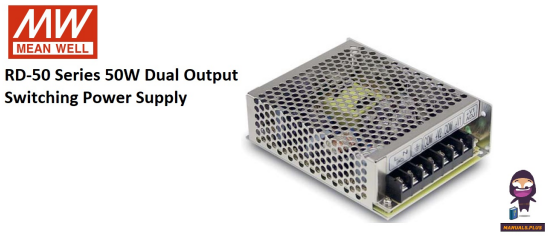


MEAN WELL RD-50 Series 50W Dual Output Switching Power Supply Owner's Manual

Contents

MEAN WELL RD-50 Series 50W Dual Output Switching Power Supply

Specifications

- Model: RD-50 series
- Output Power: 50W
- Output Voltage: CH1 (5V), CH2 (12V/24V)
- Rated Current: CH1 (6A), CH2 (2A/1.4A)
- Features: Universal AC input, Short circuit/Overload/Over voltage protection, LED power indicator
- Efficiency: 78%-79%
- Operating Temperature: Up to 70°C
- Warranty: 3 years

Product Usage Instructions

Installation:

1. Ensure the input power matches the specifications mentioned.
2. Connect the output cables to the respective devices securely.

Power On

1. Plug in the power supply to a compatible power source.
2. Turn on the power supply using the switch.

Monitoring

- Check the LED indicator for power status.
- Monitor the output voltages to ensure they meet the requirements of connected devices.

Safety Precautions

1. Do not overload the power supply beyond the rated current.
2. Keep the power supply well-ventilated to prevent overheating.

Specifications

MODEL		RD-50A		RD-50B	
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH1	CH2
	DC VOLTAGE	5V	12V	5V	24V
	RATED CURRENT	6A	2A	4A	1.4A
	CURRENT RANGE Note.3	0 ~ 6A	0 ~ 3A	0 ~ 6A	0 ~ 2A
	RATED POWER	54W		53.6W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH1: 4.75 ~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±7.0%	±2.0%	±8%
	LINE REGULATION Note.4	±0.5%	±1.5%	±0.5%	±1.5%
	LOAD REGULATION Note.5	±0.5%	±3.0%	±0.5%	±3.0%
	SETUP, RISE TIME	500ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load			
	HOLD UP TIME (Typ.)	60ms/230VAC 10ms/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%		79%	
	AC CURRENT (Typ.)	1.3A/115VAC 0.8A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 48A/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	CH1: 5.75 ~ 6.75V
		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℃)on +5V output
	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, BIS IS 13252(Part 1):2010/IEC 60950-1:2005, 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℃/ 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-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**	2981.9K hrs min. Telcordia SR-332 (Bellcore); 594.2K hrs min. MIL-HDBK-217F (25℃)
	DIMENSION	99*97*36mm (L*W*H)
	PACKING	0.41Kg; 45pcs/19.5Kg/0.94CUFT

NOTE	1. All parameters NOT specially mentioned are measured at 230V AC 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 0.1μF & 47μF parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation, when multi-channel output, it is recommended that CH1 load > 10%. 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 that will be installed into the 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 to ensure 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 **https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf**) 7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/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

GTIN CODE

MW Search: **https://www.meanwell.com/serviceGTIN.aspx**

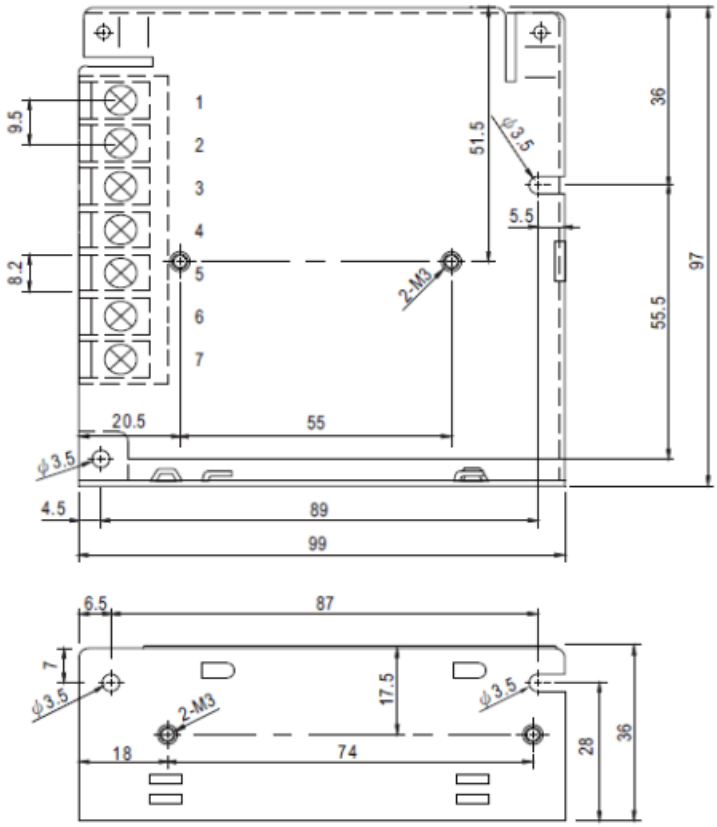
Features

- 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 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 vears warranty

