

MEAN WELL LPS-50 Series 50W Single Output Switching Power Supply



MEAN WELL LPS-50 Series 50W Single Output Switching Power Supply Owner's Manual

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MEAN WELL LPS-50 Series 50W Single Output Switching Power Supply



Specifications

- Model: LPS-50 series
- Input: Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling: Free air convection
- Remote ON-OFF control: Built-in
- Indicator: LED for power on
- Burn-in test: 100% full load
- Low profile: 23mm thickness
- Warranty: 2 years

Product Usage Instructions:

Installation

1. Ensure the input power matches the specifications of the power supply.
2. Connect the output wires to the appropriate devices, observing polarity.
3. Secure the power supply in a well-ventilated area to allow for proper cooling.

Operation

1. Turn on the power supply using the remote ON-OFF control or switch.
2. Monitor the LED indicator to ensure power is on.
3. Avoid overloading the power supply beyond its rated capacity.
4. If any protection feature is triggered, investigate and resolve the issue before reuse.

Maintenance

1. Regularly check for dust or debris accumulation that may hinder cooling.
2. Inspect the power supply for any physical damage or loose connections.
3. Keep the power supply away from moisture or direct sunlight.

FAQ

- **Q: What should I do if the LED indicator does not light up?**

A: Check the input power connection and ensure it is within the specified range. If the issue persists, contact customer support.

- **Q: Can I use the power supply with devices that have different voltage requirements?**

A: No, it is recommended to match the voltage output of the power supply with the requirements of the connected devices to avoid damage.

- **Q: How can I test if the power supply is functioning correctly?**

A: Use a multimeter to measure the output voltage of the power supply under load to verify its performance.

50W Single Output Switching Power Supply
LPS-50 series



Features

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Small and compact size
- Built-in remote ON-OFF control
- LED indicator for power on
- 100% full load burn-in test
- Low profile: 23mm thickness
- 2 years warranty

GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



BS EN/EN62368-1



IEC62368-1



TPTC004



SPECIFICATION

MODEL		LPS-50-3.3	LPS-50-5	LPS-50-12	LPS-50-15	LPS-50-24	LPS-50-48	
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	24V	48V	
	RATED CURRENT	10A	10A	4.2A	3.4A	2.1A	1.1A	
	CURRENT RANGE	0 ~ 12A	0 ~ 12A	0 ~ 5A	0 ~ 4.1A	0 ~ 2.5A	0 ~ 1.3A	
	RATED POWER	33W	50W	50.4W	51W	50.4W	52.8W	
	PEAK LOAD(10sec.) Note.4	39.6W	60W	60W	61.5W	60W	62.4W	
	RIPPLE & NOISE (max.) Note.2	50mVp-p	50mVp-p	80mVp-p	80mVp-p	80mVp-p	100mVp-p	
	VOLTAGE ADJ. RANGE	3 ~ 3.6V	4.5 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 27.2V	43.2 ~ 52.8V	
	VOLTAGE TOLERANCE Note.3	±3.0%	±3.0%	±2.0%	±2.0%	±1.0%	±1.0%	
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LOAD REGULATION	±3.0%	±3.0%	±2.0%	±2.0%	±1.0%	±1.0%	
	SETUP, RISE TIME	500ms, 40ms/230VAC 500ms, 40ms/115VAC at full load						
	HOLD UP TIME (Typ.)	70ms/230VAC 12ms/115VAC at full load						
INPUT	VOLTAGE RANGE		90 ~ 264VAC 127 ~ 370VDC					
	FREQUENCY RANGE		47 ~ 63Hz					
	EFFICIENCY(Typ.)		75%	81%	82%	84%	85%	86%
	AC CURRENT (Typ.)	115V AC	0.9A	1.2A				
		230V AC	0.6A	0.8A				
	INRUSH CURRENT (Typ.)		COLD START 18A/115VAC 35A/230VAC					
	LEAKAGE CURRENT		<1mA / 240VAC					

