



90W Single Port Multi-Gig Power over Ethernet IEEE802.3bt Compliant Power Injector



Features

- IEEE802.3bt Compliant
- 24VAC Input & 20 – 55VDC Input
- 2.5G Data Speed
- Shielded DC Jacks
- Diagnostic LEDs
- 4 Pair Powering +3,4,5,6 / - 1,2,7,8
- Full Protection Over-Current, Over-Voltage and Short Circuit Protection
- Limited Power Source
- 1 Year Warranty

Applications

- Wireless Network Access Points
- Security Cameras

Safety Approvals

- UL 62368-1
- IEC 62368-1

Mechanical Characteristics (Standard Model)

- Length: 166mm (6.53in)
- Width: 80mm (3.15in)
- Height: 44mm (1.73in)
- Weight: 500g (1.1lbs)

Output Specifications

Model	Data Speed	DC Output Voltage	Load		Regulation ¹	
			Min.	Max. ²	Line	Load
POE90D-1BTP-R	2.5G	56V	10mA	1.6A	54-57V	

Maximum Load by Input Voltage

INPUT VOLTAGE	OUTPUT CURRENT	
	Output #1, #2	COMBINED
19.2VAC – 28.8VAC	0.8A	1.6A
20VDC-27VDC	0.8A	1.6A
>27VDC-55VDC	0.67A	1.34A

Notes:

1. Voltage measured within 2" of the output RJ45 connector on data pairs 3,6(+) and 1,2(-)
2. Combined output on data pairs and spare pairs. Otherwise 800mA on data pairs 3,6(+) 1, 2(-) and spare pairs 4,5(+) 7,8(-). See Maximum Load by Input Voltage table. Power vs. Temperature curve on page 3.

INPUT:**AC Input Voltage Range**

24VAC +/- 20% (19.2VAC to 28.8VAC)

DC Input Voltage Range

20VDC to 55VDC

AC Input Frequency

50Hz to 60Hz

AC Input Current

8A (RMS) maximum at 19.2VAC, full load

DC Input Current

6A DC maximum, full Load

Leakage Current

3.5mA maximum @28.2VAC, 60Hz

AC Inrush Current

45A Max at 19.2VAC, full load

70A Max at 28.8VAC, full load

OUTPUT:**Total Output Power**

90W

Ripple and Regulation²

200mV max @25°C, 19.2VAC – 28.8VAC,

20VDC – 55VDC

Efficiency

82% minimum at 24VAC, 84% minimum at 24VDC @ 25°C and Full Load

Hold-up Time

10mS min. at 24VAC 60Hz max load

3mS min. at 24VDC and Full Load

ENVIRONMENTAL:**Temperature**

Operation -20°C to +70°C

Non-operation -40°C to +75°C

Humidity 5 to 90%

EMC

Complies with FCC Class A

Complies with EN55032 Class A

Immunity

EN55035

IEC61000-3-2 (Harmonic) Class A

IEC61000-3-3

IEC61000-4-2 (ESD) 6KV Contact/8KV Air

IEC61000-4-3 (RS) 3V/m

IEC61000-4-4(EFT) 1KV Input 0.5KV Output

IEC61000-4-5 (Surge) 1KV L-L, 2KV L-PE

IEC61000-4-6 (CS) 3V

IEC61000-4-11 (Dips) Class 3

Dielectric Withstand (Hi-POT)

Primary to Secondary: 2121VDC for 1

Minute, 10mA

Primary to Earth Ground: 2121VDC for 1

Minute, 10mA

MTBF

>100,000 Hours Min, Full Load, 24VAC 25°C

FEATURES:**Over Current Protection**

Output #1(OUT) ≤ 1100mA

Output #2(OUT) ≤ 1100mA

Output #1 and #2 combined(OUT) ≤ 2200mA

Over Voltage Protection

Output voltage shall not exceed 60VDC

Short Circuit Protection

Non-Latching. Auto-recovery

Input Connector

ANYTEK Three Pin Terminal Block

Output Connector

RJ45

Output Connection

+pins 3,4,5,6 / -pins 1,2,7,8

Notes:

1. The characteristics defined are at ambient temperature of 25°C unless otherwise specified
2. Measured with by-pass capacitors 0.1uf/10uf at output connector terminal and oscilloscope set at 20Mhz (tested by oscilloscope). 20 minutes warm-up required when operating at negative temperature.

