



MEAN WELL RS-150-3.3 150W Single Output Switching Power Supply Owner's Manual

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MEAN WELL RS-150-3.3 150W Single Output Switching Power Supply



Product Information

The RS-150 series is a 150W single output switching power supply. It features various protections including short circuit, overload, and over voltage. The power supply is cooled by free air convection and has an LED indicator for power on. It has undergone a 100% full load burn-in test and uses 105 long life electrolytic capacitors. The power supply can withstand a 300VAC surge input for 5 seconds and is designed to operate at high temperatures up to 70°C. It has also passed a 5G vibration test and comes with a 3-year warranty.

Product Usage Instructions

To use the RS-150 series power supply, follow the instructions below:

1. First, identify the model that corresponds to your desired output voltage. The available models are RS-150-3.3, RS-150-5, RS-150-12, RS-150-15, RS-150-24, and RS-150-48.
2. Make sure the input voltage is within the specified range of 88 ~ 132VAC or 176 ~ 264VAC. You can select the appropriate range using the switch on the power supply.
3. Connect the DC output of the power supply to your device or load. Ensure that the polarity is correct.
4. Before connecting the AC input, check that all connections are secure and there are no loose wires.
5. Connect the AC input to a suitable power source with a frequency range of 47 ~ 63Hz.
6. Once everything is properly connected, turn on the power source.
7. The LED indicator on the power supply will light up to indicate that power is on.
8. If there are any issues or faults, the power supply's protections will activate to prevent damage. Refer to the user's manual for troubleshooting steps.

Ensure that you adhere to safety precautions and guidelines when using the power supply. If you have any further questions or concerns, refer to the user's manual or contact the manufacturer's customer support.

150W Single Output Switching Power Supply

Features

- 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°C long life electrolytic capacitors
- Withstand 300VAC surge input for 5 second
- High operating temperature up to 70°C
- Withstand 5G vibration test
- High efficiency, long life and high reliability
- 3 years warranty

SPECIFICATION

MODEL		RS-150-3.3	RS-150-5	RS-150-12	RS-150-15	RS-150-24	RS-150-48
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	24V	48V
	RATED CURRENT	30A	26A	12.5A	10A	6.5A	3.3A
	CURRENT RANGE	0 ~ 30A	0 ~ 26A	0 ~ 12.5A	0 ~ 10A	0 ~ 6.5A	0 ~ 3.3A
	RATED POWER	99W	130W	150W	150W	156W	158.4W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	120mVp-p	120mVp-p	120mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	3.2V ~ 3.5V	4.75 ~ 5.5V	11.4 ~ 13.2V	14.25 ~ 16.5V	22.8 ~ 26.4V	45.6 ~ 52.8V
	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	800ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load					
	HOLD UP TIME (Typ.)	28ms/230VAC 20ms/115VAC at full load					
INPUT	VOLTAGE RANGE	88 ~ 132VAC / 176 ~ 264VAC selected by switch 248 ~ 373VDC(Withstand 300VAC surge for 5sec. Without damage)					
	FREQUENCY RANGE	47 ~ 63Hz					
	EFFICIENCY(Typ.)	74%	78%	83%	84%	86%	86%

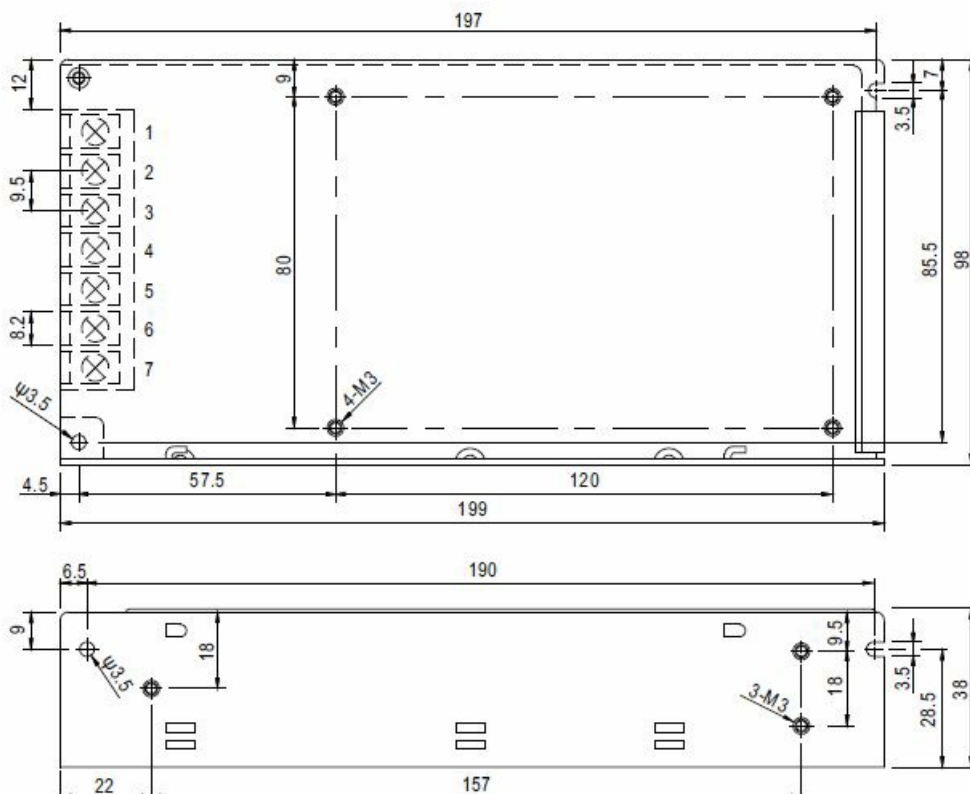
T	AC CURRENT (Typ.)	3A/115VAC 2A/230VAC					
	INRUSH CURRENT (Typ.)	COLD START 40A/230VAC					
	LEAKAGE CURRENT	<2mA / 240VAC					
PROTECTION	OVERLOAD Note.8	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	3.8 ~ 4.45V	5.75 ~ 6.75 V	13.8 ~ 16.2 V	17.25 ~ 20.25V	27.6 ~ 32.4 V	55.2 ~ 64.8 V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
ENVIRONMENT	WORKING TEMP.	-25 ~ +70°C (Refer to “Derating Curve”)					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)					
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes					
SAFETY & EMC (Note 6)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, AS/NZS 62368.1, EAC TP TC 004 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°C/ 70% RH					
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2(Note.9), -3, EAC TP TC 020					
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 020					
OTHERS	MTBF	3044.1K hrs min. Telcordia SR-332 (Bellcore) ; 437.3K hrs min. MIL-HDB K-217F (25°C)					
	DIMENSION	199*98*38mm (L*W*H)					
	PACKING	0.7Kg; 20pcs/14Kg/0.85CUFT					