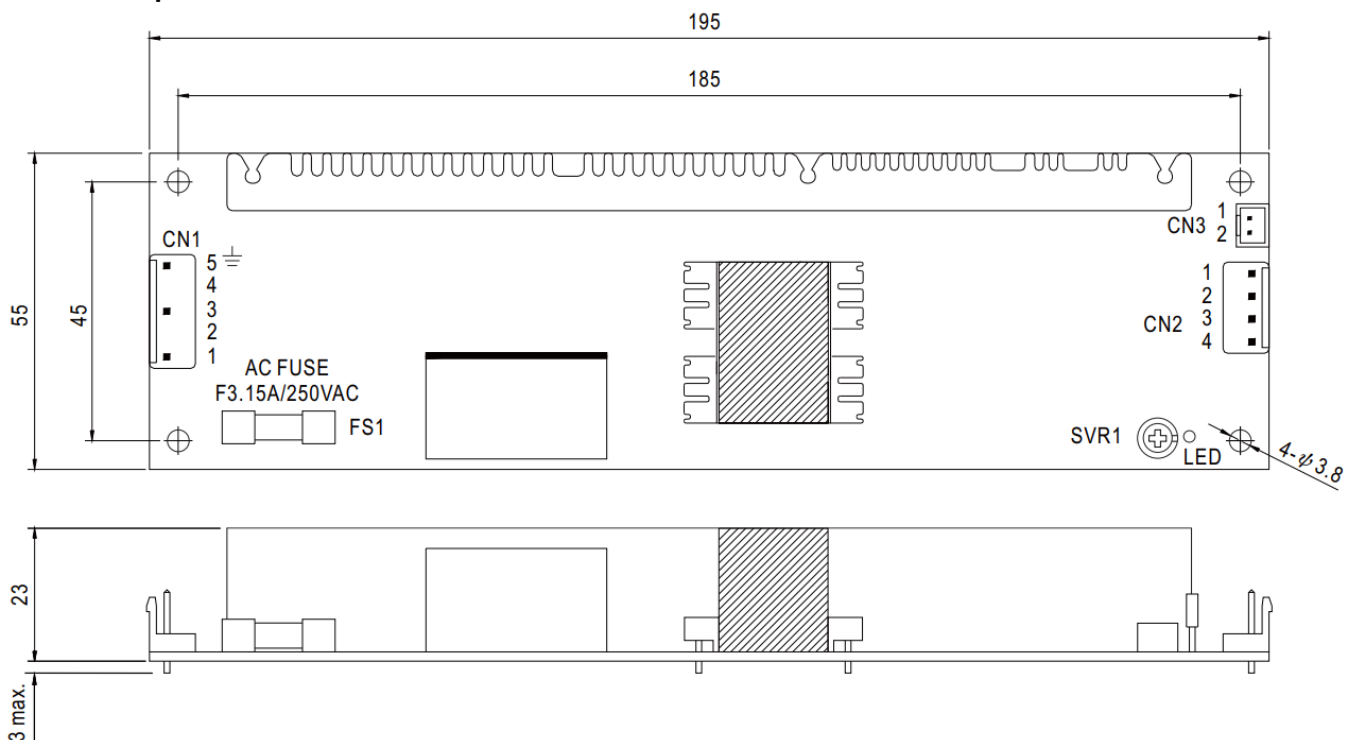
PROTECTION	OVERLOAD	122 ~ 160% rated output power					
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	3.8 ~ 4.45V	5.75 ~ 6.75 V	13.8 ~ 16.2 V	17.25 ~ 20.25V	27.6 ~ 32.4 V	57.6 ~ 67.2 V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
FUNCTION	REMOTE ON/OFF	RC+/RC- : 0 ~ 0.8V power on ; 4 ~ 10V power off					
ENVIRONMENT	WORKING TEMP.	-20 ~ +70°C (Refer to “Derating Curve”)					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.04%/°C (0 ~ 50°C)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, 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,-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, criteria A, EAC TP TC 020					
OTHERS	MTBF	3138.2K hrs min. Telcordia SR-332 (Bellcore) ; 491.4K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	195*55*23mm (L*W*H)					
	PACKING	0.24Kg; 48pcs/12.5Kg/0.87CUFT					

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 0.1μF & 47μF parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. 33.3% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.
5. 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 https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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



AC Input Connector (CN1) : JST B5P-VH or equivalent

Pin No.	Assignment	Mating Housing		Terminal
1	AC/L	JST VHR or equivalent		JST SVH-21T-P1.1 or equivalent
2,4	No Pin			
3	AC/N			
5	FG			

