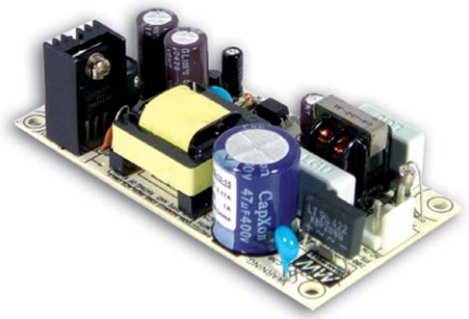
15W Single Output Switching Power Supply

PS-15 series



■ Features :

- Universal AC input / Full range
- Low leakage current <0.5mA
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- 100% full load burn-in test
- Fix switching frequency at 67KHz
- Low cost
- High reliability
- 2 years warranty

User's Manual

CB CE

SPECIFICATION

MODEL		PS-15-5	PS-15-12	PS-15-15	PS-15-24	PS-15-48
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	48V
	RATED CURRENT	2.8A	1.25A	1A	0.625A	0.313A
	CURRENT RANGE	0 ~ 2.8A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.625A	0 ~ 0.313A
	RATED POWER	14W	15W	15W	15W	15W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	120mVp-p	150mVp-p	200mVp-p
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%
	SETUP, RISE TIME	5 ~ 24V:1200ms, 30ms 48V:1200ms, 75ms at full load				
	HOLD UP TIME(Typ.)	100ms at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY(Typ.)	74%	77%	78%	79%	77%
	AC CURRENT (Typ.)	0.4A/115VAC 0.2A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 40A/230VAC				
	LEAKAGE CURRENT	<0.5mA / 240VAC				
PROTECTION	OVERLOAD	Above 105% rated output power				
		Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V
		Protection type : Shut off o/p voltage, clamping by zener diode				
	OVER TEMPERATURE	Tj 140℃ typically (U1) detect on main control IC				
		Protection type : Hiccup mode, recovers automatically after fault condition is removed				
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 4)	SAFETY STANDARDS	IEC60950-1 CB approved by TUV				
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC 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 EN55032 (CISPR32) Class B				
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3				
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, light industry level, criteria A				
OTHERS	MTBF	681.7K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	94*49*25mm (L*W*H)				
	PACKING	0.083Kg; 120pcs/10.96Kg/0.9CUFT/0.9CUFT				
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. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx					

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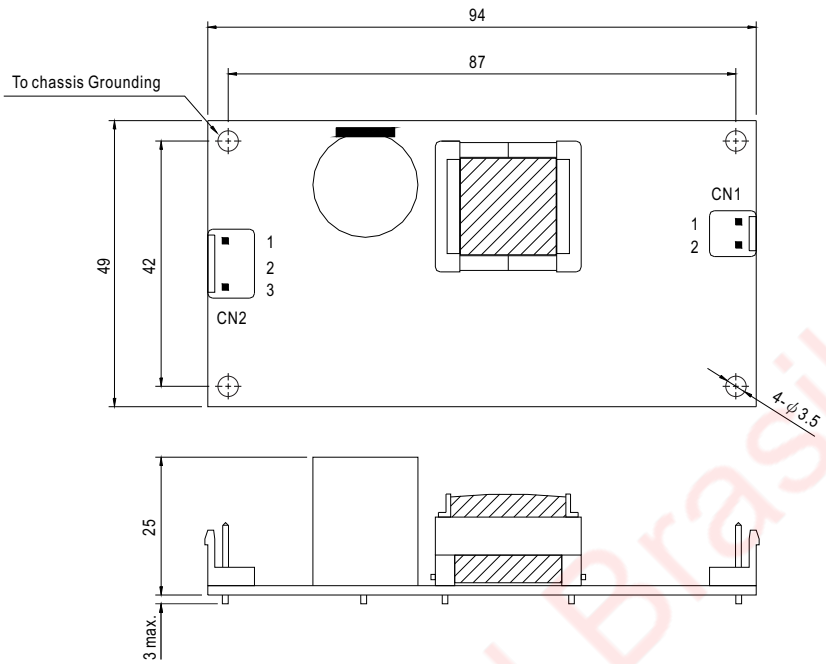
■ Mechanical Specification

Unit:mm



AC Input Connector (CN2) : JST B3P-VH or equivalent

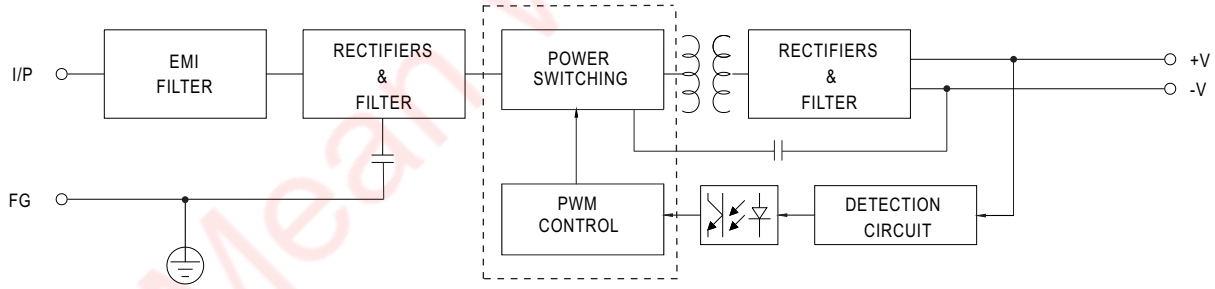
Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/L		

DC Output Connector (CN1) : JST B2P-VH or equivalent

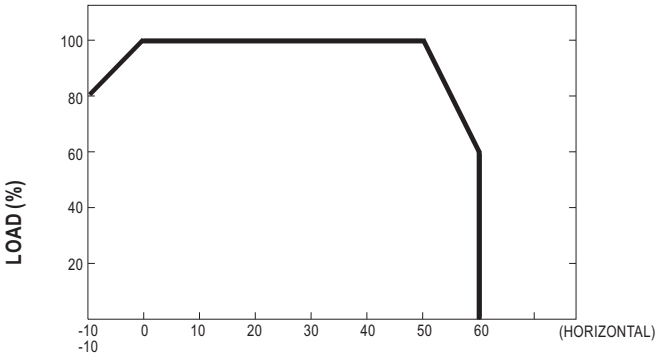
Pin No.	Assignment	Mating Housing	Terminal
1	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	-V		

■ Block Diagram

fosc : 67KHz

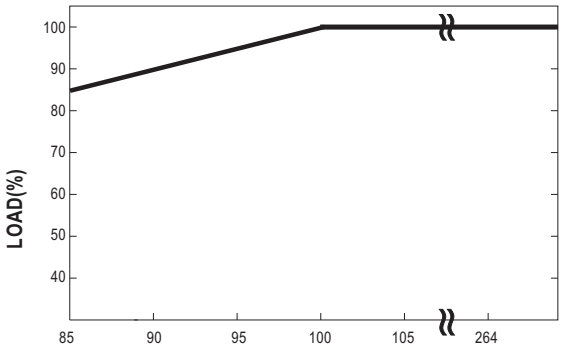


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Static Characteristics



INPUT VOLTAGE (V) 60Hz

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