



30W Single Output Switching Power Supply

PLN-30 series



■ Features :

- Universal AC input / Full range
- Fully isolated plastic case with IP64 level
- Built-in constant current limiting circuit with adjustable OCP level
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Built-in active PFC function
- IP64 design for indoor or outdoor installations
- Cooling by free air convection
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications
- 2 years warranty

SELV
EQUIVALENT

(except for 48V)

IP64



SPECIFICATION

MODEL	PLN-30-9	PLN-30-12	PLN-30-15	PLN-30-20	PLN-30-24	PLN-30-27	PLN-30-36	PLN-30-48	
OUTPUT	DC VOLTAGE	9V	12V	15V	20V	24V	27V	36V	48V
	CONSTANT CURRENT REGION <small>Note.6</small>	6.3 ~ 9V	8.4 ~ 12V	10.5 ~ 15V	14 ~ 20V	16.8 ~ 24V	18.9 ~ 27V	25.2 ~ 36V	33.6 ~ 48V
	RATED CURRENT	3.3A	2.5A	2A	1.5A	1.25A	1.12A	0.84A	0.63A
	CURRENT RANGE	0 ~ 3.3A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.5A	0 ~ 1.25A	0 ~ 1.12A	0 ~ 0.84A	0 ~ 0.63A
	RATED POWER	29.7W	30W	30W	30W	30W	30.24W	30.24W	30.24W
	RIPPLE & NOISE (max.) <small>Note.2</small>	2.6Vp-p	2Vp-p	2.6Vp-p	2Vp-p	2.6Vp-p	2.3Vp-p	4.5Vp-p	3.7Vp-p
	VOLTAGE ADJ. RANGE <small>Note.5</small>	±10%. Can be adjusted by internal potential meter SVR1							
	CURRENT ADJ. RANGE <small>Note.5</small>	3% ~ -25%. Can be adjusted by internal potential meter SVR2							
	VOLTAGE TOLERANCE <small>Note.3</small>	±10%							
	LINE REGULATION	±3.0%							
LOAD REGULATION	±10%								
SETUP, RISE TIME	1500ms, 150ms / 230VAC 3000ms, 150ms / 115VAC at full load								
INPUT	VOLTAGE RANGE	90 ~ 264VAC 127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR	PF>0.9/230VAC PF>0.95/115VAC at full load							
	EFFICIENCY(Typ.)	80%	83%	84%	84%	85%	85%	86%	86%
	AC CURRENT	0.4A/115VAC 0.2A/230VAC							
	INRUSH CURRENT(max.)	40A/230VAC							
LEAKAGE CURRENT	0.5mA / 240VAC								
PROTECTION	OVER CURRENT <small>Note.4</small>	110 ~ 120% 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	10 ~ 14V	14 ~ 16V	17 ~ 22V	23 ~ 26V	27 ~ 34V	31 ~ 35V	40 ~ 50V	53 ~ 63V
	OVER TEMPERATURE	90℃ ±10℃ (TSW1)							
		Protection type : Shut down o/p voltage, re-power on to recover							
ENVIRONMENT	WORKING TEMP.	-30 ~ +50℃ (Refer to output load derating curve)							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.06%/℃ (0 ~ 50℃)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
SAFETY & EMC	SAFETY STANDARDS	TUV EN61347-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91(except for 48V), IP64 approved							
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH							
	EMI CONDUCTION & RADIATION	Compliance to EN55015							
	HARMONIC CURRENT	Compliance to EN61000-3-2 Class C (>80% load), Class D (>50% load) ; EN61000-3-3							
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN61547, light industry level, criteria A							
	MTBF	621.4Khrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	145*47*30mm (L*W*H)							
	PACKING	0.22Kg; 60pcs/14.2Kg/1.25CUFT							

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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. Please refer to OLP characteristics.
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.
6. Constant current operation region is within 70% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please