DC Output Connector (CN2) : JST B4P-VH or equivalent

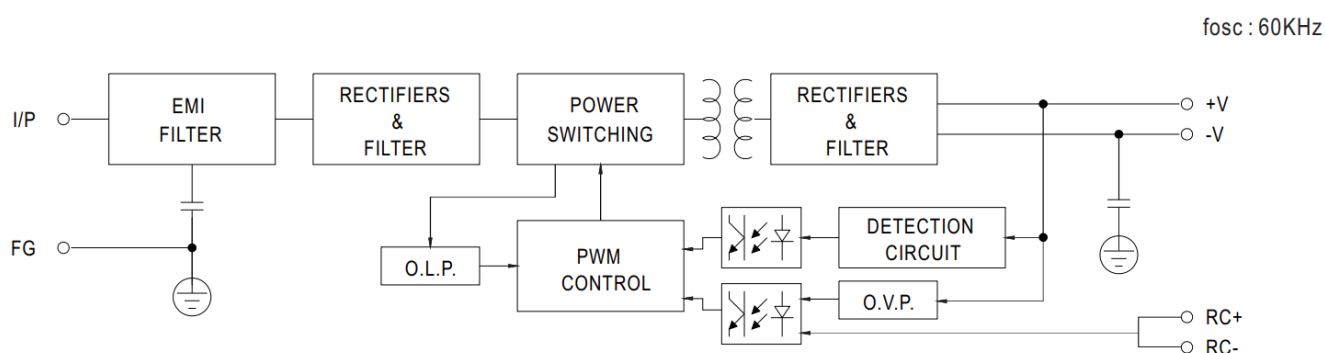
Pin No.	Assignment	Mating Housing	Terminal
1,2	-V	JST VHR	JST SVH-21T-P1.1
3,4	+V	or equivalent	or equivalent

Remote ON/OFF Connector(CN3):JST B2B-XH or equivalent

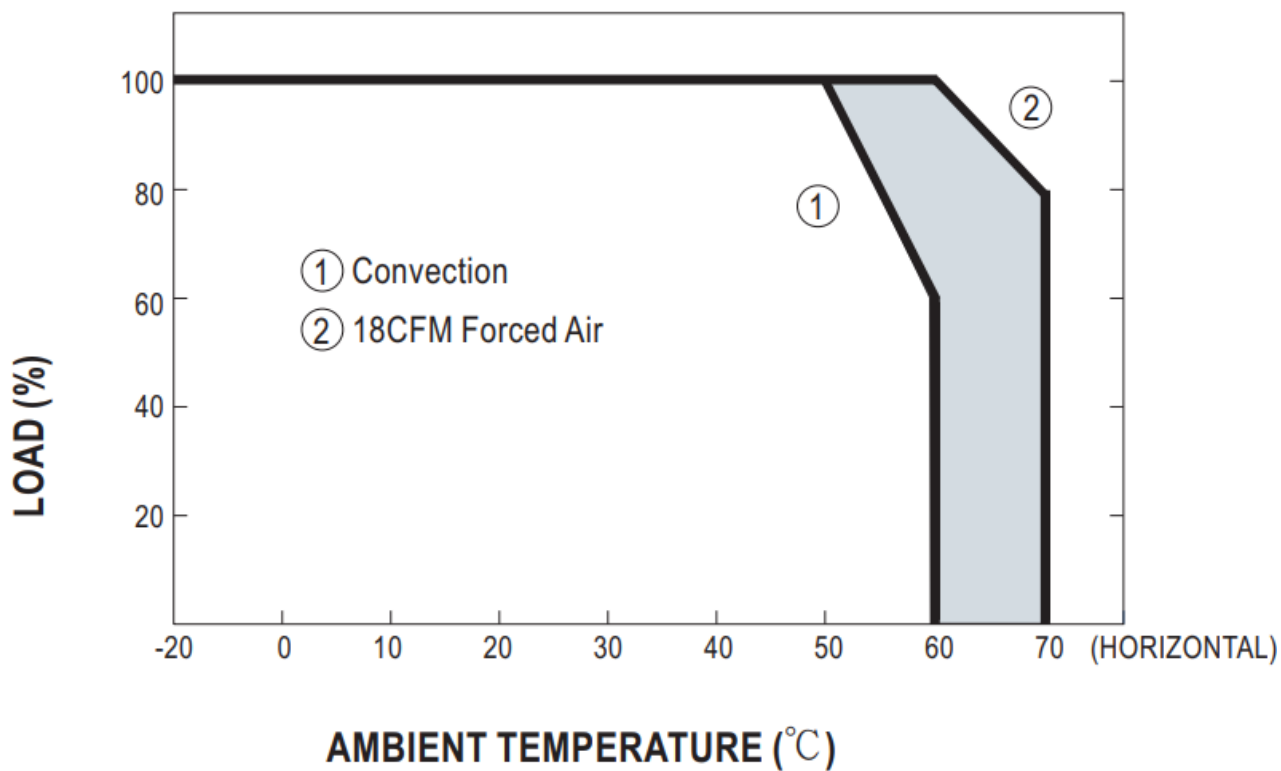
Pin No.	Assignment	Mating Housing	Terminal
1	RC+	JST XHP	JST SXH-001T-P0.6
2	RC-	or equivalent	or equivalent

