

Ethernet Power Inserters for Power-over-Ethernet Devices



These Power Inserter Units are small indoor modules that inject DC power into the unused lines of the Ethernet Cat5 cable. They can be used to provide power over the Ethernet to any of the Afar pulsAR wireless Ethernet Bridges.

There are two models, one for operation from an AC source, and the other for operation from a DC source.

The AC Power Inserter Unit includes a power supply for connection to an AC outlet (90-264 VAC), two RJ45 connectors and a bi-color LED. The two RJ-45 connectors are labeled "To LAN" and "To Radio". The power supply output is 24 VDC (0.8A) which is applied to the radio.

The bi-color LED turns amber when there is AC power applied to the power inserter but no current is being drawn by the device. It turns green once the device draws 20 mA or more.

The DC Power Inserter Unit has two RJ45 connectors labeled "DATA" and "DATA+PWR OUT", a green LED, and a 3 ft pigtail cable for connection to your DC power source. With the newer Afar radios you can use a DC voltage from 10 to 58 volts. This device also includes surge protection on all Ethernet lines. To be effective you must connect the GND terminal on the device to an appropriate earth ground.

The RJ45 that powers the radio carries the DC voltage on the following pins:

V (+): RJ45 pins 4 and 5

V (-): RJ45 pins 7 and 8



PWI-0109: Ethernet Power Inserter for AC power source



PWI-0218: Ethernet Power Inserter for DC power source



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Specifications		AC Power Inserter - PWI-0109
Input Voltage		90 to 264 VAC @ 47 to 63 Hz
Input Current		0.3 A @ 120 VAC 0.2 A @ 230 VAC
Inrush current		<15A peak @ 120 VAC <30A peak @ 230 VAC
Efficiency		70% Min.
Output Voltage		24 VDC @ 0.8 A
Output Ripple		1% Max
Switching Frequency		200 kHz typical
Line Regulation		+/- 0.5%
Load Regulation		+/- 1%
Operating Temperature		-10 to +60 deg C (-14 to +140 deg F)
Max. Humidity		Up to 90% non-condensing
Dimensions (L x W x H)		3.25" x 3.0" x 1.5" (83 x 76 x 38 mm)
Weight		5.2 oz (0.15 kg)
AC Connector		IEC-320 C6 (Supercom SC-14)
Data In / Data Out Connectors		RJ45 Shielded Sockets
LED		Amber / Green
Clamping Voltage		11 V Data / 77.5 V Power
Max Surge Discharge Current		1200 A (8/20 uS) Power
Peak Pulse Current		36 A (10/1000uS) Data
Shunt Capacitance		<5pF Data
Response Time		<1nS
Compliance		
EMI		EN55022 (CISPR22) class B, Meets CE
EMS		EN61000-4-2,3,4,5,6,8,11

Ordering Information		
PWI-0109-06A		Power Inserter for AC source, 6 ft cord with North America plug
PWI-0109-06B		Power Inserter for AC source, 6 ft cord with European (CEE 7/7) plug
PWI-0218		Power Inserter with surge protection for DC source, 3 ft pigtail

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