

60W Single Output LED Power Supply

PLN60 series



- Universal AC input
- Fully isolated plastic case with IP64 level for indoor outdoor installations
- Built-in constant current limiting circuit with adjustable Over Current Protection level
- Built-in active Power Factor Correction function
- Cooling by free air convection
- UL310 Class 2 power unit
- Suitable for LED lighting and moving sign applications



Model Number	Output Volts	Output Amps	Ripple & Noise	Efficiency	OVP	Min Load	DC Volt Adjust
SINGLE OUTPUT							
PLN60-12	12 Volts(DC)	5.0 Amps	2.0Vpk-pk	83%	13.8~16Volts(DC)	0~5.0Amps	11~13Volts(DC)
PLN60-15	15 Volts(DC)	4.0 Amps	2.4Vpk-pk	84.5%	17.5~21Volts(DC)	0~4.0Amps	13.8~16.2Volts(DC)
PLN60-20	20 Volts(DC)	3.0 Amps	1.8Vpk-pk	86.5%	22.8~25Volts(DC)	0~3.0Amps	18~22Volts(DC)
PLN60-24	24 Volts(DC)	2.5 Amps	2.7Vpk-pk	86.5%	28~32Volts(DC)	0~2.5Amps	22~26Volts(DC)
PLN60-27	27 Volts(DC)	2.3 Amps	2.7Vpk-pk	87%	31~35Volts(DC)	0~2.3Amps	25~30Volts(DC)
PLN60-36	36 Volts(DC)	1.7 Amps	3.6Vpk-pk	87%	41~46Volts(DC)	0~1.7Amps	32.5~39Volts(DC)
PLN60-48	48 Volts(DC)	1.3 Amps	4.6Vpk-pk	88%	54~60Volts(DC)	0~1.3Amps	43.6~51.8Volts(DC)

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INPUT SPECIFICATIONS

Input Voltage Range (Note 4)	90-264VAC, 127~370Volts(DC)
Frequency Range	47-63 Hz
Inrush Current, typ: (cold start)	40 Amps @ 230VAC
Input Current	0.8 Amps max @ 115VAC 0.4 Amps max @ 230VAC
Leakage current	< 0.5mA / 240VAC
Power Factor @ FL	PF> 0.9/ 230VAC >0.98/ 115VAC

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Line Regulation	±4.0%
Load Regulation	±10%
Voltage Tolerance (Note 2)	±10%
Ripple/Noise (Note 1)	See Selection Chart
Setup, Rise Time @ FL	1500mS, 100mS/230VAC 3000mS. 100mS/115VAC
Over Temperature Protection	95°C ±10°C (TSW1) detect on heatsink of power transistor Shutdown o/p voltage, auto recover
Over Voltage Protection	See Selection Chart Shutdown o/p voltage, re-power
Over Current Protection	95~110% 12Volts(DC) only 130%max 15~48Volts(DC) Constant Current limiting, auto recov
Short Circuit (Note 3)	Hiccup mode, auto recover
Current Adjust Range(Note6)	3~25% Can ba adjust bu internal potential meter SVR1
DC Voltage Adjust (Note6)	Can ba adjust bu internal potential meter SVR1

GENERAL SPECIFICATIONS

Safety	UL1310 Class 2, TUV EN61347-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91(except for 48V), IP64 approved
Insulation Resistance	≥100MΩ/500 Volts / 25°C / 70%RH
EMI	Compliance to EN55015

	EN55022B (CISPR22B)
Harmonic Current	Compliance to EN61000-3-2,-3C (>50% load); EN61000-3-3
Efficiency	See Selection Chart
Isolation	4250VAC Input - Output
EMS	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN55024, EN61547, light industry level, criteria A

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-30°C to +50°C (See Derate Curve)
Storage Temperature	-40°C to +80°C, 10~95% RH
Relative Humidity	20 to +90% RH non cond
Temperature Coefficient	±0.03% / °C (0-50°C)
MTBF	497.8KHrs min, MIL-HDBK-217F(25°C)
Vibration	10~500Hz, 2G10min./1cycle, period for 60min. each along X, Y, Z axes

PHYSICAL SPECIFICATIONS

Size	
Millimeters	181 x 61.5 x 35
Inches	7.13" x2.42" x 1.38"
Weight	17.64 oz (500g)

NOTE

1. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
2. Tolerance : includes set up tolerance, line regulation and load regulation.
3. Please refer to OLP characteristics.
4. Derating may be needed under low input voltage. Please check the derating curve for more details.
5. Output voltage can be adjusted through the SVR1 on the PCB ; limit of output constant current level can be adjusted through the SVR2 on the PCB.

