ELN-60-P Series

60W IP64 Dimming Function LED Lighting Power Supplies

Case: 8019KN
181 x 61.5 x 35mm

Features

- Universal AC input up to 264VAC
- 100Hz~3KHz PWM dimming function
- Adjustable output voltage & constant current levels
- IP64 level fully isolated plastic case
- Short circuit, over current, over voltage protections
- Class II power unit, no FG
- Passes LPS
- 100% full load burn-in test
- Cooling by free air convection

IP64 LPS CE

Specification

INPUT	**Voltage**	90V~264VAC or 127V~370VDC.					
	Frequency	47 ----- 63 Hz					
	Current	1.2A/115VAC 0.7A/230VAC					
	Inrush Current	60A@230VAC					
	Leakage Current	0.25mA/ 240VAC input					
OUTPUT	**MODEL No.**	**ELN-60-9P**	**ELN-60-12P**	**ELN-60-15P**	**ELN-60-24P**	**ELN-60-27P**	**ELN-60-48P**
	Voltage	9V	12V	15V	24V	27V	48V
	Voltage Adj. Range	8.7~10.5V	10.8~13.2V	13.5~16.5V	21.6~26.4V	24.3~29.7V	43.2~52.8V
	Constant Current Operation	3~9V	6~12V	7.5~15V	12~24V	13.5~27V	24~48V
	Rated Current	5A	5A	4A	2.5A	2.3A	1.3A
	Power	45W	60W	60W	60W	62.1W	62.5W
	Ripple & Noise	120mV	120mV	150mV	150mV	200mV	250mV
	Efficiency (TYP.)	82%	85%	86%	87%	87%	88%
PROTECTION	**Over Voltage**	11~13.5V	13.8~16V	17.5~21V	28~32V	31~35V	54~60V
		Shutdown output voltage, re-power on to recover					
	Over Current	95~110%; constant current limiting, recovers automatically after fault condition is removed					
ELEC. CHAR.	**Current Adj. Range**	-25% ~ 3%. Can be adjusted by internal potentiometer SVR2					
	Voltage Tolerance	±5.0%					
	Line Regulation	±1.0%					
	Load Regulation	±2.0%					
	Setup, Rise Time	500ms, 30ms@230VAC 1500, 30ms@115VAC, full load					
	Hold Up Time	50ms@230VAC 16ms@115VAC, full load					
ENVIRONMENT	**Temperature**	Operating: -20~+60℃ ; De-rating: 45~60℃@50% load ; Storage: -40~ +80℃					
	Humidity	Operating: 20%~90% RH; Storage: 10%~95% RH (non condensing)					
	Temp. Coefficient	±0.03%/℃ (0~50℃)					
	Vibration	10~500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					
SAFETY	**Withstand Voltage**	I/P-O/P:3KVAC					
	Isolation Resistance	I/P-O/P:>100M Ohms / 500VDC / 25℃/ 70% RH					
	Safety Standard	UL1310 Class 2, CAN/CSA C22.2 No. 223-M91 (except for 48V); design refers to TUV EN60950-1, EN61347-2-13					
EMC	**EMI**	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3					
	EMS	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A					
OTHERS	**M.T.B.F.**	603K hrs min. MIL-HDBK-217F (25℃)					
	Packing	N.W.:0.4Kg / 1pc; 24pcs / 11Kgs; 0.75CUFT / 1 CTN					

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltage. Please check the static characteristics for more details.
5. Constant current operation region is within the specified output voltage range above. This is the suitable operation region for LED related applications.
6. The power supply is considered a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation.
7. Length of set up time is measured at first cold start. Turning the power supply ON/OFF may lead to increased set up time.
8. Output voltage can be adjusted through SVR1 on the PCB; Output constant current level limit can be adjusted through SVR2 on the PCB.
9. In the European market this power supply can be used for LED lighting applications that do not need to comply with the harmonic current requirements of EN61000-3-2 Class C.

