

## 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 2<sup>nd</sup> edition.

## Model Selection

Model Number <sup>1</sup>	Volts	Ripple & w/200LFM air	Total Noise <sup>2</sup>	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 <sup>3</sup>	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

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

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

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

### **Auxiliary Signals**

<b>Current Sharing</b>	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**

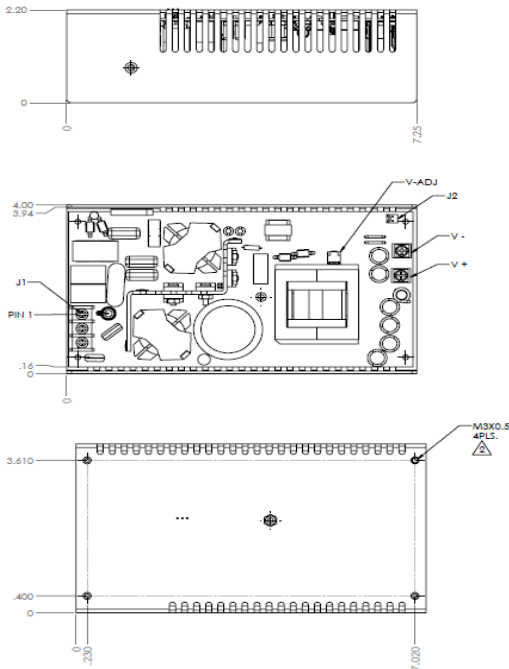
<b>Conducted Emissions</b>	EN55015 Class B, FCC Part 15, Subpart B, Class B
<b>Radiated Emissions</b>	EN55011/15 Class A; FCC Part 15, Subpart A, Class A
<b>Static Discharge Immunity</b>	EN61000-4-2, Criteria A, 8kV Contact Discharge, 15kV air discharge
<b>Radiated RF Immunity</b>	EN61000-4-3, 10V/M Criteria A
<b>EFT/Burst Immunity</b>	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					
<b>INPUT (J1)</b>	TERMINAL BLOCK	3 TERMINAL MAGNUM A 102203-07- CA OR EBY: 5002-03-N-12 OR DKL: DF-35-807W-03		CONFIGURATION #1 AC LINE #2 AC NEUTRAL #3 GROUND	
<b>SHARE/SENSE (J2)</b>	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(DC) MATING CONTACT AMP(TICC) 1375819-1  MATING HOUSING: MOLEX 22-01-3029 MATING CONTACT MOLEX 08-50-0114
<b>OUTPUT (V+, V-)</b>		BUSS BAR (M3 X 0.5 SCREW)		CONFIGURATION #1 POSITIVE (+) #2 COMMON (-)	

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