PEAD310 Power Supply Series (310W)

Features:

- Class I and Class II Versions
- Meets Efficiency Level VI Requirements
- LED on Indicator
- Overload Protection
- Short Circuit Protection
- No Load Operation
- 100% Burn-In/Hi-Pot Testing

Description:

The PEAD310 series of AC/DC switching power supplies are for 250-310 watts of continuous output power. They are available as Class I or Class II devices with the inlet of IEC320/C14 or C18 to mate with an interchangeable cord for world-wide use. All models meet FCC Part 15, EN55032, and CISPR32 class B emission limits, and comply with UL, IEC, DOE level VI, CE, and more.

Model	Voltage	Current	Total Power	Load Regulation	Line Regulation	Ripple & Noise (P-P)
PEAD310-12	12VDC	20.83A	250W	±5%	±2%	240mV
PEAD310-13	15VDC	16.66A	250W	±5%	±2%	300mV
PEAD310-13-2	19VDC	15.79A	300W	±5%	±2%	380mV
PEAD310-14	24VDC	12.50A	300W	±5%	±2%	480mV
PEAD310-17	36VDC	8.61A	310W	±5%	±2%	720mV
PEAD310-18	48VDC	6.45A	310W	±5%	±2%	840mV
PEAD310-19-1	56VDC	5.53A	310W	±5%	±2%	840mV

NOTES:

1. Output ripple and noise is measured within a limited bandwidth of 20MHz, with a 0.1µF ceramic capacitor and a 47µF electrolytic capacitor in parallel with the device output.
2. C14 Standard Receptacle.
   For C18 input receptacle, add “F” to the end of the model number.
   For C6 input receptacle, add “S” to the end of the model number.
   For C8 input receptacle, add “SF” to the end of the model number.

Specifications	
Input	
Input Voltage	90-264VAC
Input Frequency	47-63 Hz
Input Current	5A max at 115 VAC 2.5A max at 230 VAC
Inrush Current	<70A peak at 115VAC <140A peak at 230VAC, cold start, 25ºC
Safety Isolation	3.0kVAC Input to Output 1.8kVAC Input to Ground
Leakage Current	3500µA max. at 240VAC
Power Factor	>0.9
Output	
Total Output Power	220-250W See Table
Output Voltage	See Table
Hold Up Time	≥10mS typical/full load/115VAC
Average Active efficiency	>88% with 115VAC/60Hz & 230Vac/50Hz input voltage (CEC level VI compliant)
No Load Power Consumption	<500mW at nominal line input
Turn on Delay	<3 seconds
Protection Features	
Overvoltage Protection	110%-150% Max. of nominal. Latch-off
Overcurrent Protection	110%-150% of maximum output current. Auto recovery
Short Circuit	Auto recovery
Ingress	IP22 Compliant
Environmental	
Operating Temperature	0°C to 60°C (Derate output power linearly from 100% at 40°C to 50% at 60°C)
Storage Temperature	-20°C to +85°C
Operating Humidity	10% - 90% non-condensing
Altitude	<5000m operational and storage
General Specifications	
Dimensions	7.78”(197.7mm)L x 4.02”(102.1mm)W x 2.01”(51.1mm)H
Weight	2.98lb (1350g)
MTBF	>50,000 hours per MIL-HDBK-217F at full load and 25ºC ambient
AC Input Receptacle	IEC60320 C14, C6, C8, C18
DC output Plug	6-pin Molex mini-fit, #39-01-2060 with female terminals #5556. Mates with Molex plug 39-01- 2066 and male terminal #5558. Other connectors available upon request.

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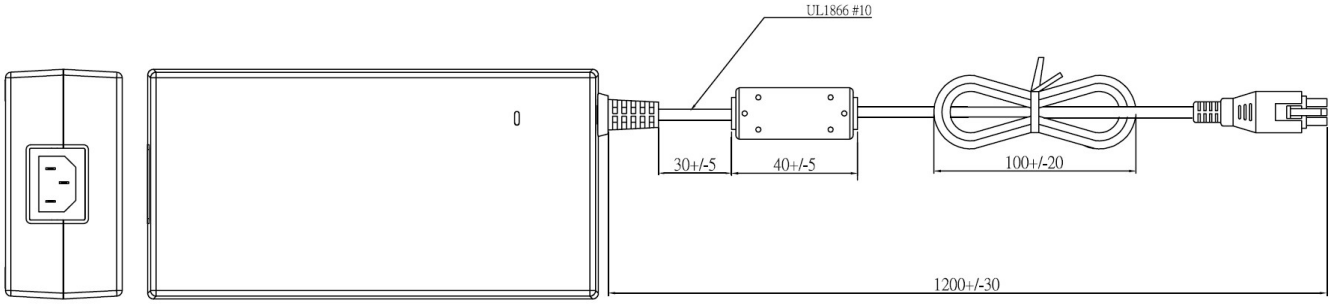
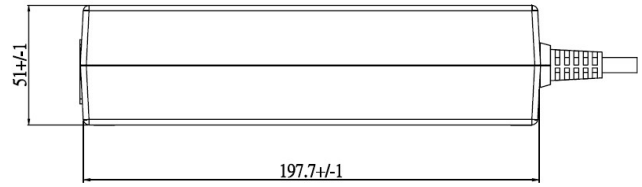
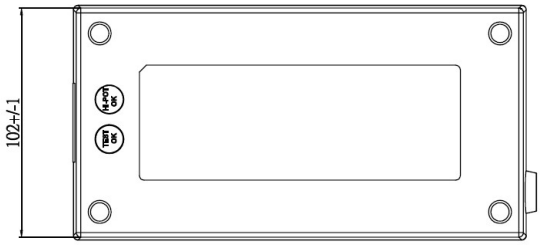
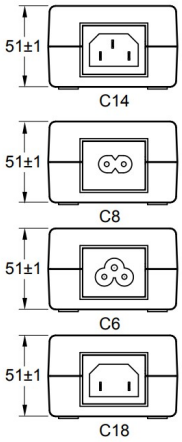
Specifications Continued	
Safety	
Approved to USA/Canada	UL62368-1 CAN/CSA C22.2 No. 62368-1
Approved to Europe	EN62368-1 CB IEC 62368-1
*Consult with TT Electronics for information on additional country safety approvals	
EMC	
EMC	FCC Part 15 Class B Radiated & Conducted CISPR32 Class B Radiated & Conducted EN55032 Class B Radiated & Conducted EN55035
Harmonic Currents Voltage Flicker Electrostatic Discharge Radiated Immunity EFT Surge Immunity Conducted Immunity Power Frequency Magnetic Field Immunity Dips/Interruptions	IEC 61000-3-2: Class D IEC 61000-3-3 IEC 61000-4-2: 8kV Air, 4kV contact IEC 61000-4-3: 3V/m IEC 61000-4-4: ±1kV IEC 61000-4-5: 2005 1kV diff, 2kV com IEC 61000-4-6: 3Vrms IEC 61000-4-8: 1A/m IEC 61000-4-11: 30% reduction for 500ms,>95% reduction for 10ms

Diagrams

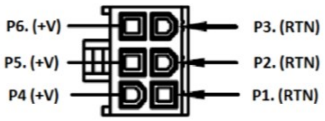








Connector Pin-Outs



RTN connected to earth ground on standard models. Contact sales for isolated version.

Thermal Derating Curve