Mean Well

PLN-20 Series

20 Watt Constant Current / Constant Voltage
LED Power Supplies

Size: 5.79 x 1.46 x 1.10”

■ Features :

- Constant current and constant voltage mode power supply
- Universal AC input / Full range(up to 277VAC)
- Built-in constant current limiting circuit with adjustable OCP level
- Fully isolated plastic case
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Built-in PFC (single stage) function
- IP64 design for indoor or outdoor installations
- Small and compact size
- Cooling by free air convection
- 100% full load burn-in test
- High reliability,low cost
- Suitable for LED lighting and moving sign applications
- 2 years warranty

SPECIFICATION

MODEL		PLN-20-12	PLN-20-18	PLN-20-24	PLN-20-36	PLN-20-48
OUTPUT	DC VOLTAGE	12V	18V	24V	36V	48V
	LED OPERATION VOLTAGE Note.5	9 ~ 12V	13.5 ~ 18V	18 ~ 24V	27 ~ 36V	36 ~ 48V
	RATED CURRENT	1.6A	1.1A	0.8A	0.55A	0.42A
	CURRENT RANGE	0 ~ 1.6A	0 ~ 1.1A	0 ~ 0.8A	0 ~ 0.55A	0 ~ 0.42A
	CURRENT ADJ. RANGE	75% ~ 100%				
	RATED POWER	19.2W	19.8W	19.2W	19.8W	20.2W
	RIPPLE & NOISE (max.) Note.2	2.5Vp-p	3.0Vp-p	3.0Vp-p	3.0Vp-p	3.8Vp-p
	VOLTAGE TOLERANCE Note.3	±10%				
	LINE REGULATION	±3.0%				
	LOAD REGULATION	±10%				
	SETUP TIME	2300ms / 230VAC 3000ms / 115VAC at full load				
INPUT	VOLTAGE RANGE Note.4	90 ~ 277VAC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR	PF≧0.9 at 75~100% load, 115VAC/230VAC				
	EFFICIENCY(Typ.)	80%	81%	82%	83%	83.5%
	AC CURRENT	0.4A/115VAC 0.2A/230VAC				
	INRUSH CURRENT(max.)	40A/230VAC				
	LEAKAGE CURRENT	0.5mA / 240VAC				
PROTECTION	OVER CURRENT Note.5	95 ~ 110%				
		Protection type : Hiccup current limiting, recovers automatically after fault condition is removed				
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.				
	OVER VOLTAGE	14 ~ 16V	19 ~ 22V	27 ~ 34V	41 ~ 46V	54 ~ 60V
		Protection type : Shut off o/p voltage, clamping by zener diode				
	OVER TEMPERATURE	110°C±10°C (TSW1)				
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT	WORKING TEMP.	-30 ~ +60°C (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.06%/°C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
SAFETY & EMC	SAFETY STANDARDS	IEC61347-1, IEC61347-2-13, TUV EN61347-1, EN61347-2-13, UL8750, IP64 approved				
	EMI CONDUCTION & RADIATION	Compliance to EN55015				
	HARMONIC CURRENT	Compliance to EN61000-3-2 Class C(≧75% load);EN61000-3-3				
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61547, light industry level, criteria A				
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC				
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC / 25°C/ 70%RH				
OTHERS	MTBF	643.6Khrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	147*37*28mm (L*W*H)				
	PACKING	0.18Kg; 60pcs/12.8Kg/0.9CUFT				

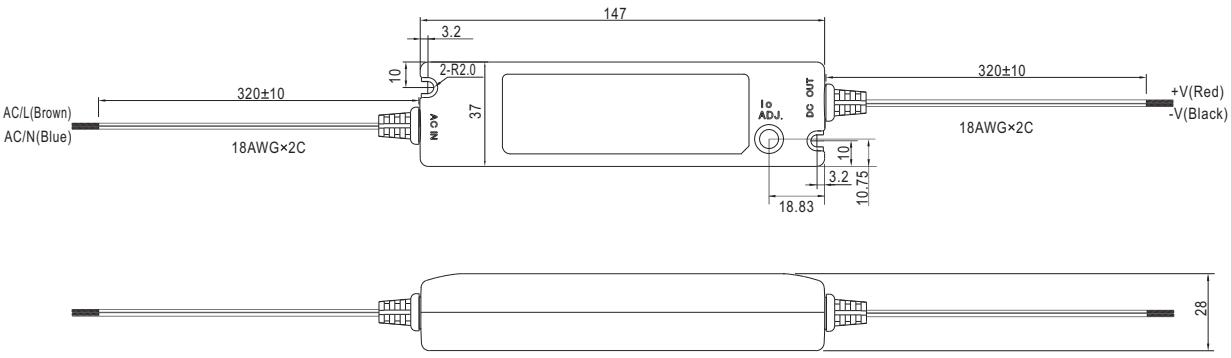
NOTE

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. Derating may be needed under low input voltage, please check the derating curve for more details.
5. Constant current operation region is within 75% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
6. The power supply is considered as 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 again.

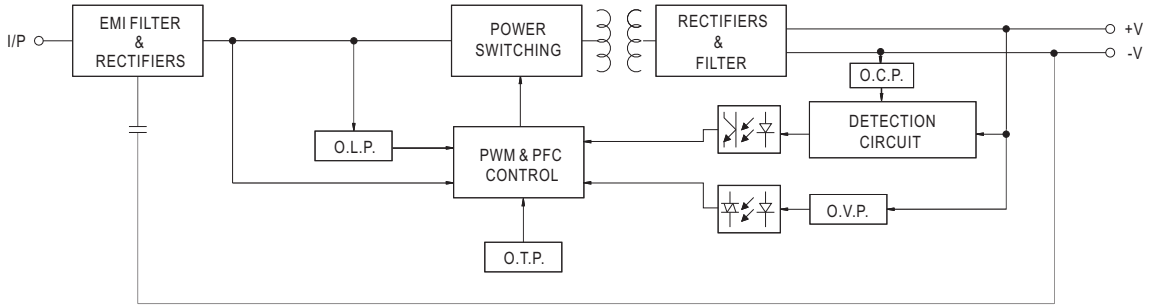
Size: 5.79 x 1.46 x 1.10”

■ Mechanical Specification

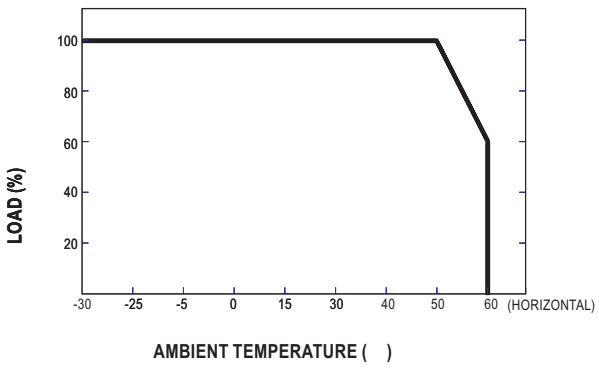
Case No.989A Unit:mm



■ Block Diagram



■ Derating Curve



■ Static Characteristics