



## 75W Power over Ethernet Adapter Ultra Power over Ethernet Single Port Injector



Shown here in standard on the left and with NIC option on the right

### Features

- Fully Compliant Detection, Disconnect and Voltage Control IEEE802.3af
- Diagnostic LEDs
- Gigabit Compatible
- 1 Year Warranty
- SNMP Management Option
- Full Power Cisco AP1250 Support
- Proprietary Detection, Disconnect and Overload Protection
- Full Protection OCP, OVP
- Single Source 4 Pair Power Current Sharing
- Broken Wire Detection
- Limited Power Source

### Applications

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

### Safety Approvals

- cUL/UL
- CE

### Mechanical Characteristics (Standard Model)

- Length: 166mm (6.53in)
- Width: 80mm (3.15in)
- Height: 44mm (1.73in)
- Weight: 0.5Kg

### Output Specifications

Model	DC Output Voltage*	Load		Regulation	
		Min.	Max.	Line	Load
POE75U-1UP(x)	+56V	0A	0.67A	54-57V DC under all conditions	

Options: (x) = N for SNMP Management Option

Note (\*) = 4-pair powering for 2 outputs at 56V, 0.67A

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**INPUT:**

**AC Input Voltage Range**

90 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**

30A (RMS) maximum for 115VAC  
60A (RMS) maximum for 230VAC

**OUTPUT:**

**Total Output Power**

75W

**Ripple and Regulation**

250mV maximum

**DC Offset**

No data degradation with DC imbalance 18mA per min.

**Efficiency**

80% (typical) at maximum load, and 120VAC 60Hz

**Hold-up Time**

10mS min. 120VAC and maximum load

**Transient O/P Voltage Protection**

60V maximum

**ENVIRONMENTAL:**

**Temperature**

Operation -20 to +40°C  
Non-operation -25 to +65°C

**Humidity**

Operation 5 to 90%

**EMC**

FCC Part 15 Class B  
EN55022 Class B

**Warranty**

1 Year

**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 3  
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 Class A

**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" 33.6W 2 pair powering. 12.5k detection resistance required for full power  
UNH Interoperability report available upon request

**FEATURE:**

**Cisco Legacy detection**

No extern parts required for Legacy devices:  
VoIP Phones:  
7910,7912,7940,7960  
Access Points:  
350,1100,1200,1250

**Over Voltage/Current, Short Circuit Protection**

Outputs equipped with short circuit protection and overload protection as per 802.3af specifications except max average current is 1.34A  
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**

