Product Specifications

Industrial IEEE 802.3at/af Gigabit PoE+ Injector

IPOE-162

Version 3.0

Change History:

Revision:	Date:	Author:	Change List
Version 3.0	2018/12/26	Bryant Wu	Enhance DC 12V PoE output ability
Version 2.0	2018/5/14	Bryant Wu	Add Support DC 12V
Version 1.1	2012/8/31	Bryant Wu	Add CE description
Version 1.0	2011/7/13	Bryant Wu	Initial Release

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Reviewed By:		Approved By:	Kent Kang

1. PRODUCT DESCRIPTION

The following key features of PLANET IPOE-162 Industrial IEEE 802.3at Power over Ethernet Plus Injector are:

- IEEE 802.3at Power over Ethernet standard compliant
- 12~48V DC power input for redundant power
- Maximum 30W output power support
- Passive 10/100/1000Mbps duplex mode support
- -40 to 75 degrees C operating temperature
- IP30 metal case with DIN-rail or wall mounting
- Free fall, shock and vibration tested for industrial stability

Quick and Easy High Power PoE Network Deployment

The IPOE-162 is a Mid-Span Industrial IEEE 802.3at Gigabit Power over Ethernet Plus Injector which simultaneously provides DC 56V and data over a Cat.5/5e/6 Ethernet cable to PLANET IPOE-162S/POE-162S Splitter. The maximum distance between the Injector and Splitter is 100 meters. As the IPOE-162 is compatible with the IEEE 802.3af Power over Ethernet Splitter, it can provide a maximum power output of up to 15.4 watts.

With the Industrial IEEE 802.3at Gigabit Power over Ethernet Plus devices installed, the system administrator only has to use one single RJ45 Ethernet cable to carry both power and data to each device, thus making the network management easier and more effective.

Stable Operation Assured under Difficult Environments

The IPOE-162 provides a high level of immunity to electromagnetic interference and heavy electrical surges typical of environments found on plant floors or in curb-side traffic control cabinets. Its operating temperature ranging from -40 to 75 degrees C allows the IPOE-162 to be placed in almost any difficult location.

The IPOE-162 comes with a compact IP30-rated metal case that allows either DIN-rail or wall mounting for efficient use of cabinet space. Its wide-ranging voltages of 12 to 48V DC are suitable for worldwide operability with high availability applications requiring dual or backup power inputs.

2. PRODUCT FEATURES

- **Interface**
  - 2 RJ45 interfaces
    - 1-port **Data + Power** output
    - 1-port **Data input**
  - One terminal block for master and slave power input. (Power Range: 12 ~ 48V DC redundant power)
- **Power over Ethernet**
  - Gigabit Power over Ethernet Plus mid-span PSE
  - IEEE 802.3at/802.3af PoE compliant
  - IEEE 802.3at/802.3af splitter devices compatible
  - Supports PoE Power up to 30 watts for the PoE port
  - Provides DC 56V power over RJ45 Ethernet cable to device with Ethernet port
  - Auto-detection of PoE IEEE 802.3at/802.3af devices
  - Remote power feeding up to 100m
- **Hardware**
  - IP30 slim metal case
  - LED indicators for power LED and PoE-in-use
- **Industrial Case** and **Installation**
  - DIN-rail and wall-mount designs
  - Supports 6000 VDC Ethernet ESD protection
  - -40 to 75 degrees C operating temperature
- **Standard Compliance**
  - IEEE 802.3 10BASE-T
  - IEEE 802.3u 100BASE-TX
  - IEEE 802.3ab 1000BASE-T
  - IEEE 802.3at/802.3af Power over Ethernet standard
  - FCC Part 15 Class A, CE

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

Power IC: TI LM5022

POE Controller: PowerDsine PD69101

3.2 FUNCTION SPECIFICATIONS

Product		IPOE-162
Hardware Specifications		
Hardware Version		3
Interface	**Input Port**	1 x RJ45 STP (Data In)
	Output Port	1 x RJ45 STP (Data + Power Out)
	Input Power Terminal Block	1
LED Indicator		System: Power 1 (**Green**), Power 2 (**Green**), Fault (**Red**) PoE Port: PoE-in-use x 1 (**Orange**)
Network Cable		10BASE-T: UTP Cat. 3, 4, 5, up to 100m (328ft) 100BASE-TX: UTP Cat. 3, 4, 5, up to 100m (328ft) 1000BASE-T: UTP Cat. 5, 5e, 6 up to 100m (328ft) EIA/TIA- 568 100-ohm STP (100m)
Data Rate		10/100/1000Mbps
Dimensions (W x D x H)		32 x 87 x 135 mm
Weight		489g
Unit Input Voltage		12 ~ 48V DC
Power Consumption		32 watts max.
Number of devices can be powered		1
Installation		DIN-rail kit and wall-mount ear
Alarm		Provides one relay output for power failure; alarm relay current carry ability: 3A @ DC 24V
Enclosure		IP30 slim metal case
Power over Ethernet		
PoE Standard		IEEE 802.3at Power over Ethernet Plus / mid-span PSE
PoE Power Output		30 watts
PoE Power Supply Type		Mid-span
Power Pin Assignment		4/5(+), 7/8(-)