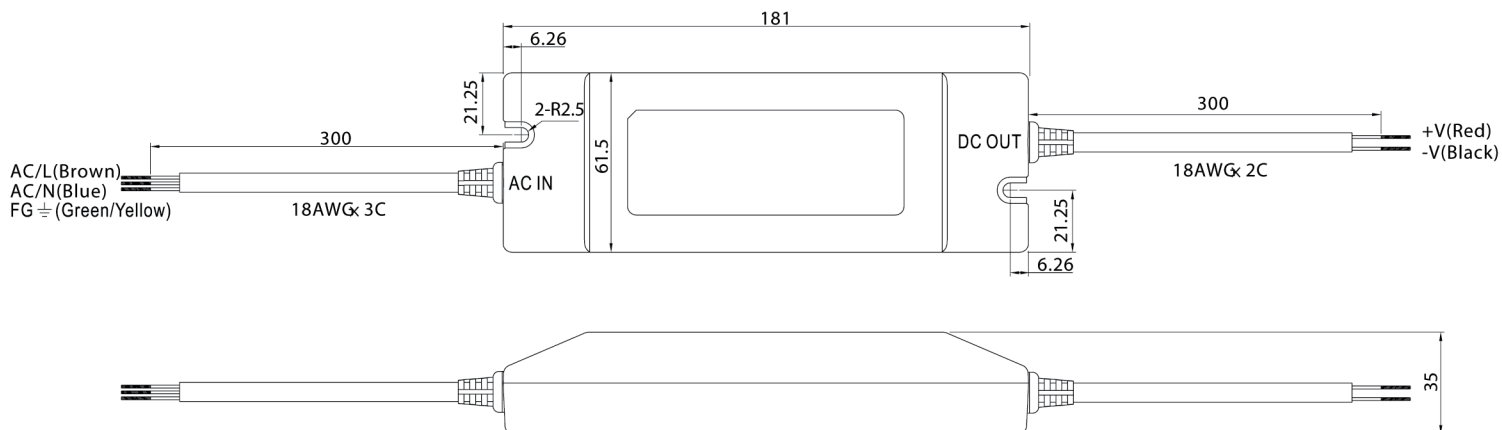
All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

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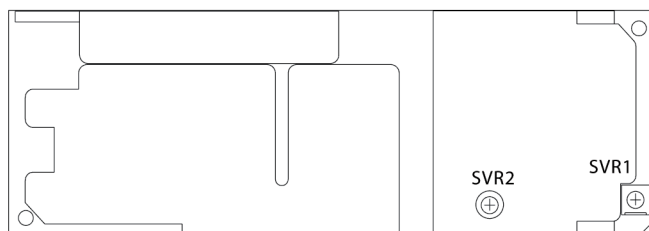
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Mechanical Specification

Case No.960A Unit:mm



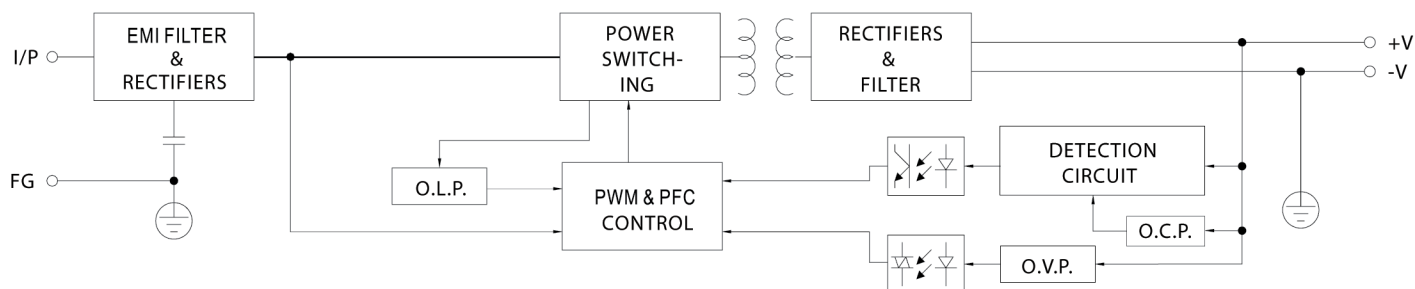
Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.



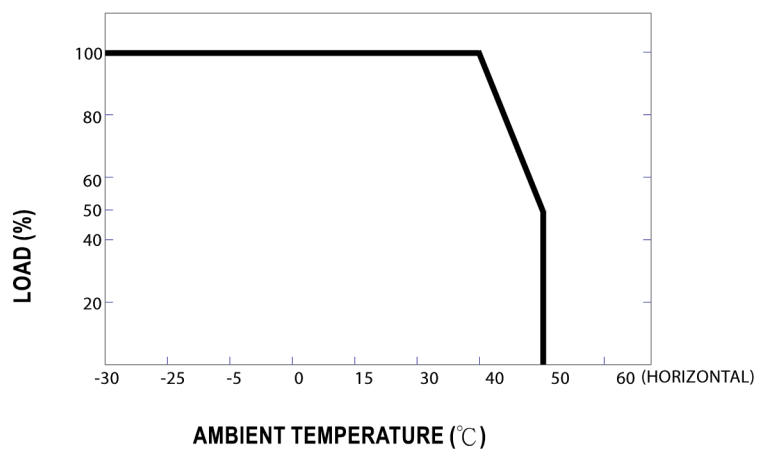
SVR1	Output voltage adjustment
SVR2	Output current adjustment

Block Diagram

fosc : 90KHz(115VAC)
120KHz(230VAC)



■ Derating Curve



■ Static Characteristics

