



Features :

- Universal AC input / Full range (up to 295VAC)
- High efficiency 89%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit with adjustable OCP level
- Fully isolated plastic case with IP64 level
- Built-in active PFC function
- Pass LPS
- Class 2 power unit
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications (Note.2)
- Suitable for dry / damp locations
- Compliance to worldwide safety regulations for lighting
- 2 years warranty

User's Manual



GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>


SPECIFICATION

MODEL	PLN-60-12	PLN-60-15	PLN-60-20	PLN-60-24	PLN-60-27	PLN-60-36	PLN-60-48	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	27V	36V	48V
	CONSTANT CURRENT REGION Note.6	8.4 ~ 12V	10.5 ~15V	14 ~ 20V	16.8 ~24V	18.9 ~27V	25.2 ~ 36V	33.6 ~ 48V
	RATED CURRENT	5A	4A	3A	2.5A	2.3A	1.7A	1.3A
	CURRENT RANGE	0 ~ 5A	0 ~ 4A	0 ~ 3A	0 ~ 2.5A	0 ~ 2.3A	0 ~ 1.7A	0 ~ 1.3A
	RATED POWER	60W	60W	60W	60W	62.1W	61.2W	62.4W
	RIPPLE & NOISE (max.) Note.2	2Vp-p	2.4Vp-p	1.8Vp-p	2.7Vp-p	2.7Vp-p	3.6Vp-p	4.6Vp-p
	VOLTAGE ADJ. RANGE Note.5	11.5 ~ 13V	14.5 ~ 16.2V	19.5 ~ 22V	24 ~ 26V	25 ~ 30V	32.5 ~ 39V	43.6 ~ 51.8V
	Can be adjusted by internal potentiometer SVR1							
	CURRENT ADJ. RANGE Note.5	3% ~ -25%. Can be adjusted by internal potentiometer SVR2						
	VOLTAGE TOLERANCE Note.3	±10%						
LINE REGULATION	±3.0%							
LOAD REGULATION	±5.0%							
SETUP TIME	500ms / 230VAC 3000ms / 115VAC at full load							
INPUT	VOLTAGE RANGE Note.4	90 ~ 295VAC 127 ~ 417VDC						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	PF>0.92/115VAC, PF>0.9/230VAC, PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve)						
	TOTAL HARMONIC DISTORTION	THD< 20% when output loading≥75% at 115VAC/230VAC input and output loading≥80% at 277VAC input						
	EFFICIENCY (Typ.)	85%	86%	87.5%	87%	88%	89%	89%
	AC CURRENT (Typ.)	0.8A/115VAC	0.4A/230VAC	0.3A/277VAC				
	INRUSH CURRENT (Typ.)	COLD START 35A (width=45μs measured at 50% Ipeak) at 230VAC						
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	32 units (circuit breaker of type B) / 32 units (circuit breaker of type C) at 230VAC						
LEAKAGE CURRENT	<0.75mA / 240VAC							
PROTECTION	OVER CURRENT	95 ~ 110% Protection type : Constant current limiting, recovers automatically after fault condition is removed						
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.						
	OVER VOLTAGE	13.8 ~ 16V	17.5 ~ 21V	23 ~ 28V	28 ~ 32V	31 ~ 35V	41 ~ 46V	54 ~ 60V
	Protection type : Shut down o/p voltage, re-power on to recover							
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down						
ENVIRONMENT	WORKING TEMP.	-30 ~ +50°C (Refer to "Derating Curve")						
	WORKING HUMIDITY	20 ~ 95% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)						
	VIBRATION	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes						
SAFETY & EMC	SAFETY STANDARDS	UL879, UL1310, UL8750, CSA C22.2 No. 207-M89(except for 48V), TUV BS EN/EN61347-1, BS EN/EN61347-2-13 independent, CAN/CSA C22.2 No. 223-M91 (except for 48V), CSA C22.2 No. 250.0-08(except for 48V), EAC TP TC 004, GB19510.1, GB19510.14, IP64 approved ; design refer to UL60950-1						
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH						
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (≥75% load) ; BS EN/EN61000-3-3; GB17743 and GB17625.1, EAC TP TC 020						
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN61547, light industry level, EAC TP TC 020						
OTHERS	MTBF	3445.2K hrs min. Telcordia SR-332 (Bellcore) ; 497.9Khrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	181*61.5*35mm (L*W*H)						
	PACKING	0.5Kg; 24pcs/13Kg/0.87CUFT						