Standards Conformances	
Standards Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32(Free fall) IEC60068-2-27(Shock) IEC60068-2-6(Vibration)
Environment	
Operating Temperature	-40 ~ 75 degrees C
Storage Temperature	-40 ~ 85 degrees C
Humidity	5 ~ 95% (non-condensing)

The PoE power output ability will depend on the distance.

3.3 PHYSICAL SPECIFICATIONS:

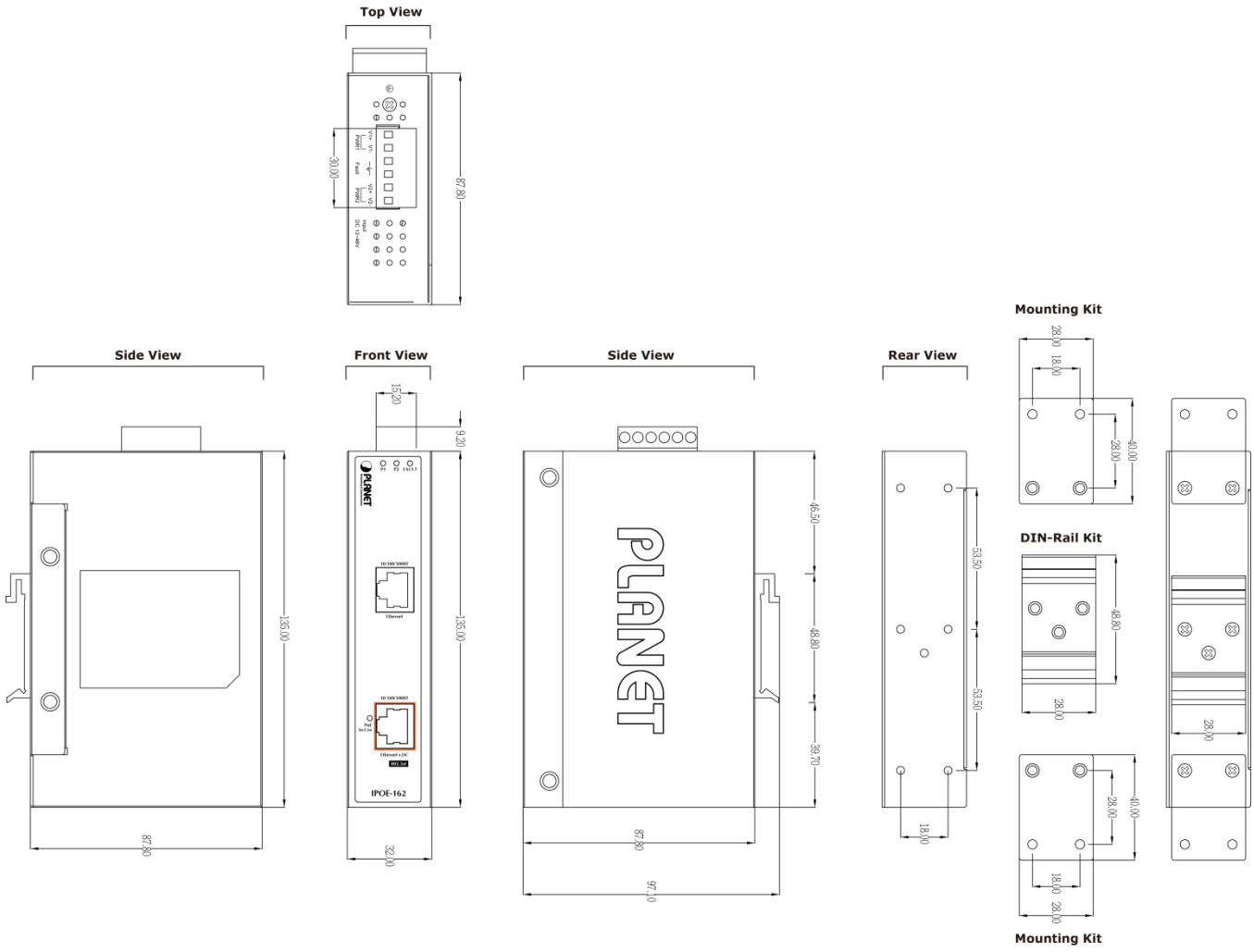
Dimensions:

135 x 97 x 32 mm (W x D x H)

Weight:

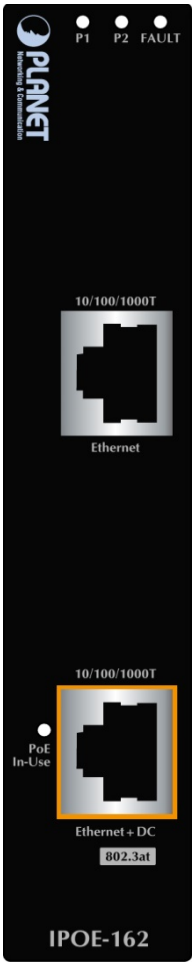
489g

Physical Dimensions:



Unit: mm

Front Panel:



LED Definition:

LED	Color	Function
P1	Green	Indicates Power 1 has power.
P2	Green	Indicates Power 2 has power.
FAULT	Red	Indicates either Power 1 or Power 2 has no power.
PoE In-Use	Orange	Indicates the port is providing 56V DC in-line power.

3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: -40 degrees C ~ 75 degrees C

Relative Humidity: 5% ~ 90% (non-condensing)

Storage:

Temperature: -40 degrees C ~ 85 degrees C

Relative Humidity: 5% ~ 90% (non-condensing)

3.5 ELECTRICAL SPECIFICATION

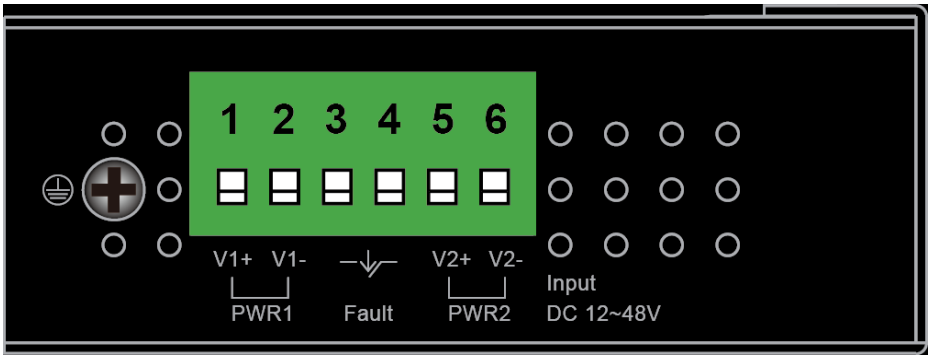
Input Voltage:

DC 12 to 48V

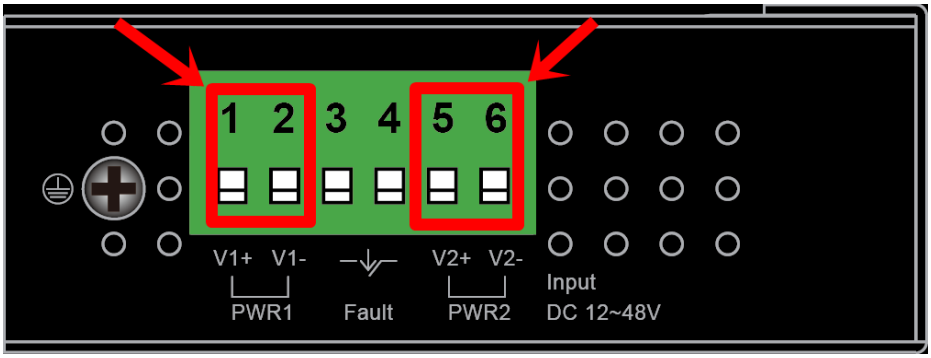
Power Consumption:

	12V DC Input	24V DC Input	48V DC Input
System On (Without PoE)	0.84 watts / 2.8 BTU/hr	0.96 watts / 3.2 BTU/hr	1.92 watts / 6.5 BTU/hr
30W PoE Output (with 100-meter UTP cable)	30.84 watts / 105.1 BTU	30.96 watts / 105.5 BTU	31.92 watts / 108.8 BTU

Power Input PIN Definition:



Terminal Block PIN Definition:



1	2	3	4	5	6
Power 1		Fault		Power 2	
+	-			+	-

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

Stability Test:

IEC 60068-2-32 (Free fall)

IEC 60068-2-27 (Shock)

IEC 60068-2-6 (Vibration)

3.7 RELIABILITY

MTBF > 100,000 hrs @ 25 degrees C

3.8 BASIC PACKAGING

- The Industrial IEEE 802.3at Gigabit Power over Ethernet Plus Injector x 1
- User's Manual x 1
- DIN-rail Kit x 1
- Wall-mount Kit x 1
- Dust Cap x 2

3.9 PACKING INFORMATION

Box Dimensions (W x D x H):	205 x 144 x 46 mm
Gross Weight:	0.578 kg
Carton Dimensions (W x D x H):	435 x 325 x 280 mm
Total Weight:	11.9 kg
Quantity:	20pcs per carton