Product Specifications

LPV-500

- Product Category: 500W Waterproof Power Supply
- Version Number: ZTAO3.0
- Release Date: May 1st, 2025

Product Overview

The LPV-500W series is a waterproof AC-to-DC LED driver power supply designed for constant voltage and constant power output. It features an AC input voltage range of 180~264VAC and offers 12V, 24V, 36V, and 48V output options. It boasts a high conversion efficiency of up to 94% and employs self-cooling technology. It features a gold-plated casing and an IP67 high protection rating.

Model encoding

LPV - 500 xx

- xx: Output Voltage
- 500: Output Power
- LPV: Series Name

Product Features

- 180~264VAC AC input range
- constant voltage and constant power model
- IP67 protection rating
- Protection Types: Short Circuit / Overload / Overvoltage / Overtemperature
- Natural Air Cooling
- Suitable for Dry, Humid, and Rainy Environments
- 100% Full Load Burn-in Test
- 3-Year Warranty

CE FC RoHS ISO ISO9001

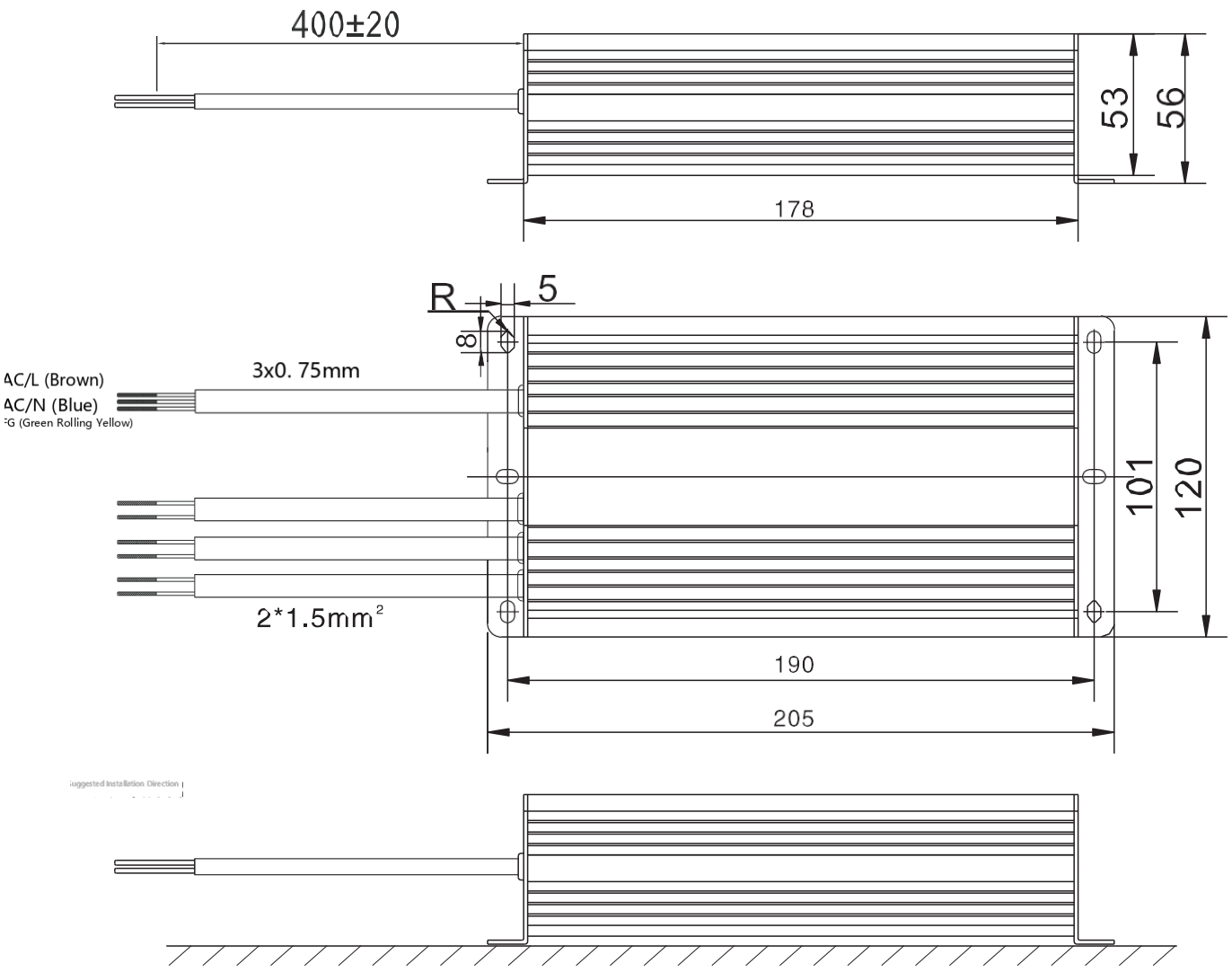
Application Areas

Street Lighting, Wall Washers, Courtyard Lights, Fishing Lights, Floodlights, Building Lighting, Plant Lighting, Electronic Instruments and Devices, etc. (excluding information technology equipment)