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. 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>)
7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.
8. Extra consideration should be taken when selecting output wiring for 3.3V and 5V models. This is to prevent the protection modes for overload and short circuit from becoming constant power.
9. Testing harmonic current at 80% load.
10. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).

❖ **Product Liability Disclaimer** For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

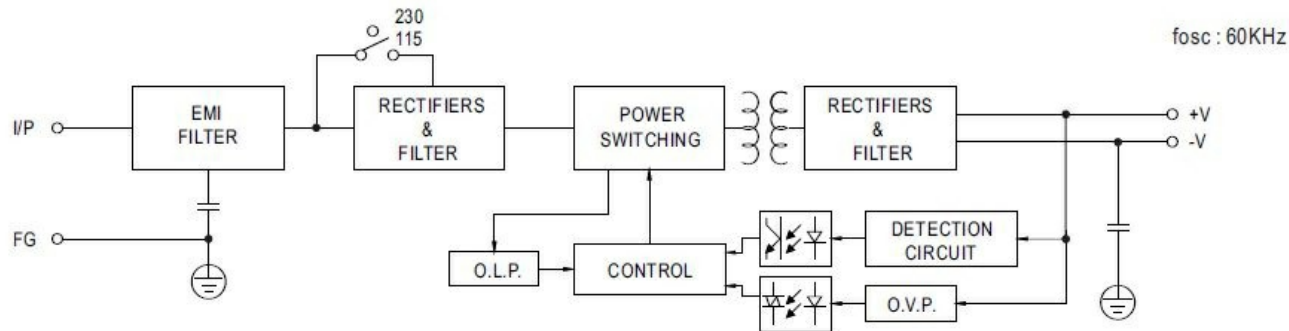
Mechanical Specification



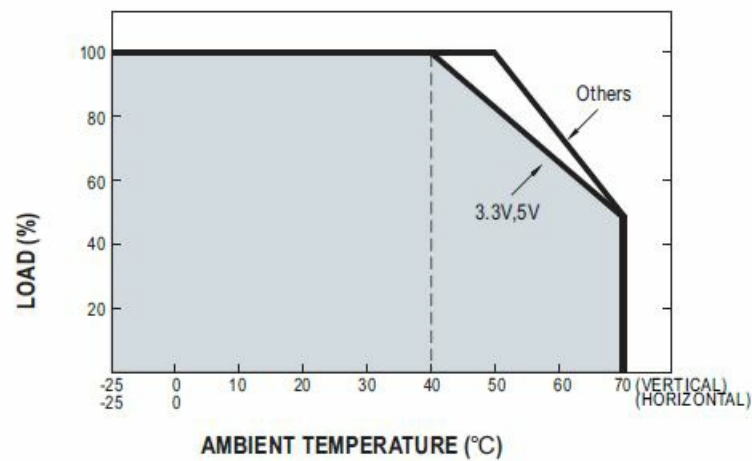
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG		

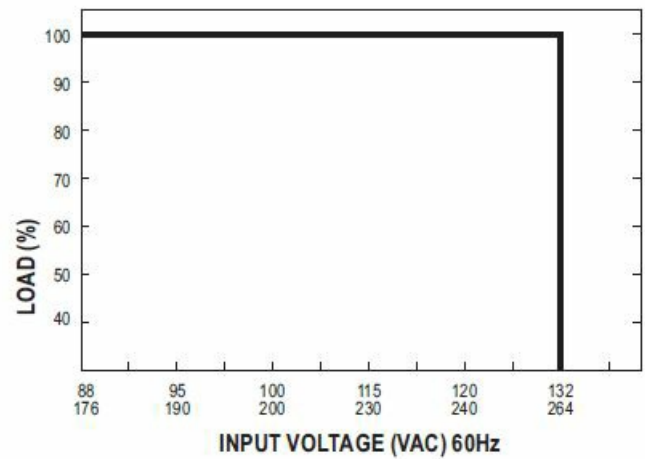
Block Diagram



Derating Curve



Static Characteristics





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RS-150-3.3 150W Single Output Switching Power Supply, RS-150-3.3, 150W Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply, Supply

References

- [TÜV Rheinland - Home | US | TÜV Rheinland](#)
- [MEAN WELL Switching Power Supply Manufacturer](#)
- [Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer](#)
- [Global Trade Item Number \(GTIN\)-MEAN WELL Switching Power Supply Manufacturer](#)