50W Single Output Switching Power Supply

RS-50 series

■ Features :

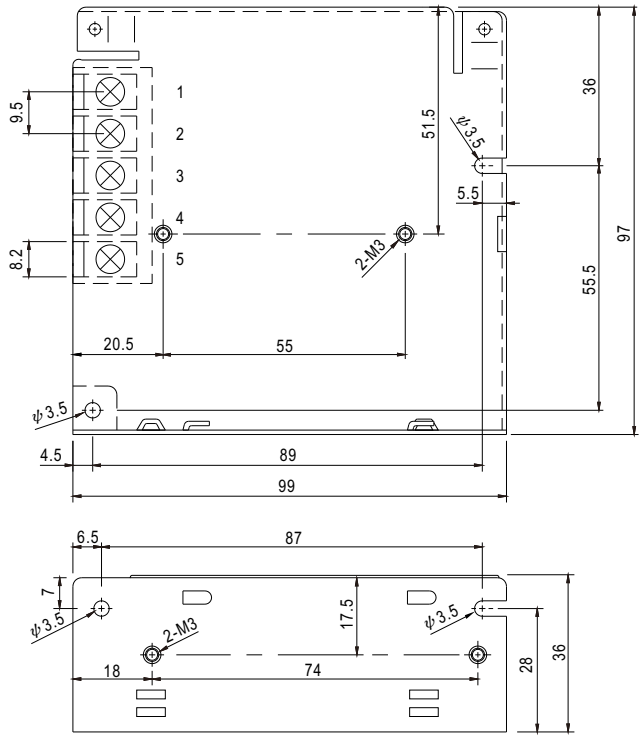
- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- All using 105℃ long life electrolytic capacitors
- Withstand 300VAC surge input for 5 second
- High operating temperature up to 70℃
- Withstand 5G vibration test
- No load power consumption<0.5W
- High efficiency, long life and high reliability
- 3 years warranty

SPECIFICATION

MODEL		RS-50-3.3	RS-50-5	RS-50-12	RS-50-15	RS-50-24	RS-50-48
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	24V	48V
	RATED CURRENT	10A	10A	4.2A	3.4A	2.2A	1.1A
	CURRENT RANGE	0 ~ 10A	0 ~ 10A	0 ~ 4.2A	0 ~ 3.4A	0 ~ 2.2A	0 ~ 1.1A
	RATED POWER	33W	50W	50.4W	51W	52.8W	52.8W
	RIPPLE & NOISE (max.) Note.2	80mVp p	80mVp p	120mVp p	120mVp p	120mVp p	200mVp p
	VOLTAGE ADJ. RANGE	3V ~ 3.6V	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	22 ~ 27.2V	42 ~ 54V
	VOLTAGE TOLERANCE Note.3	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION Note.5	±2.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	500ms, 30ms/230VAC 1200ms, 30ms/115VAC at full load					
	HOLD UP TIME (Typ.)	60ms/230VAC 14ms/115VAC at full load					
INPUT	VOLTAGE RANGE	88 ~ 264VAC 125 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)					
	FREQUENCY RANGE	47 ~ 63Hz					
	EFFICIENCY(Typ.)	78%	83%	84.5%	86%	88%	89%
	AC CURRENT (Typ.)	1.3A/115VAC 0.8A/230VAC					
	INRUSH CURRENT (Typ.)	COLD START 33A/230VAC					
	LEAKAGE CURRENT	<2mA / 240VAC					
PROTECTION	OVERLOAD	110 ~ 150% rated output power					
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	3.8 ~ 4.45V	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
ENVIRONMENT	WORKING TEMP.	25 ~ +70℃ (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non condensing					
	STORAGE TEMP., HUMIDITY	40 ~ +85℃, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)					
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes					
SAFETY & EMC (Note 6)	SAFETY STANDARDS	UL60950 1, TUV EN60950 1 , CCC GB4943 approved					
	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					
	EMC EMISSION	Compliance to EN55032 (CISPR32) Class B, EN61000 3 2, 3,GB9254 class B,GB17625.1					
	EMC IMMUNITY	Compliance to EN61000 4 2,3,4,5,6,8,11; EN61000 6 2 (EN50082 2), heavy industry level, criteria A					
OTHERS	MTBF	228Khrs min. MIL HDBK 217F (25℃)					
	DIMENSION	99*97*36mm (L*W*H)					
	PACKING	0.41Kg; 45pcs/19.5Kg/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. Line regulation is measured from low line to high line at rated load. 5. Load regulation is measured from 0% to 100% rated load. 6. 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)						

■ Mechanical Specification

Case No. 905B Unit:mm

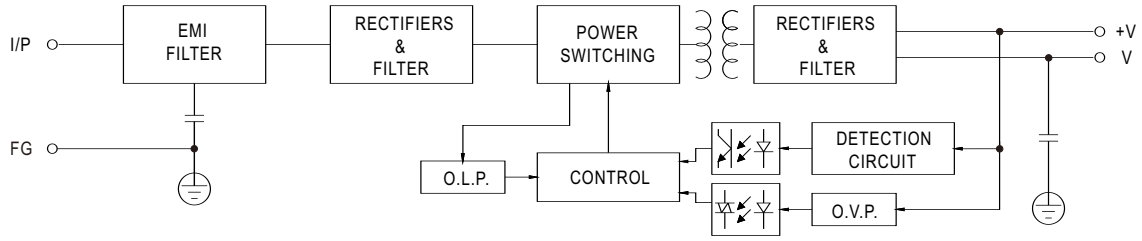


Terminal Pin No. Assignment

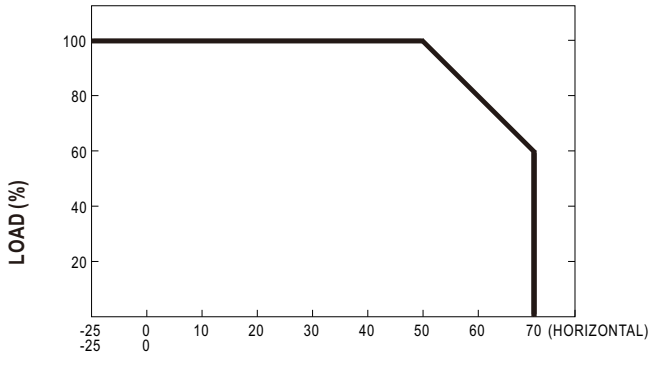
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG ⏚		

■ Block Diagram

fosc : 60KHz

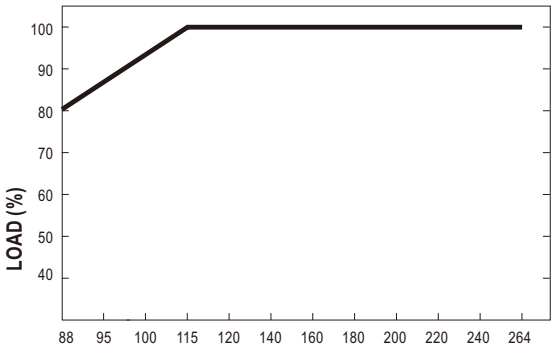


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz