



INJ-IG01-PH

Gigabit Ethernet PoE+ Injector IEEE802.3at/af,
15.4/30/36/60W (Compact)



INJ-IG01-PH is an industrial grade, single port, gigabit Ethernet PoE (Power over Ethernet) injector with power boost technology. PoE describes a system to pass electrical power safely, along with data, on Ethernet cabling. The original IEEE 802.3af-2003 PoE standard provides up to 15.4 W of DC power to each device. The updated IEEE 802.3at-2009 PoE standard also known as PoE+ or PoE plus, provides up to 30 W of power. Additionally, INJ-IG01-PH can provide up to 36/60W through the non-standard use of all 4 pairs of category 5 cable. Housed in a rugged DIN rail or wall mountable enclosure, this product is designed for harsh environments, such as industrial networking, security, intelligent transportation systems (ITS) and is also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications (See Figure 1). Standard operating temperature range models (-10 to 60°C) and wide operating temperature range models (-40 to 75°C) fulfill the special needs of industrial automation applications.

Features

- Provides 1 port IEEE802.3at/af PoE Injector
- Power output 15.4W, 30W, 36W, 60W select by DIP SW
- PoE Mode A/B Select by DIP SW
- 4 Pairs PD handshake mode select by DIP SW (Such as AXIS® IP cam)
- CE, FCC, Railway traffic EN50121-4 certified
- Heavy industrial grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Wide operating temperature -40 ~ 75°C (INJ-IG01-PHE)
- IP30 rugged metal housing and fanless

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3at, IEEE802.3af
PoE Standard	IEEE802.3at, IEEE802.3af
PoE Standard & RJ-45 Pin Assignment	RJ-45 support IEEE 802.3at/af Middle-Span Alternative B mode or End-Span Alternative A mode, set by DIP SW End-Span, Alternative A mode Positive (V+): RJ-45 pin 1, 2. Negative (V-): RJ-45 pin 3, 6. Data (1, 2, 3, 6, 4, 5, 7, 8) Middle-Span, Alternative B mode Positive (V+): RJ-45 pin 4,5 Negative (V-): RJ-45 pin 7,8 Data (1, 2, 3, 6, 4, 5, 7, 8)
Network Connector	1 RJ-45 for 10/100/1000Base-T Data, and 1 RJ-45 for 10/100/1000Base-T Data with PoE Output power
Network Cable	UTP/STP above Cat. 5e cable EIA/TIA-568 100-ohm (100m)
LED	Per unit: Power (Green) Alt A/PoE, Alt B/PoE (Green) ON when a PD device is connected to the GbE+PoE RJ-45 connector and the injector is feeding power in Alt A or B mode. Blinking One of the Injector faults (overload, short circuit or over-temperature) occurs.
DIP SW	SW1 ON: Alternative B mode PoE Power Pin 4, 5, 7, 8 (When DIP SW 3 Off) OFF: Alternative A mode PoE Power Pin 1, 2, 3, 6 (When DIP SW 3 Off) SW2 ON: Hi Power 36W 36W PoE output OFF: Standard PoE 802.3af (15.4W), 802.3at (30W) SW3 ON: 4 Pair PoE Pin Ultra-High Power 60W PoE Output OFF: 2 Pair PoE Pin depend on DIP SW 1,2 SW4 60W PD handshake mode OFF: General PD at ether 2 or 4 pairs mode ON: Compatible with some particular PD devices at high power mode (4 Pair mode), such as AXIS® Q60
Reverse Polarity Protection	Supported for power input

Overload Current Protection	Supported									
Power Supply	(44~57VDC) Input power (Removable Terminal Block)									
PoE Power Output	Maximum Ultra High Power 60W, IEEE802.3at 30W, IEEE802.3at High power 36W, IEEE802.3af 15.4W									
Power Consumption	<table border="1"> <thead> <tr> <th></th> <th>In 30W mode (2 Pairs)</th> <th>In 60W mode (4 Pairs)</th> </tr> </thead> <tbody> <tr> <td>Input Power Consumption (Input 48VDC)</td> <td>31.1W</td> <td>62.8W</td> </tr> <tr> <td>PoE Output Power</td> <td>30W</td> <td>60W</td> </tr> </tbody> </table>		In 30W mode (2 Pairs)	In 60W mode (4 Pairs)	Input Power Consumption (Input 48VDC)	31.1W	62.8W	PoE Output Power	30W	60W
	In 30W mode (2 Pairs)	In 60W mode (4 Pairs)								
Input Power Consumption (Input 48VDC)	31.1W	62.8W								
PoE Output Power	30W	60W								
Removable Terminal Block	Provides 2 Pin for power input connector									
Operating Temperature	-10 ~ 60°C (INJ-IG01-PH) -40 ~ 75°C (INJ-IG01-PHE)									
Operating Humidity	5% to 95% (Non-condensing)									
Storage Temperature	-40 ~ 85°C									
Housing	Rugged Metal, IP30 Protection and fanless									
Dimensions	70 x 30 x 103 mm (D x W x H)									
Weight	215g									
Installation Mounting	DIN Rail mounting, and Wall Mounting (Optional)									
MTBF	2,108,634 Hours (MIL-HDBK-217)									
Warranty	5 years									
Certification										
EMC	CE									
EMI	FCC Part 15 Subpart B Class A, CE									
Railway Traffic	EN50121-4									
Immunity for Heavy Industrial environment	EN 61000-6-2									
Emission for Heavy industrial environment	EN 61000-6-4									