Electrical Specifications

Model		LPV-500-24	LPV-500-36	LPV-500-45	LPV-500-48	LPV-500-60
Output	DC Output Voltage	24V	36V	45V	48V	60V
	Rated Current	20A	13.5A	11A	10.5A	8.3A
	Current Range	0~20A	0~13.5A	0~11A	0~10.5A	0~8.3A
	Rated Power	480W	486W	495W	504W	498W
	Ripple & Noise (Max)	200mVp-p	220mVp-p	240mVp-p	240mVp-p	240mVp-p
	Voltage Accuracy	±2%	±2%	±2%	±2%	±2%
	Linearity Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Load Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Start-up & Rise Time	500ms, 50ms / 230VAC (at full load)				
	Hold Time	24ms / 230VAC (at full load)				
Input	Input Voltage	180~264VAC selected through switch	245~370VDC(switc on 230VAC)			
	Input Frequency	50~60HZ				
	Efficiency	92%	92.5%	93.5%	93.5%	94.5%
	Input Current	5.0A/230VAC				
	Leakage Current	＜ 3mA/240VAC				
Protection	Overload Protection	100~110% Overcurrent Limit of Rated Power				
		Protection Mode: Hiccup-type protection, automatically recovers after abnormal conditions are removed				
	Overvoltage Protection	Overvoltage protection activated at 115%~135% of rated output voltage				
		Protection mode: Output voltage off, restarts to recover				
	Over-temperature protection	95℃±10℃ (JK1 is tested on the transformer side/Mos tube surface)				
		Protection mode: Output voltage off, automatically recovers after temperature drops				
Environment	Operating temperature	-20℃ ~+60℃				
	Operating humidity	20~90% RH without condensation				
	Storage temperature / Humidity	-40~+80 ℃ 10~95% RH, no condensation				
	Vibration resistance	10~500HZ, 5G 10 minutes / Cycle, X, Y, Z each 60 minutes				
Safety	Withstand voltage	Input to output: 1.5KVAC; Input to ground: 1.5KVAC; Output to ground: 500VAC				
	Insulation resistance	Input to output, input to ground, output to ground: 100 Ohms/500VDC/25℃/70%RH				
Other	Product dimensions	205*120*56mm（L*W*H）				
	Packaging	2.05kg/10pcs/21.5Kg/0.033 cubic meters				
Remarks		1. All parameters, unless otherwise specified, are measured at 230VAC voltage input, rated load, and 25 ℃ conditions. 2. Ripple and noise voltage were measured on a 20MHz bandwidth oscilloscope with 0.1μ and 47μ capacitors added to the ends of a 12-inch twisted pair cable. Measurements were performed at a 20MHz bandwidth. 3. Accuracy: Includes setting error, line regulation, and load regulation. 4. Linear regulation measurement method: Test from low voltage to high voltage under rated load 5. Load regulation measurement method: From 0% to 100% rated load 6. Startup time is measured under cold start conditions. Rapid and frequent power-on and power-off may increase startup time.				

Appearance and Installation Dimensions (mm)



Pins	Function
L	AC LINE
N	AC NETURAL
⏚	EARTH
-V	DC output -
-V	DC output -
+V	DC output +
+V	DC output +

4-M4 Customer System Mounting Hole

Mounting Screws: M4

Installation torque: 8 kgf.cn (0.8 Nm)

Terminal Pin No.Assignment

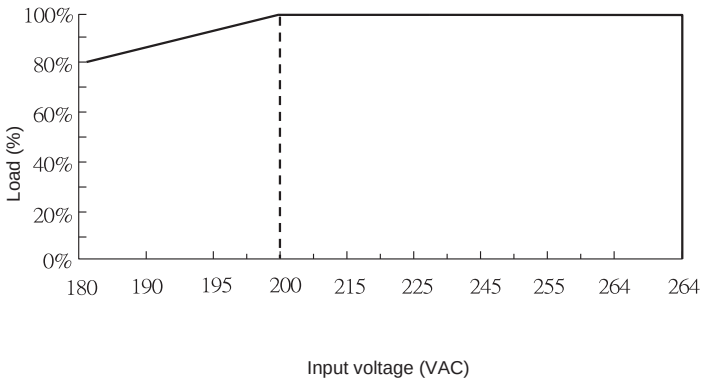
input (Black three core		Output(Black two core	
Brown	AC/L	Brown	DC OUTPUT +V
Blue	AC/N	Blue	DC OUTPUT -V
Green& yellow	⏚ : Ground		

Remarks:

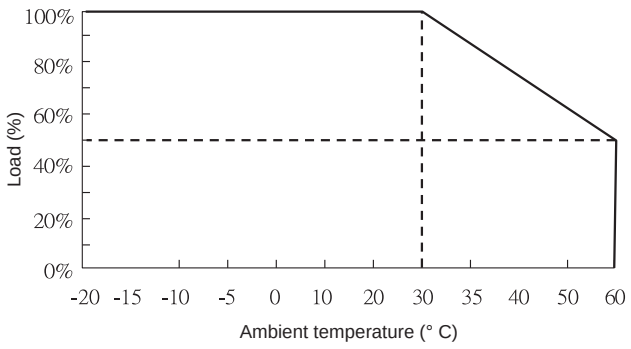
Unit: mm [inch]; Unspecified tolerance is ±0.5 [±0.020]

Characteristic Curve

Input voltage vs output load



Ambient temperature vs. output load



Note:

1. For more detailed test data, please contact our technical support to obtain the application notes for the corresponding product.
2. This product is suitable for use in natural air convection environments. For use in enclosed environments, please contact our technical support.