 : Grounding Required CN1:Pin 5 is safety ground

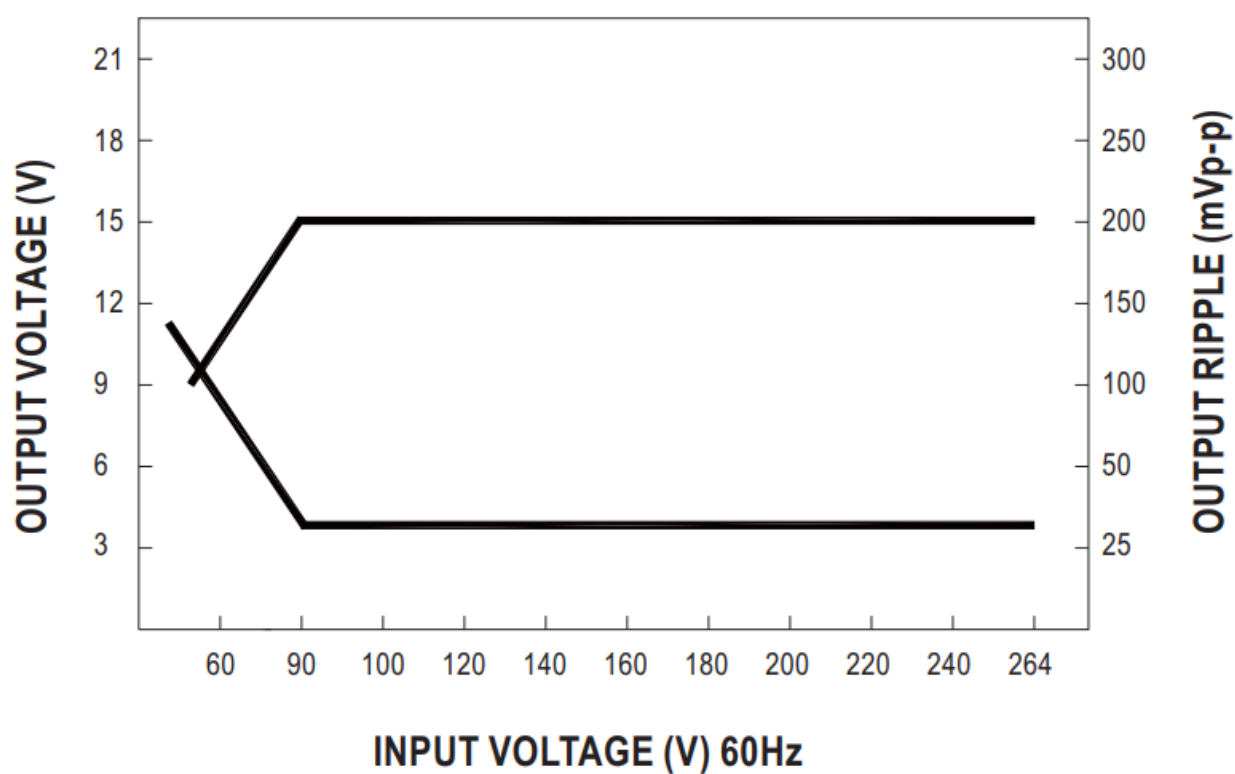
Block Diagram



Derating Curve



Static Characteristics (15V)



Documents / Resources



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LPS-50 Series 50W Single Output Switching Power Supply, LPS-50 Series, 50W Single Output Switching Power Supply, Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply, Supply

References

- [TÜV Rheinland - Home | US | TÜV Rheinland](#)
- [User Manual](#)

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