LED Indicators:

Main Power LED:

Green Solid – Power Good “On”

POE Fault LED:

Red Flash long – Fault Condition (Over Current or Shorted)

Flash short with Green – Invalid Connection/Detection

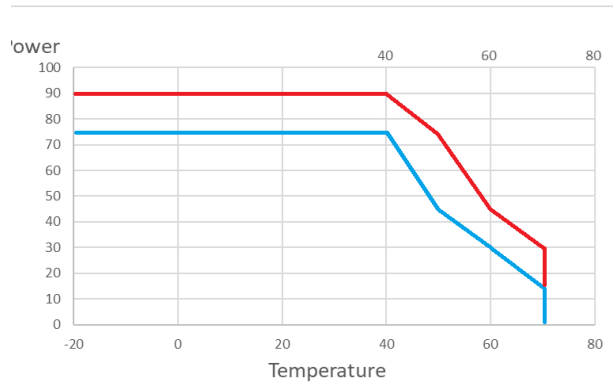
POE LED:

Green Solid – Valid Connection/Detection and Load

Flash short and slow – No connection

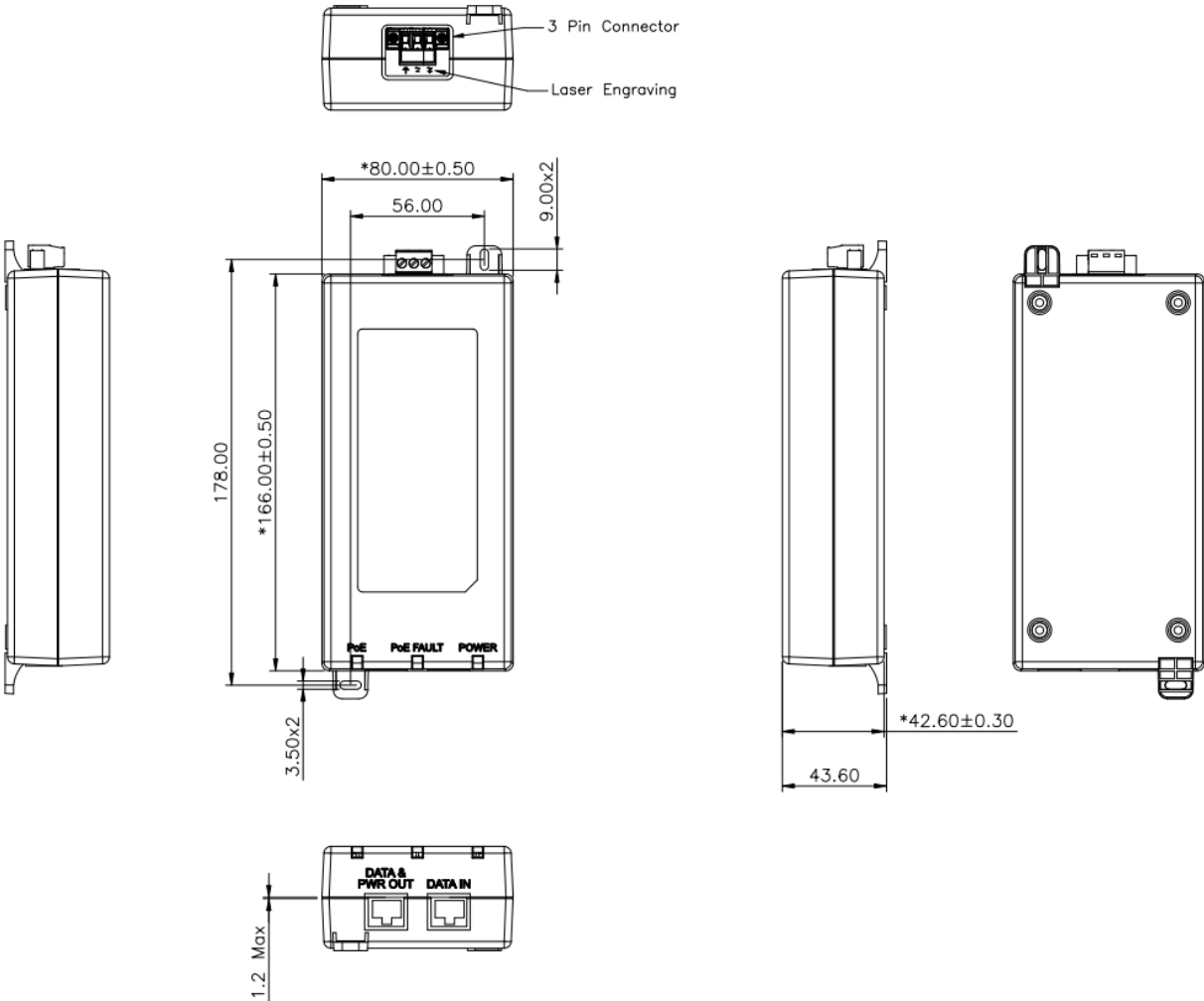
Power vs. Temperature

Power Versus Temperature



Input Voltage: 20VDC-27VDC, 19.2VAC - 28.8VAC
Input Voltage: >27VDC-55VDC

Outline Diagram (mm)





**Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance Information**

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This device complies with/The devices in this product series comply with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.