

Features

- 4" X 7.25" X 2.2" Package
- Up to 500W w/air
- Universal Input 90 to 305Vac
- Active current share
- Class I Input
- Approved to EN60950 2nd Edition
- 93% Efficiency @ 230V Input, 92% @ 115V Input
- 3 Year Warranty



Description

A superior performance 500 Watt AC to DC power supply designed for LED applications. Highly efficient, LU500 product family has active current share for redundant applications. All models are CE marked to low voltage directive and approved to EN60950 2nd edition.

Model Selection

Model Number ¹	Volts	Ripple & w/200LFM air	Total Noise ²	Total Regulation	OVP Threshold
LU500S12T	12V	34A	1.5%	±2%	13.8 ± 1.0V
LU500S24T	24V	20.8A	1%	±2%	27.6 ± 1.0V
LU500S48T ³	48V	10.4A	1%	±2%	55.5 ± 2.0V

Notes:

- 1) Input Connector: "T" = Terminal Block and replace with "E" = 3pin Molex
- 2) Measured with noise probe directly across output terminals with 0.1µF ceramic and 10µF low ESR capacitors. For main output load of less than 5%, total noise & ripple will increase to 2%.
- 3) Consult the factory for availability

General Specifications

AC Input	90-305Vac, 47-63Hz DC input 127-380Vdc (External fuse required. Not Safety Approved) Power supply is protected against brown out condition	Turn On Time	<500mS @115Vac
Input Current	115Vac: 5A, 230Vac: 2.5A, 277Vac: 2.1A	Hold-up Time	16 mS minimum at full load & 100 Vac input. Measured from 100% to 90% of output voltage.
Inrush Current	277Vac, cold start: will not exceed 70A	Power Factor Correction	Meets EN61000-3-2, Class A, C, and D
Input Fuses	F1, T10A, 500Vac, provided on all models	Overload Protection Main Output	120% to 140% of current rating, Hiccup Mode

Leakage Current	Earth: <math><350\mu\text{A}</math> @ 277Vac, 60Hz, NC;	Short Circuit Protection	Self-recovering
Efficiency	12V: Typ 90% at Full Load, 115Vac & 92% at Full Load, 230Vac Other Outputs: 92% typical at 115Vac, 93% typical at 230Vac	Overvoltage Protection	Hiccup Mode, Self-recovering see models chart for trip ranges.
Output Power	Up To 500W continuous with 200 LFM airflow, 50°C ambient	Overtemperature Protection	Provided, self-recovering Automatic power shutdown at TC 135°C/115°C
Transient Response	500 uS typical for return to within 0.5% of nominal, 50% load step from 5% to 100%. $\Delta I/\Delta t$: <math><0.2\text{A}/\mu\text{S}</math>. Maximum Voltage Deviation = 3%	Switching Frequency	PFC: Variable, 50-500kHz Main Converter: Variable 40-180 kHz, 65Khz typical
Ripple and Noise Main Output	See models chart	Isolation	Input-Output: 3000Vac Input-Ground: 1500Vac Output-Ground: 500Vac
Output Voltage	See models chart	Operating Temperature	-10°C to +70°C (Derate output power linearly by 2.5% /°C above 50°C to 50% at 70°C)
Voltage Adjustability	+/-5% from nominal Units must be set within 0.1% of each other for Current share configuration	Storage Temperature	-40°C to +85°C
Minimum Load	Not required	Altitude	Operating: 3000m Non-operating: -150 to 12,000m
Total Regulation	Main Output: $\pm 2\%$.	Relative Humidity	5% to 95%, non-condensing
Vibration	Operating: 0.003g ² /Hz, 1.5grms overall, 3 axes, 1 hr/axis Operating: 0.026g ² /Hz, 5.0grms overall, 3 axes, 10 min/axis	Shock	Operating: Half-sine, 40gpk, 8ms, 3 axes, 6 shocks total
Dimensions	4"X7.25"X2.2" 101.60X184.15X55.88mm	Safety Standards	EN/CSA/UL/EN60950 2 nd Edition
Weight	1.5 lbs (0.68kg)	MTBF	Over 500,000 hours, 115Vac input
Ordering Option	Please see model Selection	Audible Noise	N/A

Unless is stated otherwise, all specification are based on 25 °C ambient

Auxiliary Signals

Current Sharing	Active single wire current share for up to 2 units. Please consult Application notes for proper wiring for up to 2 units in parallel
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EMI/EMC Compliance

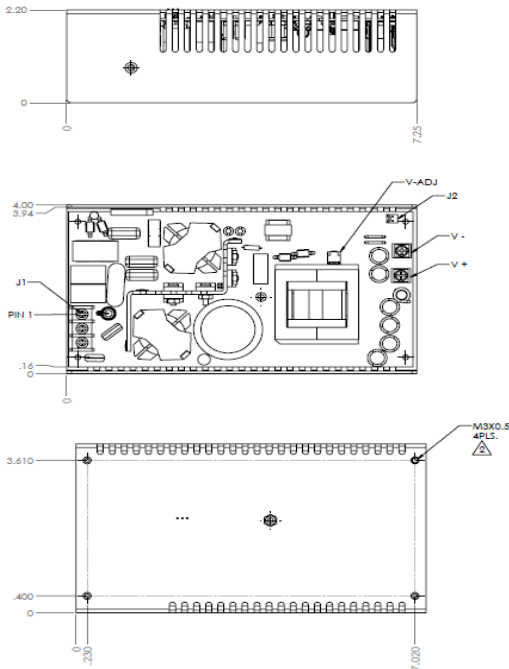
Conducted Emissions	EN55015 Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55011/15 Class A; FCC Part 15, Subpart A, Class A
Static Discharge Immunity	EN61000-4-2, Criteria A, 8kV Contact Discharge, 15kV air discharge
Radiated RF Immunity	EN61000-4-3, 10V/M Criteria A
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz

Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m
Line Harmonic Emissions	EN61000-3-2, Class A,C, and D
Flicker Test	EN61000-3-3, Complies

Isolation Specifications

Parameter	Conditions/Description	Min	Nom	Max	Units
Electric Strength Test Voltage	Input/Ground	1500	-	-	Vac
	Input/Output	3000	-	-	Vac
	Output/Ground	500	-	-	Vac

Mechanical Drawings



CONNECTOR INFORMATION					
INPUT (J1)	TERMINAL BLOCK	3 TERMINAL MAGNUMAL_A102203-07- CA OR EBY: 5002-03-N-12 OR DKL: DF-35-807W-03		CONFIGURATION #1 AC LINE #2 AC NEUTRAL #3 GROUND	
SHARE/SENSE (J2)	CONNECTOR	2 PIN AMP(TICC) 640456-2 OR MOLEX 22-23-2021		PIN CONFIGURATION #1 SENSE (+) #2 SHARE (-)	MATING HOUSING: AMP(TICC) 1375820-2, OR 3-640441-2(1DC) MATING CONTACT AMP(TICC) 1375819-1 MATING HOUSING: MOLEX 22-01-3029 MATING CONTACT MOLEX 08-50-0114
OUTPUT (V+, V-)		BUSS BAR (M3 X 0.5 SCREW)		CONFIGURATION #1 POSITIVE (+) #2 COMMON (-)	