EMS (Electromagnetic Susceptibility) Protection Level	EN61000-4-2 (ESD) Level 3, Criteria B
	EN61000-4-3 (RS) Level 3, Criteria A
	EN61000-4-4 (EFT) Level 3, Criteria A
	EN 61000-4-5 (Surge) Level 3, Criteria B
	EN 61000-4-6 (CS) Level 3, Criteria A
	EN61000-4-8 (PFMF) Field strength 300A/m Criteria A

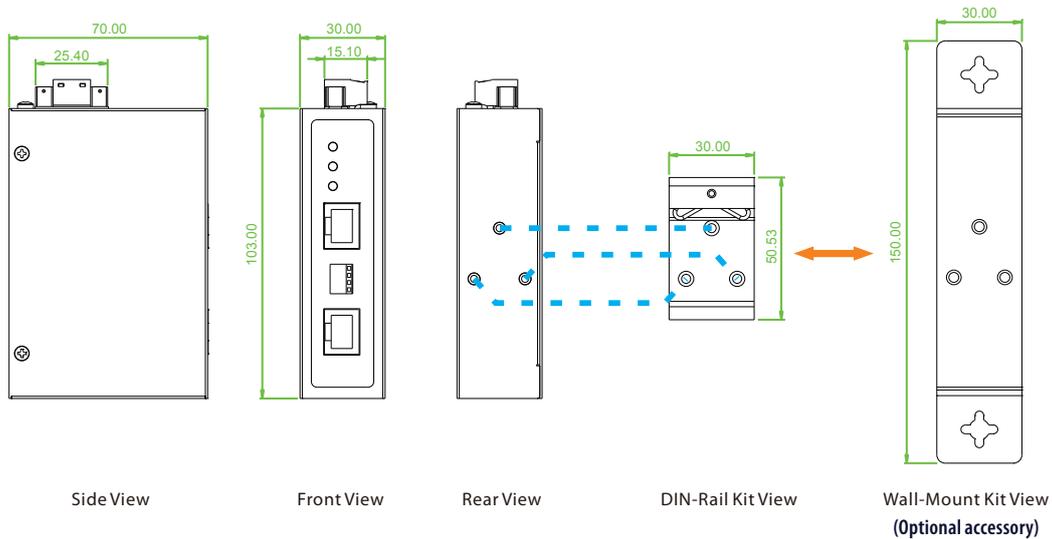
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Application

Figure : INJ-IG01-PH Gigabit Ethernet PoE Injector



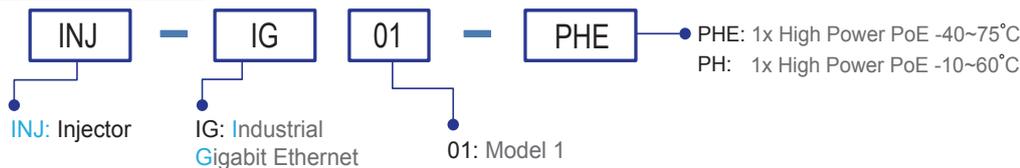
Dimensions



Ordering Information

Model Name	Ethernet		PoE Port		Powerinput		Certification			Operating Temperature
	10/100/1000 Base-T	IEEE802.3at (PSE)	Power Budget	Single power	Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE	FCC		
INJ-IG01-PH	1	1	15/30/36/60	48VDC	V	V	V	V	-10~60°C	
INJ-IG01-PHE	1	1	15/30/36/60	48VDC	V	V	V	V	-40~75°C	

Model Naming Rule



Package List

- INJ-IG01-PH device
- Quickly installation guide
- Din Rail with screws
- Terminal block

Optional Accessories

Wall mount kit Accessories

IND-WMK03	Wall Mount kit for Industrial product (Compact, 150 x 30mm)
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