80W Power over Ethernet Adapter
High Power Single Port Injector

Features

- Fully Compliant Detection, Disconnect and Voltage Control IEEE802.3af
- Diagnostic LEDs
- Gigabit Compatible
- Single Source 4 Pair Power Current Sharing
- Wide Temperature range -40 to +55˚C
- Full Protection OCP, OVP
- Broken Wire Detection

Applications

- Satellite Receiver
- Wireless Network Access Points
- LCD Displays
- Security Cameras
- Kiosks
- Computer Workstations

Safety Approvals

- cUL/UL
- CE
- C-Tick
- IRAM
- CCC
- SAA
- Korea (PHC)

Mechanical Characteristics

- Length: 203mm (8in)
- Width: 108mm (4.25in)
- Height: 63mm (2.5in)
- Weight: 1.93Kg

Output Specifications

Model	DC Output Voltage	Load		Regulation	
		Min.	Max.	Line	Load
POE80U-560G	+56V +56V	0A	0.72A	54-57V DC under all conditions	

INPUT:

AC Input Voltage Range
85 to 264VAC

AC Input Voltage Rating
100 to 240VAC, 47-63Hz

AC Input Current
2.0A (RMS) maximum for 90VAC
1.2A (RMS) maximum for 240VAC

Leakage Current
3.5mA maximum @ 254VAC 60Hz

AC Inrush Current
50A (RMS) maximum for 115VAC
50A (RMS) maximum for 230VAC

OUTPUT:

Total Output Power
80W

DC Offset
No data degradation with DC imbalance 18mA per min.

Ripple and Regulation
100mV maximum

Efficiency
75% (typical) at maximum load, and 120VAC 60Hz

Hold-up Time
10mS min. 120VAC and maximum load

Transient O/P Voltage Protection
60V maximum at switch on and off at any point on AC line phase

ENVIRONMENTAL:

Temperature

Operation	-40 to +55°C
Non-operation	-50 to +85°C

Humidity

Operation	5 to 90%

EMC
FCC Part 15 Class B
EN55022 Class B

Isolation Test
Primary to Secondary: 4242VDC for 1 minute 10mA
Primary to Field Ground: 2121VDC for 1 minute
Output to Field Ground: 2121VDC

Immunity

ESD:	EN61000-4-2. Level 3
RS:	EN61000-4-3. Level 2
EFT:	EN61000-4-4. Level 2
Surge:	EN61000-4-5. Level 3
CS:	EN61000-4-6. Level 2
Voltage Dips	EN61000-4-11
Harmonic:	EN61000-3-2

Insulation Resistance
Primary to Secondary: >10M OHM 500VDC
Primary to Field Ground: >10M OHM 500VDC

IEEE 802.3af/at Interoperability
If 25kohm is detected the unit operates in "IEEE802.3at mode" 30W 2 pair powering. 12.5k detection resistance required for full power
UNH Interoperability report available upon request

FEATURE:

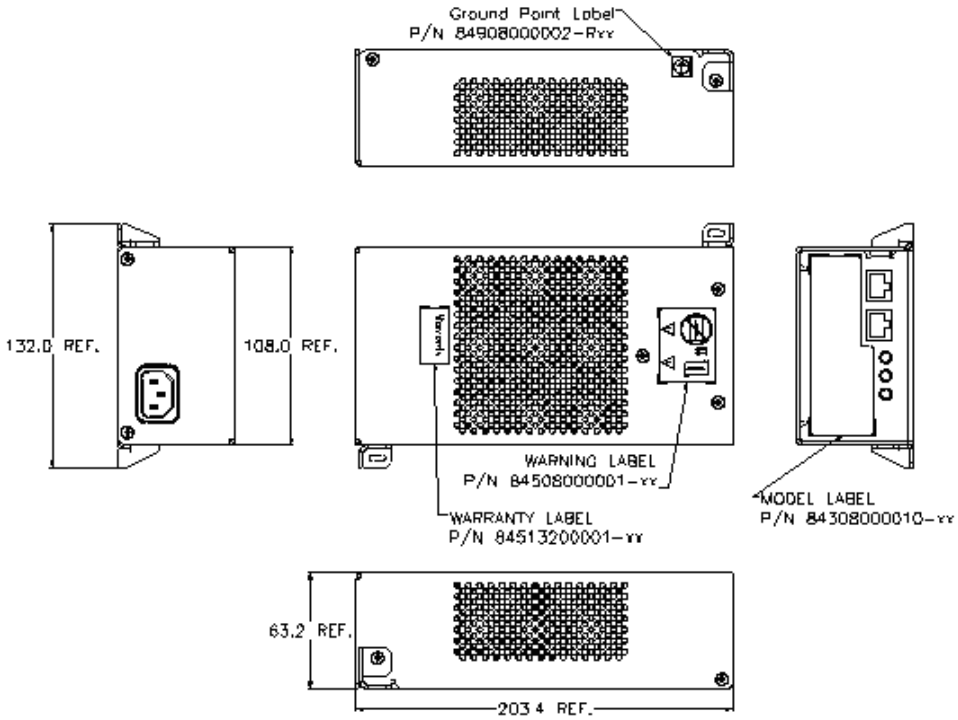
Detection
Same as IEEE802.3af and IEEE802.3at, it will power 2 pairs at 30 Watts
12.5kohm detection resistor value required to turn on full power 4 pair power.

Over Voltage/Current, Short Circuit Protection
Outputs equipped with short circuit protection and overload protection as per 802.3af specifications except max average pair current is 0.72A, Peak 1.4A per pair
The output can be shorted permanently without damage

Indicators
Green LED 1: DC Power "OK"
Red LED: Fault detected
Solid Green LED 2: Power detected "CONNECT" at 75W
Flashing Green LED 2: IEEE802.3at detected "CONNECT" at 30W

Input Connector
IEC320 inlet 3 pin

Dimension Diagram Unit: mm **WWW.PHIHONG.COM**



Description of LED Functions for Gigabit Power Injector

Power-up Sequence:

Upon power-up, all 3 LEDs will light for 2 seconds, as part of the self-test for the internal microprocessor software. After the 2 second period, the "ON" LED will illuminate green. The DC output voltage is now available for powering a compliant load (Phihong Proprietary detetcion).

Detection Sequence:

Once a compliant load is attached to the output RJ45 connector, the green "CONNECT" LED will illuminate.
Should the load be non-compliant then the LEDs will blink a code specific to the cause for non-detection.

Detection Failure Codes:

1. Incorrect resistive signature – The green “CONNECT” and red “FAULT” LEDs will blink 3 times.
2. Incorrect capacitive signature – The green “ON” LED will blink 3 times.
3. Incorrect Voffset – The green “CONNECT” and green “ON” LEDs will blink 3 times.
4. Unstable current measurement – The green “ON” LED will blink 3 times
5. Low voltage sensed during detection (overload) – The red “FAULT” LED will blink 3 times

After the LEDs blink 3 times the Power Injector will continue to try to detect a valid load. Until the correct load is applied, the LEDs will continue to blink. If there is an open circuit connected to the output RJ45 then the LEDs will not blink but the Power Injector will continue to try to detect a valid load.

Fault Sequence:

Should there be a fault such as an overload or short circuit then the red "FAULT" LED will illuminate. The red “FAULT” LED will illuminate for 2 seconds and then go off as the power supply tries to re-detect a valid load. If there is a problem detecting the load, the LED will indicate the possible fault as per the codes in the section above.