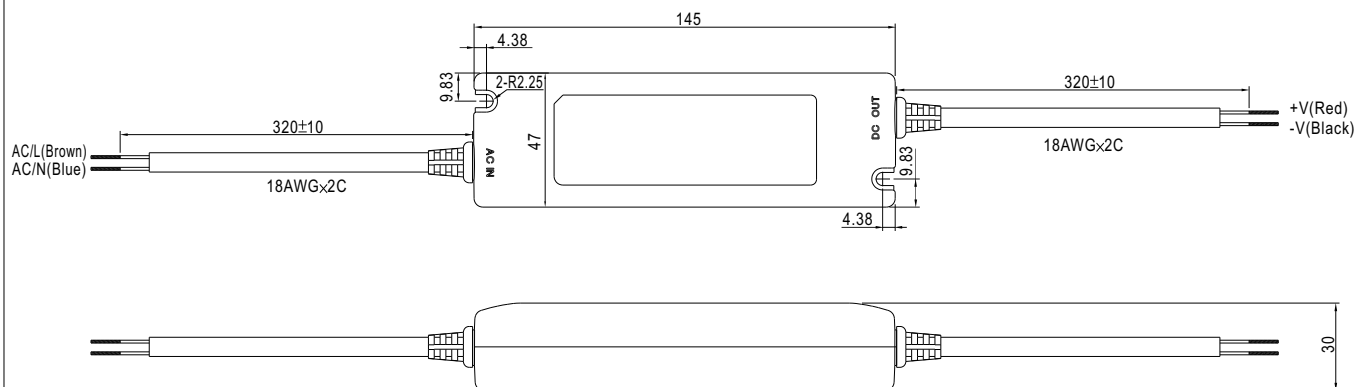


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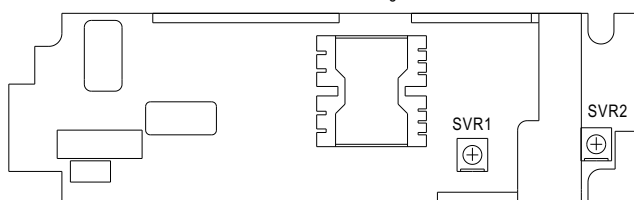
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Mechanical Specification

Case No.964A Unit:mm

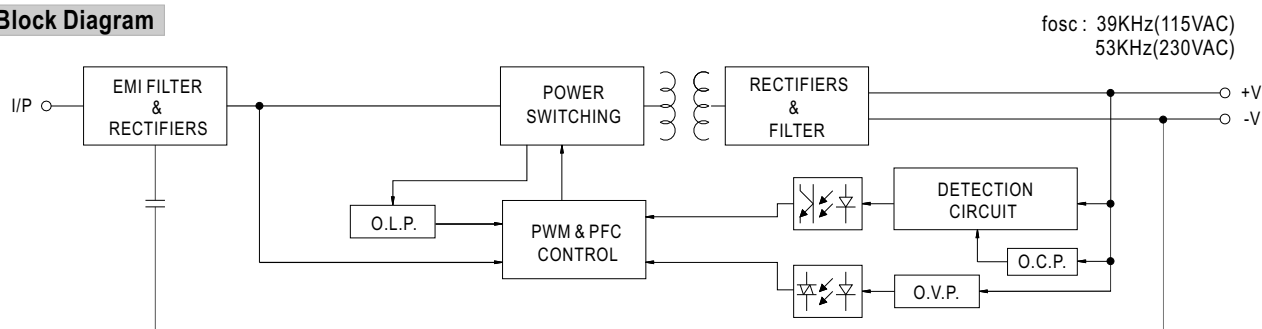


Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.

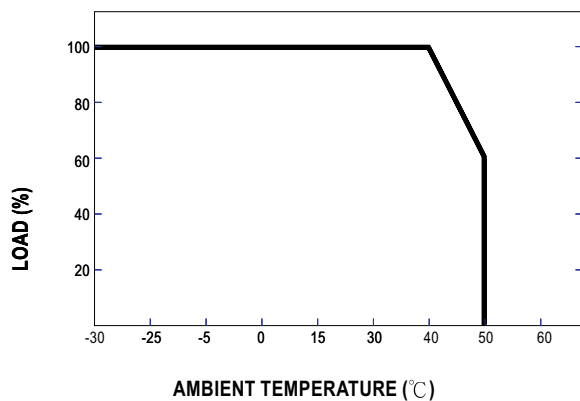


SVR1	Output voltage adjustment
SVR2	Output current adjustment

Block Diagram



Derating Curve



OLP Characteristics

