



80W Power over Ethernet Adapter High Power Single Port Injector



iol InterOperability Laboratory
Part of the University of New Hampshire Research Computing Center



Features

- Fully Compliant Detection, Disconnect and Voltage Control IEEE802.3af
- Diagnostic LEDs
- Gigabit Compatible
- 1 Year Warranty
- 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	0A	0.72A	54-57V DC under all conditions	
	+56V				

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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%
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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

UNH Interoperability report available upon request

FEATURE:**Detection**

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

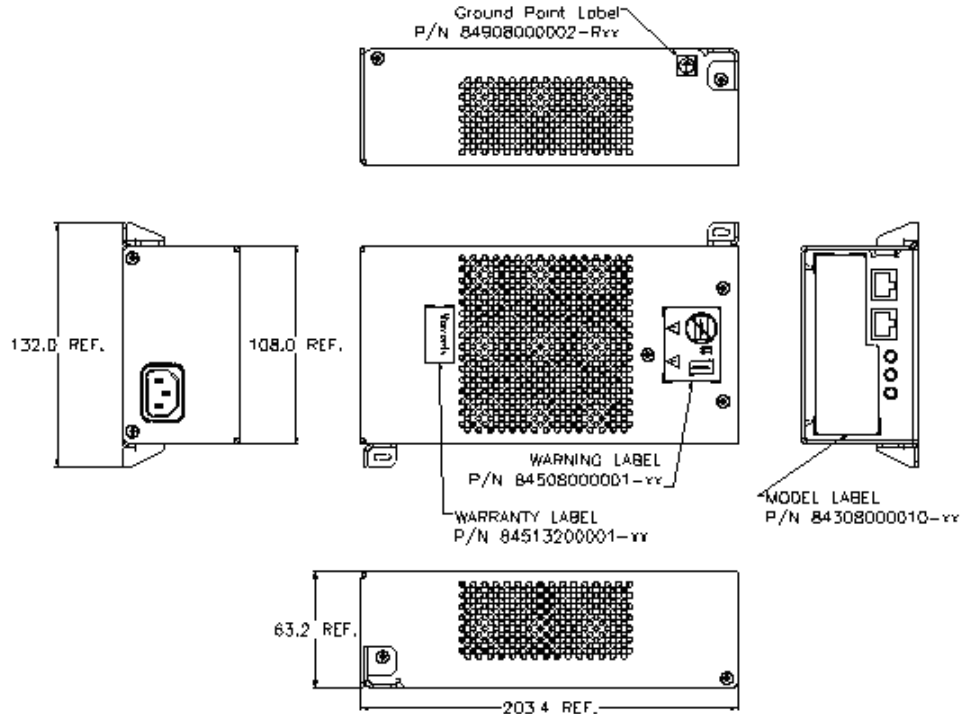
Green LED 1: DC Power "OK"
 Red LED: Fault detected
 Green LED 2: Power detected "CONNECT" at 80W

Input Connector

IEC320 inlet 3 pin

Warranty

1 Year



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 detection).

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.