50W Dual Output Switching Power Supply

Mechanical Specification

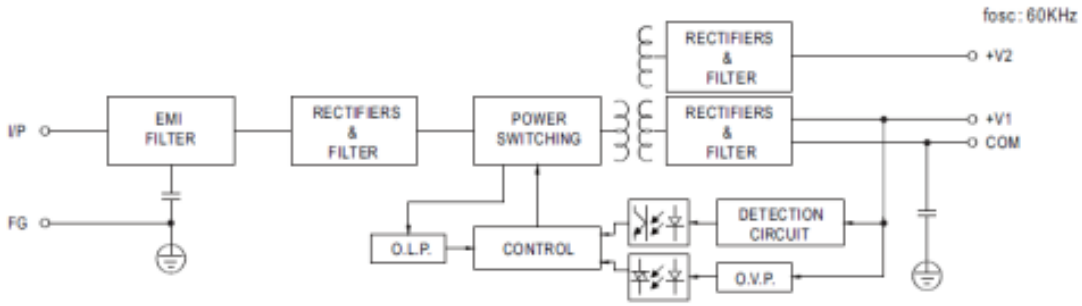
(Unit: mm , tolerance ± 1mm)



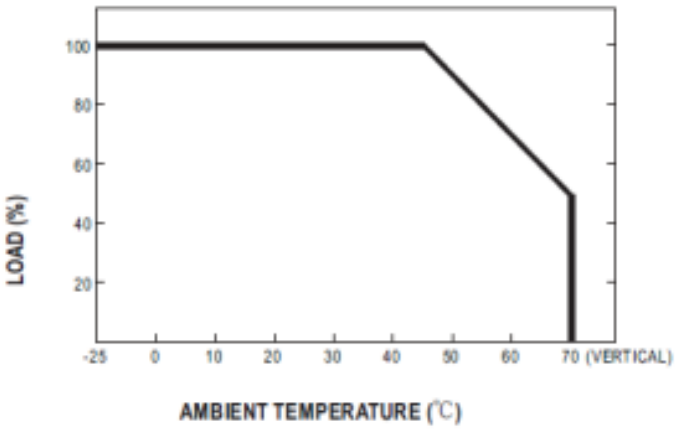
Terminal Pin No. Assignment

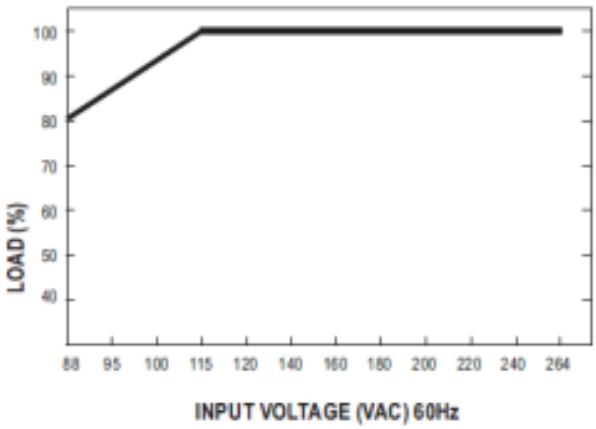
Pin No.	Assignment			Pin No.	Assignment
1	AC/L			4,6	DC OUTPUT COM
2	AC/N			5	DC OUTPUT +V2
3	FG			7	DC OUTPUT +V1

Block Diagram



- **Derating Curve**
- **Output Derating VS Input Voltage**





FAQS

- **Q: What should I do if the LED indicator does not light up?**
  A: Check the input power connection and ensure it is securely plugged in. Verify that the power switch is turned on.
- **Q: Can I connect multiple devices to both output channels simultaneously?**
  A: Yes, you can connect devices as long as the total load does not exceed the rated current for each channel.

Documents / Resources

	MEAN WELL RD-50 Series 50W Dual Output Switching Power Supply [pdf] Owner's Manual RD-50 Series, RD-50 Series 50W Dual Output Switching Power Supply, 50W Dual Output Switching Power Supply, Dual Output Switching Power Supply, Switching Power Supply, Power Supply

References

- User Manual