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PENB1020B

Universal 15.4W

Gigabit PoE Adapter



3 Year Warranty

- 10/100/1000 (MbPS) Data Rates
- Self-contained Injector
- 100-240Vac Universal Input
- IEEE802.3af Compliant Detection, Disconnect, Overload Control Function
- Load Diagnostic LED
- Overload Shutdown and Short Circuit Protection
- Regulated Output with Low Ripple
- Compliant to UL/IEC/EN60950-1
- LPS (Limited Power Source) Compliant



Description

The PENB1020B Series of Power-over-Ethernet (PoE) adapters operate from a 90 to 264Vac input range, and provide up to 15.4W of output power at an output voltage of 48Vdc. These models are capable of operating with Gigabit Data rates, and are IEEE802.3af compliant. Features include diagnostic LED, and overvoltage, overload, and short circuit protection.

Specifications

All specifications are typical at nominal input, full load at 25°C unless otherwise stated			
AC Input	100-240Vac +/- 10%, 47-63 Hz single phase	MTBF	>60,000 hours, calculated (7 years)
Input Current	0.5A @ 90Vac 0.25A @ 180Vac	Hold-Up Time	16mS min. @ 110Vac, 60Hz
Input Inrush Current	60A peak, cold start	Efficiency	65% minimum
Input Protection	Internal Primary Current Fuse provided, 250Vac/3.15A	Output Inrush Current (I _{inrush})	450mA max. Output current in startup mode. (IEEE 802.3af 33.3.8.5)
Dielectric Withstand	4242Vdc Primary – Secondary, 2,150Vdc Primary–GND, 500Vdc Secondary - GND	Overload Current Detection (I _{CLUT})	400mA max. (IEEE 802.3af 33.3.8.6)
Earth Leakage Current	<250µA @ 264Vac, 60Hz	Short Circuit Protection (I _{LIM})	400 to 450mA max. Output current - at short circuit limit. (IEEE 802.3af 33.3.8.8)
Output Power	15.4W continuous, convection cooled	Overload time limit (T _{ovld})	50 to 75ms (IEEE 802.3af 33.3.8.7)
Ripple and Noise	Per (IEEE 802.3af 33.2.8.3) f < 500Hz: 500mVp-p; 500Hz to 150kHz: 200mVp-p 150kHz to 500kHz: 150mVp-p; 500kHz to 1MHz: 100mVp-p	Short circuit time limit (T _{LIM})	50 to 75ms (IEEE 802.3af 33.3.8.9)
Output Voltage (V _{port}) ¹	+48Vdc Typical, 44V to 57V (IEEE 802.3af 33.2.8.1)	Operating Temperature	0° to +40°C
Transient Response	0.5msec for 50% load change typical	Storage Temperature	-30° to +85°C
Regulation	See chart below	Relative Humidity	5% to 95%, non-condensing
Case Material	94V-0 Black Polycarbonate	Altitude	0 to 10,000 ft
Dimensions	W: 1.9" x L: 4.44" x H: 1.3". Weight: 120g	Safety Standards	UL/IEC/EN60950-1, CE, CB

Note: 1. The voltage potential shall be measured between any conductor of one power pair and any conductor of the other power pair

Models

Model Number	Output Voltage	Output Current ¹	Ripple & Noise ²	Max. Power	Regulation Line	Regulation Load ³	IEEE802.3af Compliant?	AC Input Receptacle
PENB1020B4800F01	48Vdc	0.35A	See table above	15.4W	±1%	±4%	Yes	IEC60320, C14
PENB1020B4800N01	48Vdc	0.35A		15.4W	±1%	±4%	Yes	IEC60320, C8

- Note: 1. (I_{port}): Maximum output current in normal powering mode at PSE min output voltage. (IEEE 802.3af 33.3.8.4)
 2. Measured at 20MHz bandwidth, with noise probe as close to output RJ-45 connector as possible, and load terminated with 0.1µF ceramic and 10µF low ESR electrolytic capacitors.
 3. per (IEEE 802.3af 33.2.8.2)

PENB1020B



Universal 15.4W (IEEE802.3af Compliant)

