PD is detected Flashing－PSE is detected to PD
DIP Switch Function	DIP1: OFF－LFP disabled (Default) 　　　ON－Port 1 LFP enabled DIP2: OFF－LFP disabled (Default) 　　　ON－Port 2 LFP enabled DIP3: OFF－LFP disabled (Default) 　　　ON－Port 3 LFP enabled DIP4: OFF－LFP function turn off (Default) 　　　ON－LFP function turn on

Power Protection	Surge protection diodes on power input Reverse polarity protection Overload current protection
Power Consumption	Max power consumption 3 Watts without POE Max POE per port 36Watts at 56VDC input Max total power with POE 36 Watts
Power Input	48-56VDC power input PoE input 48-56VDC
Removable Terminal Block	Provide 4 pin terminal block, V+, V-, and Relay 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
Alarm Relay	24VDC @ 1A. Normal state – open, Relay LED OFF Triggered state – short, Relay LED ON
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)	>500,000 hours (MIL-HDBK-217F) at 25°C
Housing	Rugged Metal, IP30 Protection
Case Dimension (L X W X D)	103.5 x 32 x 81.5 mm (L x W x D)
Installation mounting	DIN Rail and Wall Mount options included

Certifications

Safety	IEC EN60950-1
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.