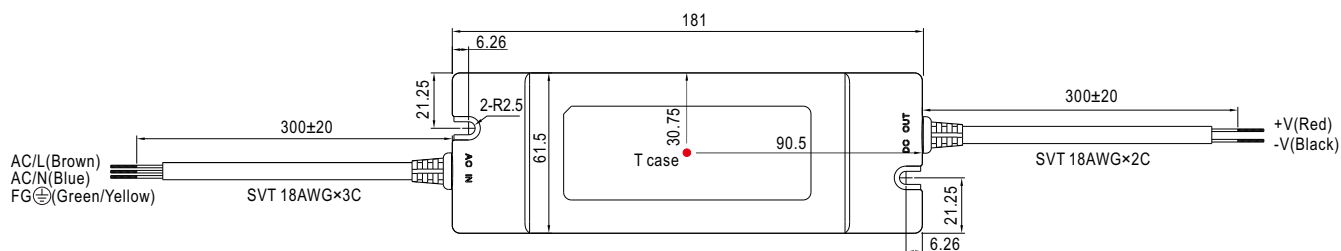


60W Single Output LED Power Supply

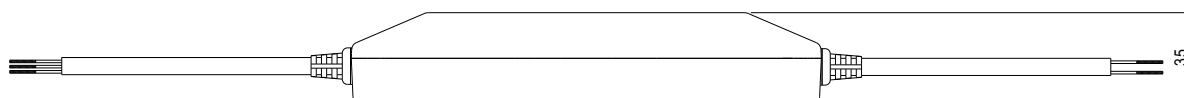
PLN-60 series

Case No.960A Unit:mm

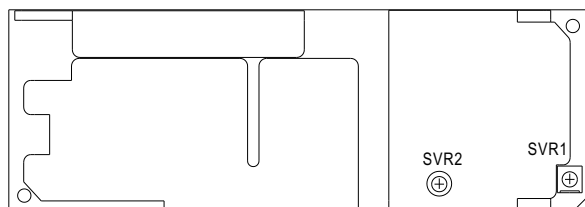
■ Mechanical Specification



※ T case: Max. Case Temperature.

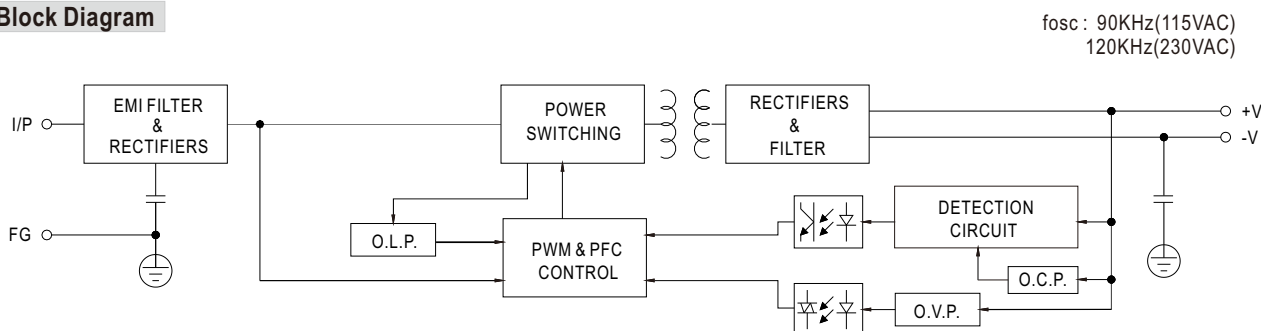


Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.