PoE Gigabit

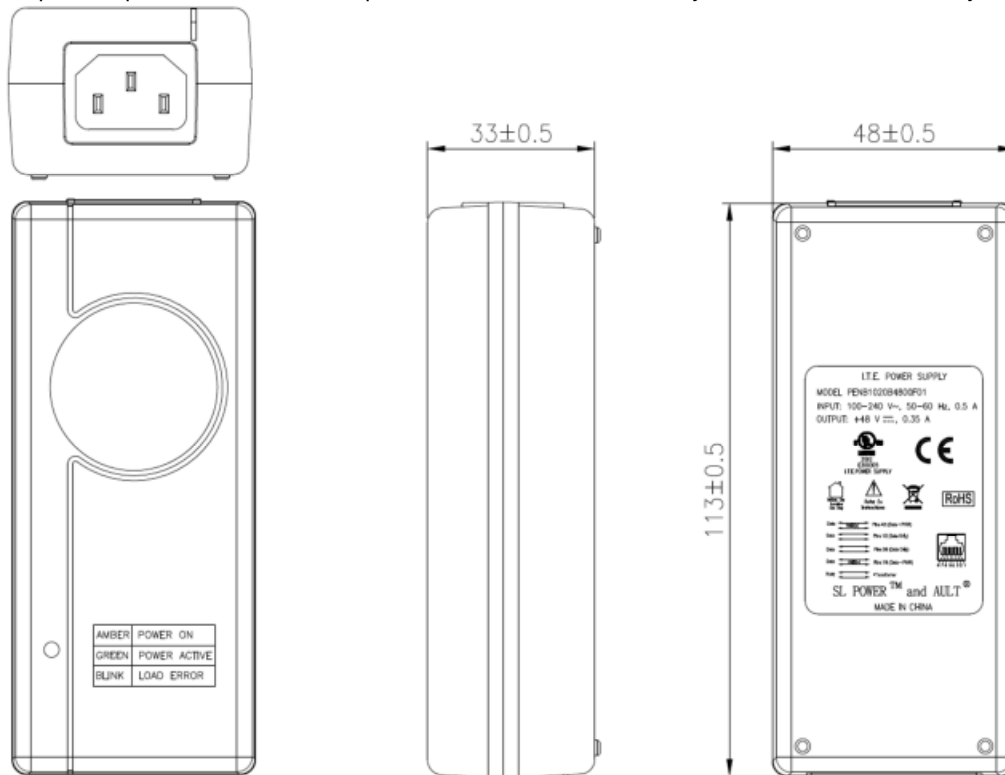
3 Year Warranty

EMI/EMC Compliance

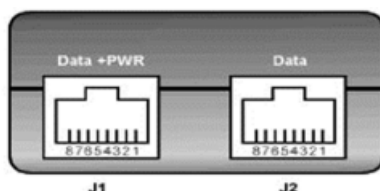
Conducted Emissions	EN55022: 2006+ A1:2007 (Class B)
Radiated Emissions	EN55022: 2006+ A1:2007 (Class B)
Static Discharge Immunity	EN55024/IEC61000-4-2, 6kV/8kV, Criteria A
Radiated RF Immunity	EN55024/IEC 61000-4-3, 3V/m, Criteria A
EFT/Burst Immunity	EN55024/IEC 61000-4-4, 2kV, 5kHz, Criteria A
Line Surge Immunity	EN55024/IEC 61000-4-5, 1kV/2kV, Criteria A
Conducted RF Immunity	EN55024/IEC 61000-4-6, 3V (AM 80%, 1kHz), Criteria A
Power Frequency Magnetic Field Immunity	EN55024/IEC 61000-4-8, 3A/m, Criteria A
Voltage Dip Immunity	EN55024/IEC 61000-4-11, 100%, 10mS; 60%, 100mS; 30%, 500mS Criteria A. 100\$, 5000mS, Criteria B
Line Harmonic Emissions	EN61000-3-2: 2006
Flicker Test	EN61000-3-3: 2008

Outline Drawing

- IEC320 C14 input receptacle shown. Other options available. Consult factory for details and availability.



PSA pinout Alternative B (IEEE 802.3af 33.2.2):



J1 Pins		J2 Pins
1 Data Pair 1	←→	1 Data Pair 1
2 Data Pair 1	←→	2 Data Pair 1
3 Data Pair 2	←→	3 Data Pair 2
4 +VDC	←→	4 No Connection
5 +VDC	←→	5 No Connection
6 Data Pair 2	←→	6 Data Pair 2
7 -VDC	←→	7 No Connection
8 -VDC	←→	8 No Connection