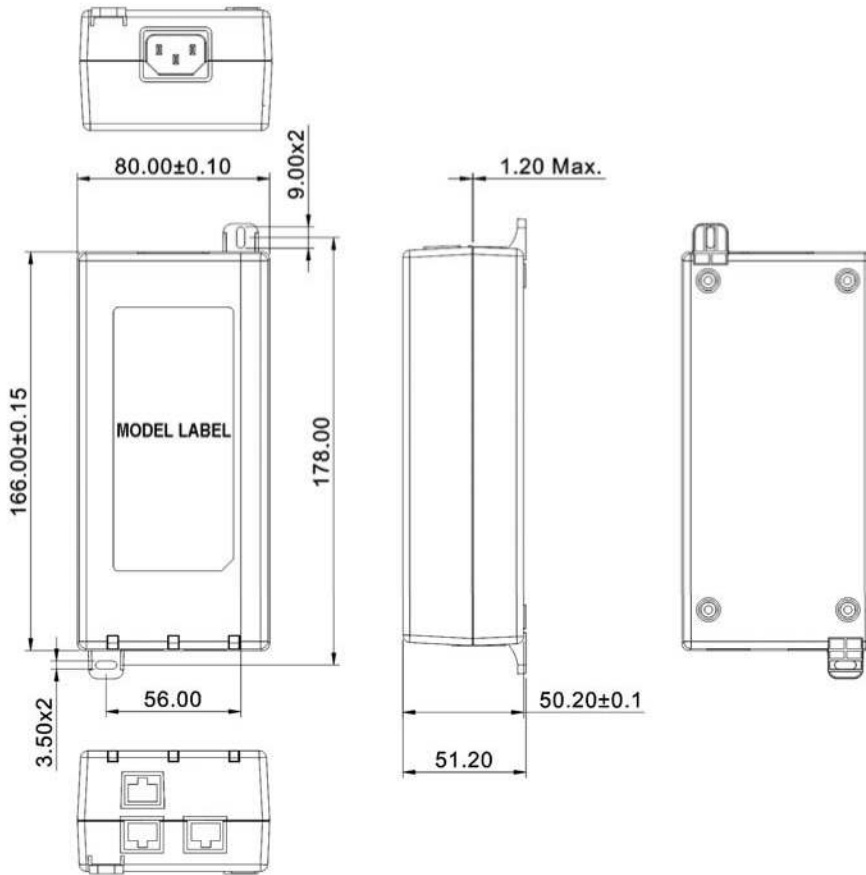
IEC320 inlet 3 pin

**Output Connection**

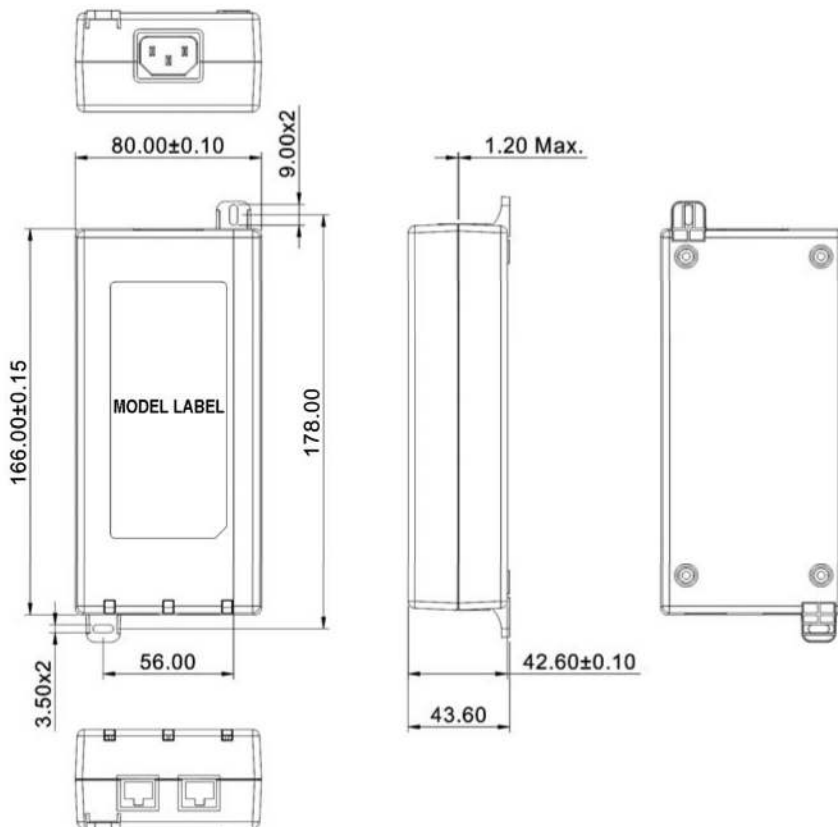
4-pair powering for full power  
Pins 3,6, 4,5(+) Pins 1,2, 7,8 (-)

2-pair powering for IEEE802.3at mode  
Pins 3,6(+) Pins 1,2 (-)

**Case as featured with the SNMP Management option**



**Case without the SNMP Management Option**





## **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 seconds period, the "ON" LED will illuminate green. The DC output voltage is now available for powering a compliant load (to the 802.3af PoE standards).

### **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 a possible fault as per the codes in the section above.