

## Sapling PoE Injector - V1.1

### Applications:

- IP Telephones
- Security Cameras
- Wireless Network Access Points
- IP Print Servers
- Bluetooth Access Points

### Mechanical Characteristics:

- Length: 140mm (5.51in)
- Height: 36mm (1.42in)
- Width: 65mm (2.55in)
- Weight: 0.2Kg (0.44lb.)

### Features:

- Fully Compliant Detection, Disconnect,
- Overload and Voltage Control IEEE802.3af
- UNH IOL Test Report
- Diagnostic LEDs
- Data and Power Carried over One Ethernet Cable
- Full Protection OTP, OCP, OVP
- Internal Signature Resistance IEEE802.3 standard
- Guaranteed Protection
- 1 Year Warranty

### Safety Approval:

- cUL/UL
- SAA
- CE
- VCCI
- S-Jet
- C-Tick



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### A-POE-INJECTOR-0 Characteristics:

#### INPUT:

##### AC Input Voltage Range

90 to 264VAC

AC Input Voltage Rating

100 to 240VAC

##### AC Input Current

0.5A (RMS) maximum for 90VAC

0.35 A(RMS) maximum for 240VAC

##### Leakage Current

0.25mA maximum @ 254VAC 60Hz

##### AC Input Frequency

47-63Hz

##### AC Inrush Current

15A (RMS) maximum for 115VAC

20A (RMS) maximum for 230VAC

#### OUTPUT:

##### Total Output Power

15.4W

##### Ripple and Regulation

100mV maximum

##### Efficiency

65% (typical) at maximum load, and 120VAC 60Hz

##### Hold-up Time

16mS min. 120VAC and maximum load

##### Transient O/P Voltage Protection

60V maximum at switch on and off at any AC line Phase

#### ENVIRONMENTAL:

##### Temperature

Operation 0 to +40°C

Non-operation -25 to +65°C

##### Humidity

Operation 5 to 90%

#### EMC

FCC Part 15 Class B

EN55022 Class B

VCCI, C-Tick

#### Isolation Test

Primary to Secondary: 3000VAC for 1 minute

10mA

Primary to Field Ground: 1500VAC for 1 minute

Output to Field Ground: 1500VAC

#### Immunity EN50082-1

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

#### FEATURE:

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

Outputs equipped with short circuit protection and overload protection as per 802.3af specifications

The output can be shorted permanently without damage

##### Indicators

Green LED 1: Power detected "ON"

Red LED: Fault detected

Green LED 2: Valid IEEE802.3af load detected and connected

##### Input Connector

IEC320 inlet 3 pin, RJ45

##### Warranty

1 Year

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### Description of LED Functions for 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 (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 nondetection.

#### 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 redetect a valid load. If there is a problem detecting the load, the LEDs will indicate a possible fault as per the codes in the section above.

### Ordering Information:

POE Injector: A-POE-INJECTOR-0

DC Output Voltage: 48V

Load:

Min: 0A

Max: 0.32A

Regulation

Line: +4%

Load: +4%