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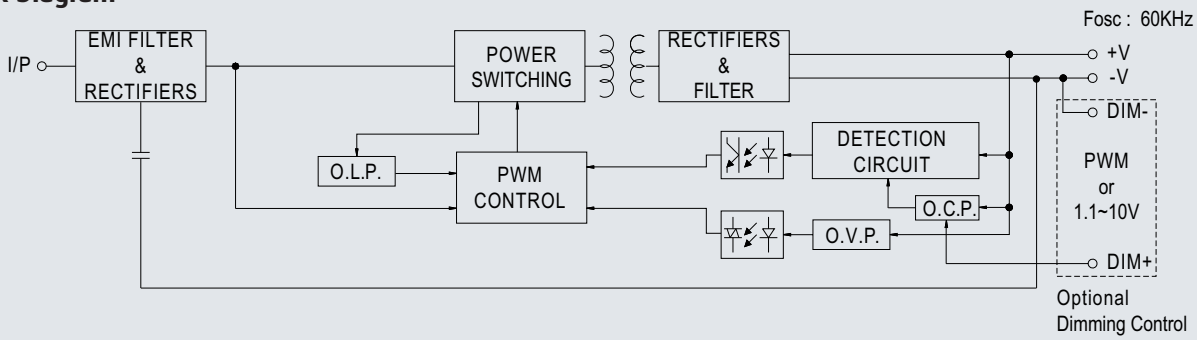
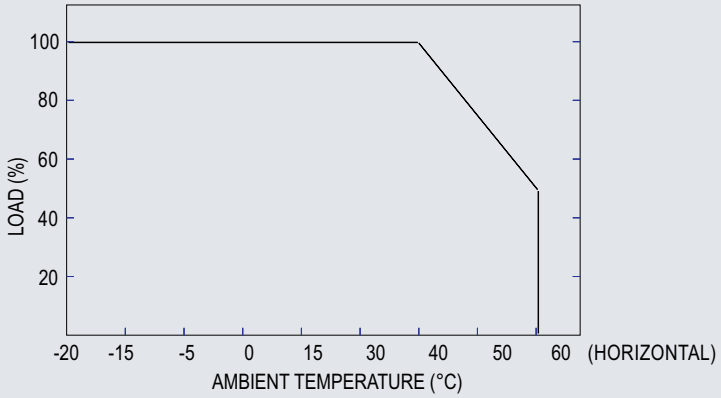
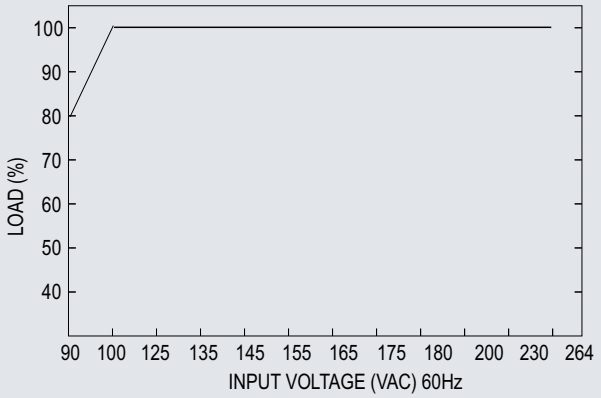
Block Diagram



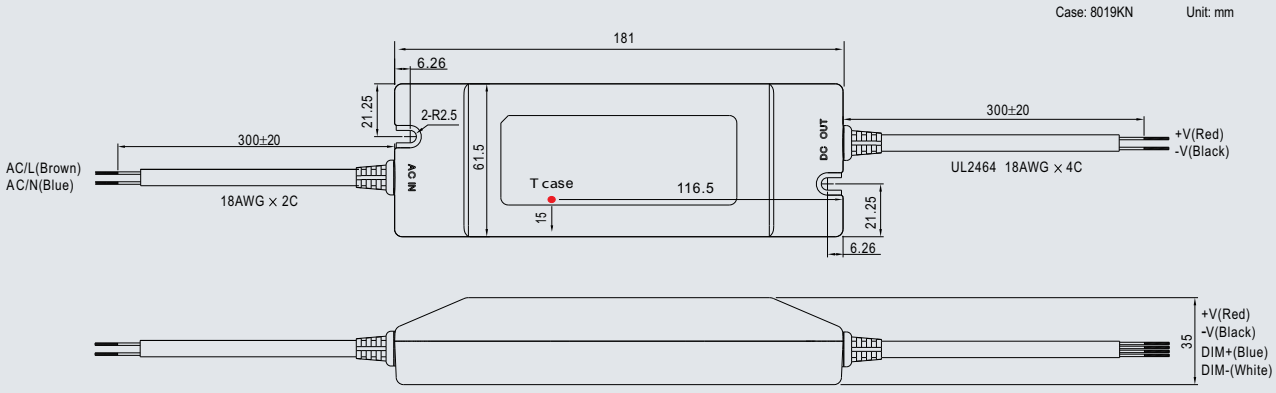
De-Rating Curve



Static Characteristics

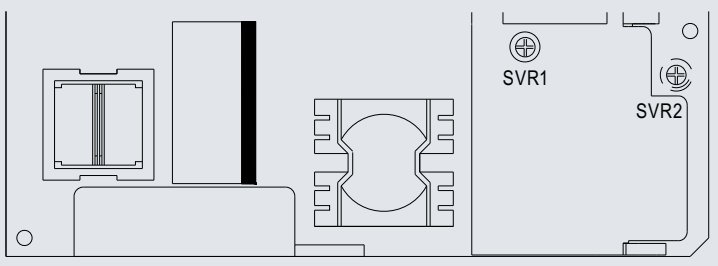


Dimensions



Output Voltage and Current Adjustment

Remove the upper case and adjust through SCR1 % SVR2, as shown in diagram below



SVR1	Output voltage adjustment
SVR2	Output current adjustment

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Dimming Control

The level of output current can be adjusted through the dimming control function.
When there is no signal to the control wires (open circuit between the two control wires), the power supply will operate as 0% duty of input signal and the output current will be zero.