INJ-IG01-PH is an industrial grade, single port, gigabit Ethernet PoE (Power over Ethernet) injector. PoE technology 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. 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.

**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 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
- 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)
- A/B PoE_A/PoE_B: (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
- 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 either 2 or 4 pairs mode
- ON: Compatible with some particular PD devices at high power mode (4 Pair mode) such as AXIS® Q60

**Power Supply**
- Normal Ultra High Power 60W, IEEE802.3at 30W, IEEE802.3af 15.4W

**Removable Terminal Block**
- Provide 2 Pin for power input connector

**Operating Temperature**
- -10 ~ 60°C (INJ-IG01-PH)
- -40 ~ 75°C (INJ-IG01-PHE)

**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**
- 409999 Hours (MIL-HDBK-217)

**Warranty**
- 5 years

**Certification**
- EMC: CE
- EMI: FCC Part 15 Subpart B Class A, CE EN55022 Class A
- Railway Traffic Immunity for Heavy industrial environment: EN 61000-6-2
- Emission for Heavy industrial environment: EN 61000-6-4
- EMS: EN61000-4-2 (ESD) Level 3, Criteria B
- EN61000-4-3 (RF) Level 3, Criteria A
- EN61000-4-4 (EFT) Level 3, Criteria A
- EN61000-4-5 (Surge) Level 3, Criteria B
- EN61000-4-6 (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

Gigabit Ethernet
Gigabit Ethernet + PoE
PoE PD Device

INJ-IG01

Figure: INJ-IG01-PH Gigabit Ethernet PoE Injector

Dimensions

INJ-IG01-PH

Ordering Information

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Ethernet</th>
<th>PoE Port</th>
<th>Certification</th>
<th>Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>INJ-IG01</td>
<td>10/100/1000 Base-T</td>
<td>1</td>
<td>IEEE802.3at (PSE)</td>
<td>Power Budget</td>
</tr>
<tr>
<td>INJ-IG01-E</td>
<td>1</td>
<td>1</td>
<td>15/30/36/60 V</td>
<td>V V</td>
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<tr>
<td>INJ-IG01-PH</td>
<td>1</td>
<td>1</td>
<td>15/30/36/60 V</td>
<td>V V</td>
</tr>
</tbody>
</table>

Model Naming Rule

INJ: INJector
IG: Industrial Gigabit Ethernet
01: Model 1
PHE: 1x High Power PoE -40~75°C
PH: 1x High Power PoE -10~60°C

Accessories

MDR-40-24: Industrial Power, Input 85 – 264VAC, Output 24VDC, 40W, -20 – +70°C
IND-WMK03: Wall Mount Kit for Industrial product (Compact, 150x 30mm)