



# 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

<b>IEEE Standard</b>	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
<b>PoE Standard</b>	IEEE802.3at, IEEE802.3af
<b>PoE Standard &amp; RJ-45 Pin Assignment</b>	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)
<b>Network Connector</b>	1 RJ-45 for 10/100/1000Base-T Data, and 1 RJ-45 for 10/100/1000Base-T Data with PoE Output power
<b>Network Cable</b>	UTP/STP above Cat. 5e cable EIA/TIA-568 100-ohm (100m)
<b>LED</b>	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.
<b>DIP SW</b>	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
<b>Reverse Polarity Protection</b>	Supported for power input
<b>Overload Current Protection</b>	Supported

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

<b>EMS (Electromagnetic Susceptibility) Protection Level</b>	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

<b>Shock</b>	IEC 60068-2-27
<b>Freefall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-6

## Application

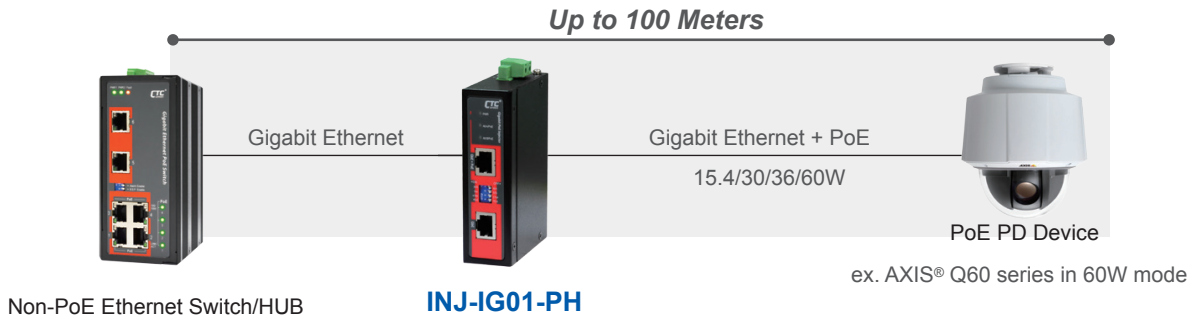
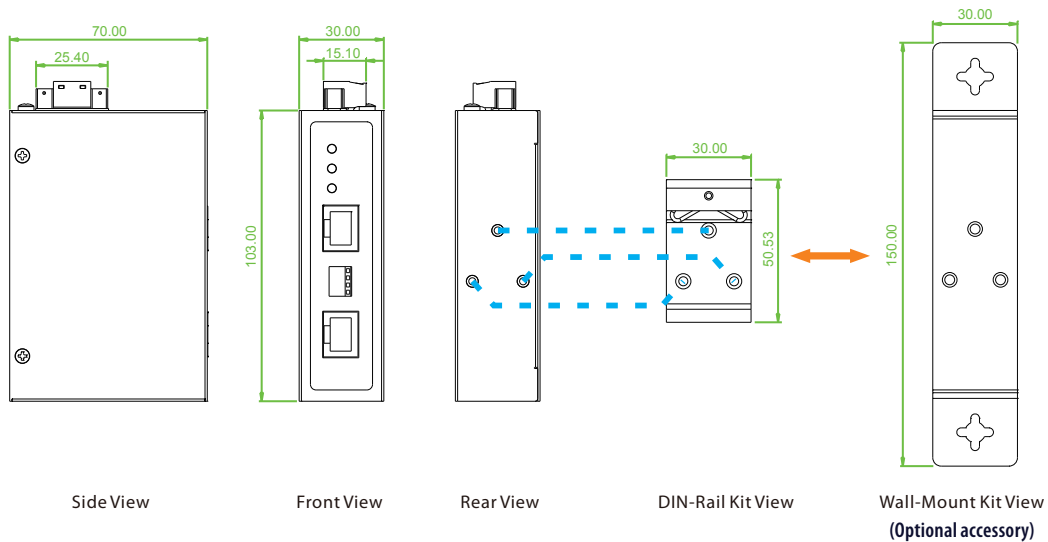


Figure 1 : INJ-IG01-PH Gigabit Ethernet PoE Injector

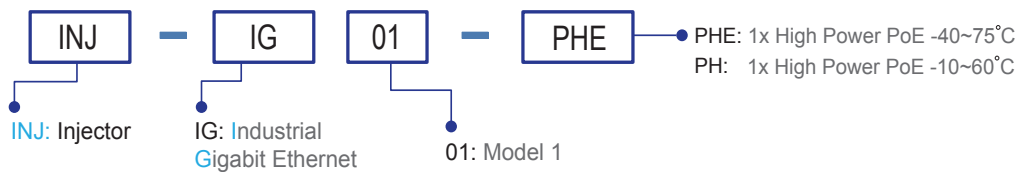
## Dimensions



## Ordering Information

Model Name	Ethernet	PoE Port		Power Input	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	1	1	15/30/36/60	48VDC	V	V	V	V	-10~60°C
INJ-IG01-E	1	1	15/30/36/60	48VDC	V	V	V	V	-40~75°C

### Model Naming Rule



## Optional Accessories

### Wall mount kit Accessories

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

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