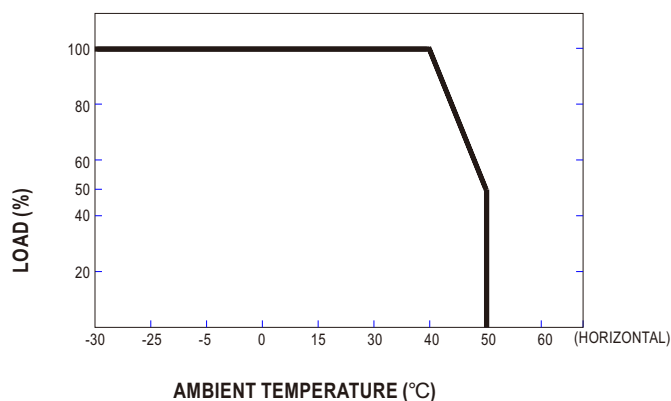


SVR1	Output voltage adjustment
SVR2	Output current adjustment

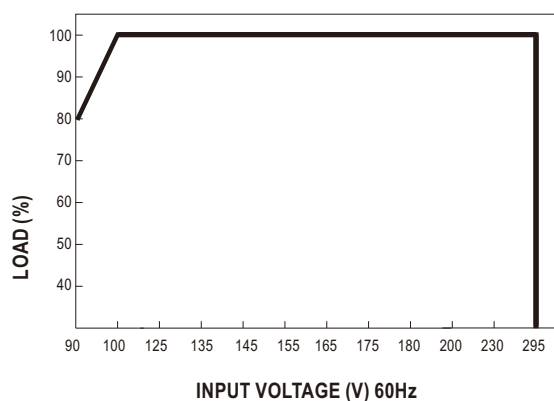
■ Block Diagram



■ Derating Curve



■ Static Characteristics

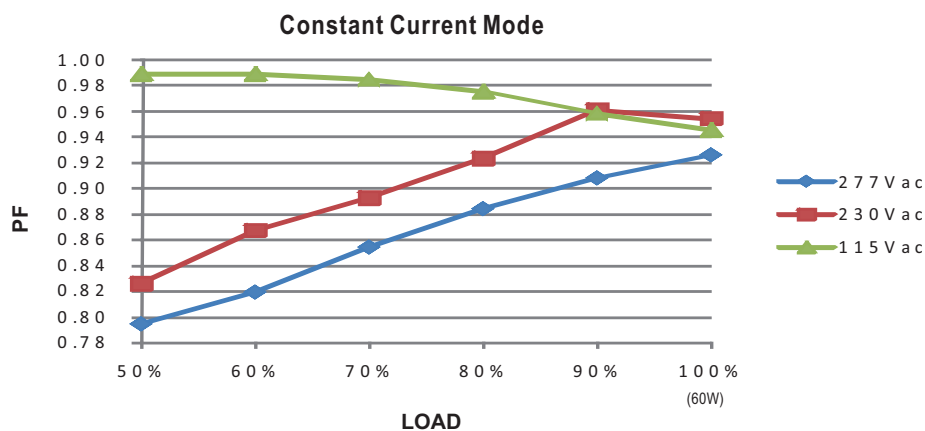




60W Single Output LED Power Supply

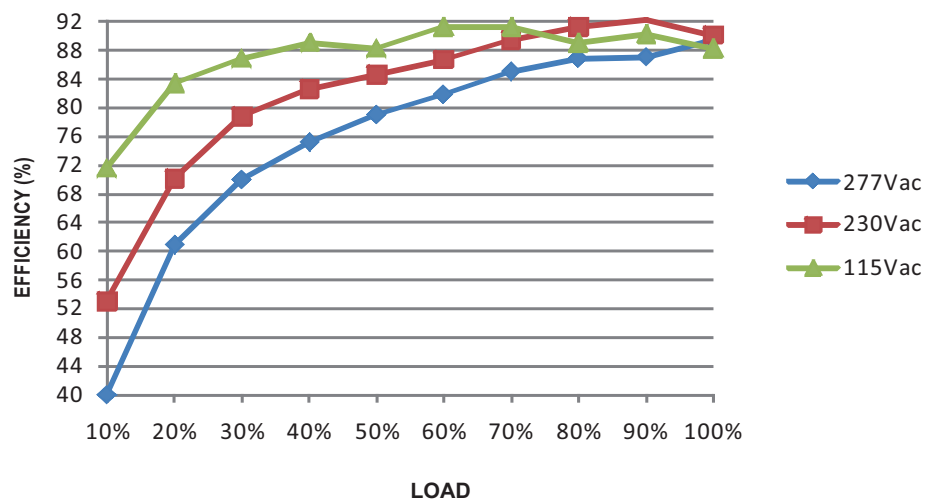
PLN-60 series

Power Factor Characteristic



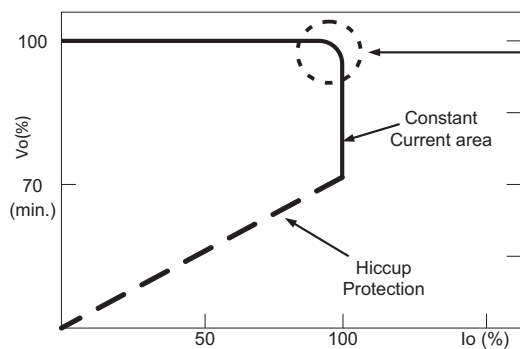
EFFICIENCY vs LOAD (48V Model)

PLN-60 series possess superior working efficiency that up to 89% can be reached in field applications.



DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.