60W Single Output LED Power Supply

PLP-60 series

Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Built-in active PFC function
- Cooling by free air convection
- No minimum load requirement
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications
- 2 years warranty

SELV EQUIVALENT (except for 48V)

SPECIFICATION

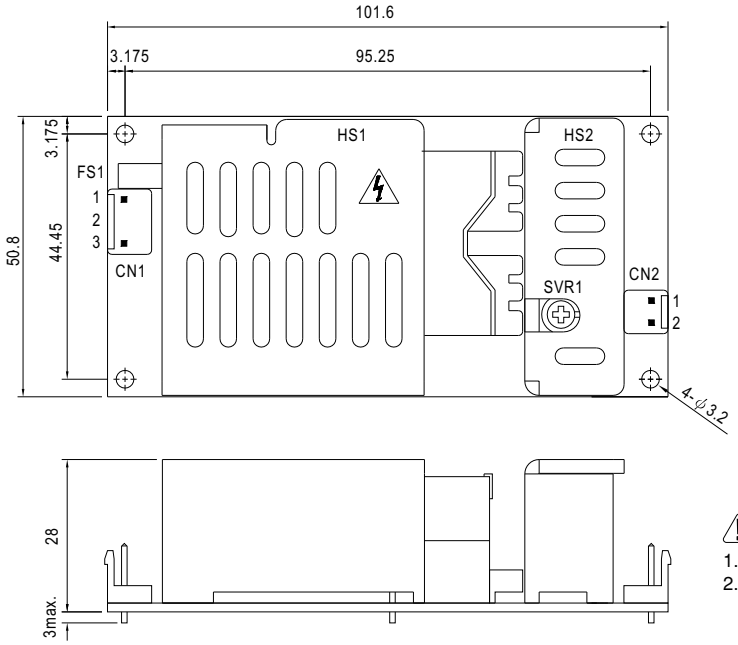
MODEL		PLP-60-12	PLP-60-24	PLP-60-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	CONSTANT CURRENT REGION Note.5	9 ~ 12V	18 ~ 24V	36 ~ 48V
	RATED CURRENT	5A	2.5A	1.3A
	CURRENT RANGE	0 ~ 5A	0 ~ 2.5A	0 ~ 1.3A
	RATED POWER	60W	60W	62.5W
	RIPPLE & NOISE (max.) Note.2	4.5Vp-p	4.5Vp-p	4.8Vp-p
	CURRENT ADJ. RANGE	3.75 ~ 5A	1.875 ~ 2.5A	0.975 ~ 1.3A
	VOLTAGE TOLERANCE Note.3	±10%		
	LINE REGULATION	±3.0%		
	LOAD REGULATION	±5.0%		
	SETUP TIME	1000ms / 230VAC 2000ms / 115VAC at full load		
INPUT	VOLTAGE RANGE	90 ~ 264VAC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR	PF≧0.9 at 75 ~ 100% load, 115VAC / 230VAC		
	EFFICIENCY(Typ.)	84%	88%	89%
	AC CURRENT	0.8A/115VAC 0.4A/230VAC		
	INRUSH CURRENT(max.)	42A/230VAC		
	LEAKAGE CURRENT	<0.75mA / 240VAC		
PROTECTION	OVER CURRENT Note.5	105 ~ 115%		
		Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	SHORT CIRCUIT	Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	OVER VOLTAGE	14 ~ 16V	28 ~ 35V	57 ~ 63V
		Protection type : Shut down o/p voltage, re-power on to recover		
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)		
	VIBRATION	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes		
SAFETY & EMC	SAFETY STANDARDS	Design refer to TUV EN61347-1, EN61347-2-13, UL60950-1		
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH		
	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; ENV50204, EN55024,EN61547, light industry level, criteria A		
OTHERS	MTBF	583.3Khrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	101.6*50.8*28mm (L*W*H)		
	PACKING	0.16Kg; 96pcs/16.4Kg/0.89CUFT		

NOTE

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, direct connecting to LED's is not suggested for models with CURRENT "RIPPLE & NOISE" > ±10% and using additional drivers is highly recommended.
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. Heat sink HS1,HS2 can not be shorted.
7. Heat sink HS1 must have safety isolation distance with system case.

■ Mechanical Specification

Unit:mm



1.HS1,HS2 can not be shorted.
2.HS1 must have safety isolation distance with system case.

AC Input Connector (CN1) : JST B3P-VH or equivalent

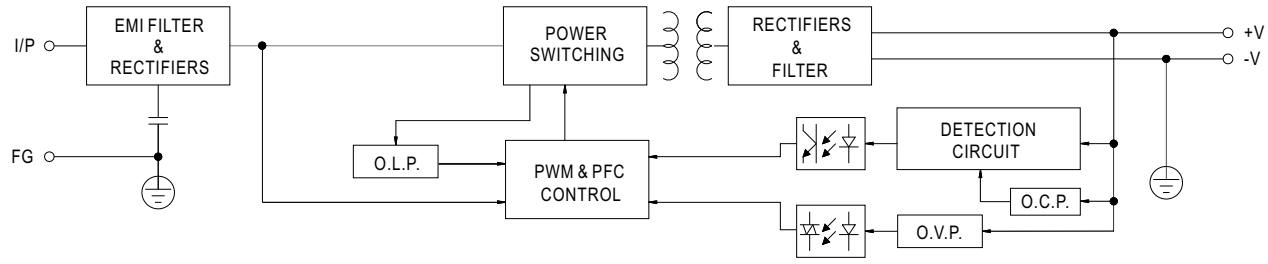
Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/N		

DC Output Connector (CN2) : JST B2P-VH or equivalent

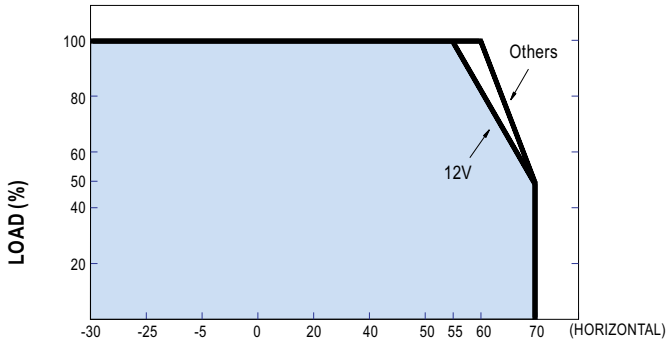
Pin No.	Assignment	Mating Housing	Terminal
1	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	-V		

■ Block Diagram

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

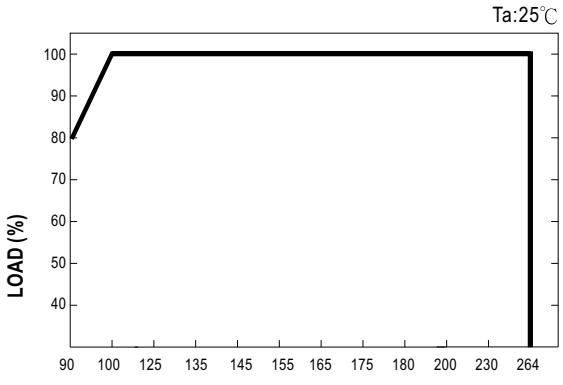


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Static Characteristics



INPUT VOLTAGE (V) 60Hz