

Wavecom



Meanwell LRS-150-12

150W 12V Single Output Switching Power Supply

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Overview

The Meanwell LRS-150 is a 150W single-output enclosed type power supply with a low profile design. Featuring a switch selectable input of 115 or 230V AC, the LRS-150-12 provides 12V output voltage, and offers efficiencies of up to 87.5%. The case features a specially designed mesh enclosure to maximise heat dissipation, and operates at temperatures between -30°C to 70°C without fan airflow. The LRS-150 delivers less than 0.5W zero load power consumption making it an excellent option for meeting energy standards, and for reducing overall energy usage. With all these features and more, the LRS-150-12 offers an excellent price to performance power supply solution.

Features

- ◇ AC Input range selectable by switch
- ◇ Withstands up to 300V AC surge input for 5 seconds
- ◇ Less than 0.5W zero load power consumption
- ◇ Miniature size and 1U low profile
- ◇ Operates without external cooling in environments up to 70°C
- ◇ Short circuit, overload and overvoltage protections
- ◇ Cooling by free air convection
- ◇ Operating altitude up to 5000 meters
- ◇ High efficiency, long life and high reliability
- ◇ LED Power Indicator
- ◇ 100% full load burn-in test
- ◇ 3 years warranty

Ordering Information

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Specifications

Output	DC Voltage	12V
	Rated Current	12.5A
	Current Range	0 - 12.5A
	Rated Power	150W
	Ripple and Noise ^(see note 2)	150mVp-p
	Voltage Adj. Range	10.2 - 13.8V
	Voltage Tolerance ^(see note 3)	±1.0%
	Line Regulation ^(see note 4)	±0.5%
	Load Regulation ^(see note 5)	±0.5%
	Setup, Rise Time	500ms, 30ms/230VAC - 500ms, 30ms/115VAC at full load
Hold up Time (Typical)	40ms/230VAC - 35ms/115VAC at full load	
Input	Voltage Range	85-132VAC - 170-264VAC by switch - 240-370VDC (switch on 230VAC)
	Frequency Range	47 - 63Hz
	Efficiency (Typical)	87.5%
	AC Current (Typical)	3A/115VAC - 1.7A/230VAC
	Inrush Current (Typical)	COLD STAR 60A/230VAC
	Leakage Current	<0.75mA - 240VAC
Protection	Overload	110 - 140% rated output power - Protection type : Hiccup mode, recovers automatically after fault condition is removed
	Over Voltage	13.8 - 16.2V - Protection type : Shut down o/p voltage, re-power on to recover
Environment	Working Temp.	-30°C - +70°C (Refer to "Derating Curve")
	Working Humidity	20 - 90% RH non-condensing
	Storage Temperature Humidity	-40°C ~ +85°C, 10 - 95% RH
	Temperature Coefficient	±0.03% per °C (0 - 50°C)
	Vibration	10 - 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes
Safety	Safety Standards	UL60950-1, TUV EN60950-1, EN60335-1, EN61558-1/-2-16, CCC GB4943.1, BSMI CNS14336-1, EAC TP TC 004, AS/NZS 60950.1 (by CB) approved
	Withstand Voltage	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:1.25KVAC
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
	EMC Emission	Compliance to EN55032 (CISPR32) Class B, EN55014, EN61000-3-2 Class A(≤75% Load), EN61000-3-3, GB/T 9254, BSMI CNS13438, EAC TP TC 020
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), heavy industry level, criteria A, EAC TP TC 020
Others	MTBF	601K hrs min. MIL-HDBK-217F (25°C)
	Dimensions	159*97*30mm (L*W*H) - 0.48Kg
Notes	<ol style="list-style-type: none">1. All parameters NOT specifically mentioned are measured at 230VAC input, rated load and 25°C ambient temperature2. Ripple and noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uf and 47uf parallel capacitor.3. Tolerance: includes set up tolerance, line regulation and load regulation4. 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. Length of set up time is measured at cold first start. Turning the power supply ON/OFF very quickly may lead to an increase of the set up time7. The power supply is considered a component which will be installed into final equipment. All the EMC tests have been executed by mounting the unit on a 360*360mm metal plate with 1mm of thickness. The final equipment must be reconfirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies" available at www.meanwell.com8. The ambient temperature derating of 5°C/1,000m is needed for operating altitudes greater than 2,000m	



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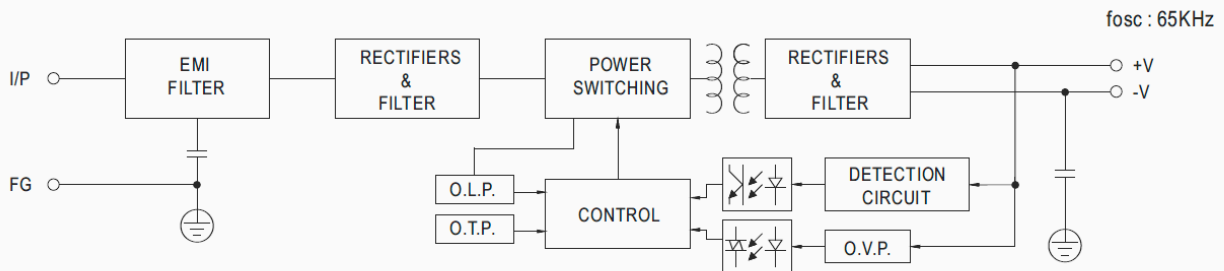


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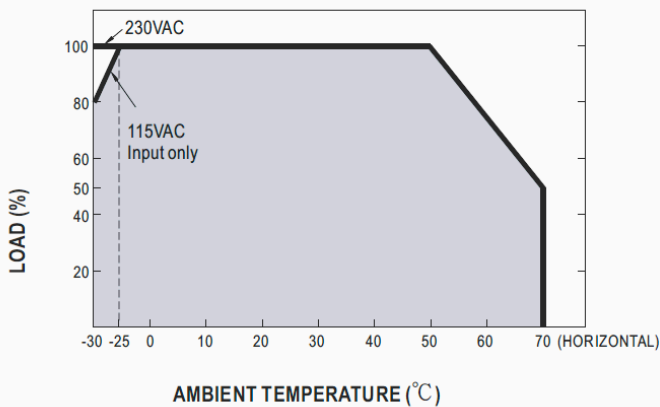
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Diagrams

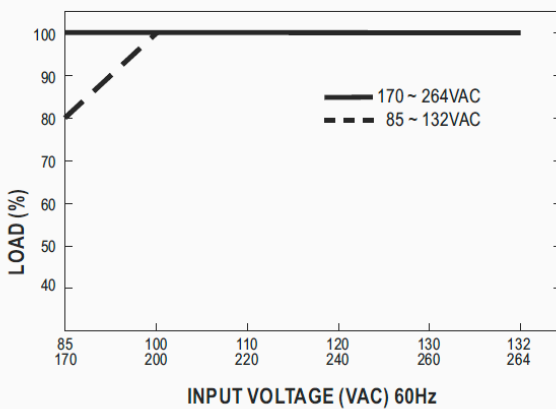
■ Block Diagram



■ Derating Curve



■ Static Characteristics



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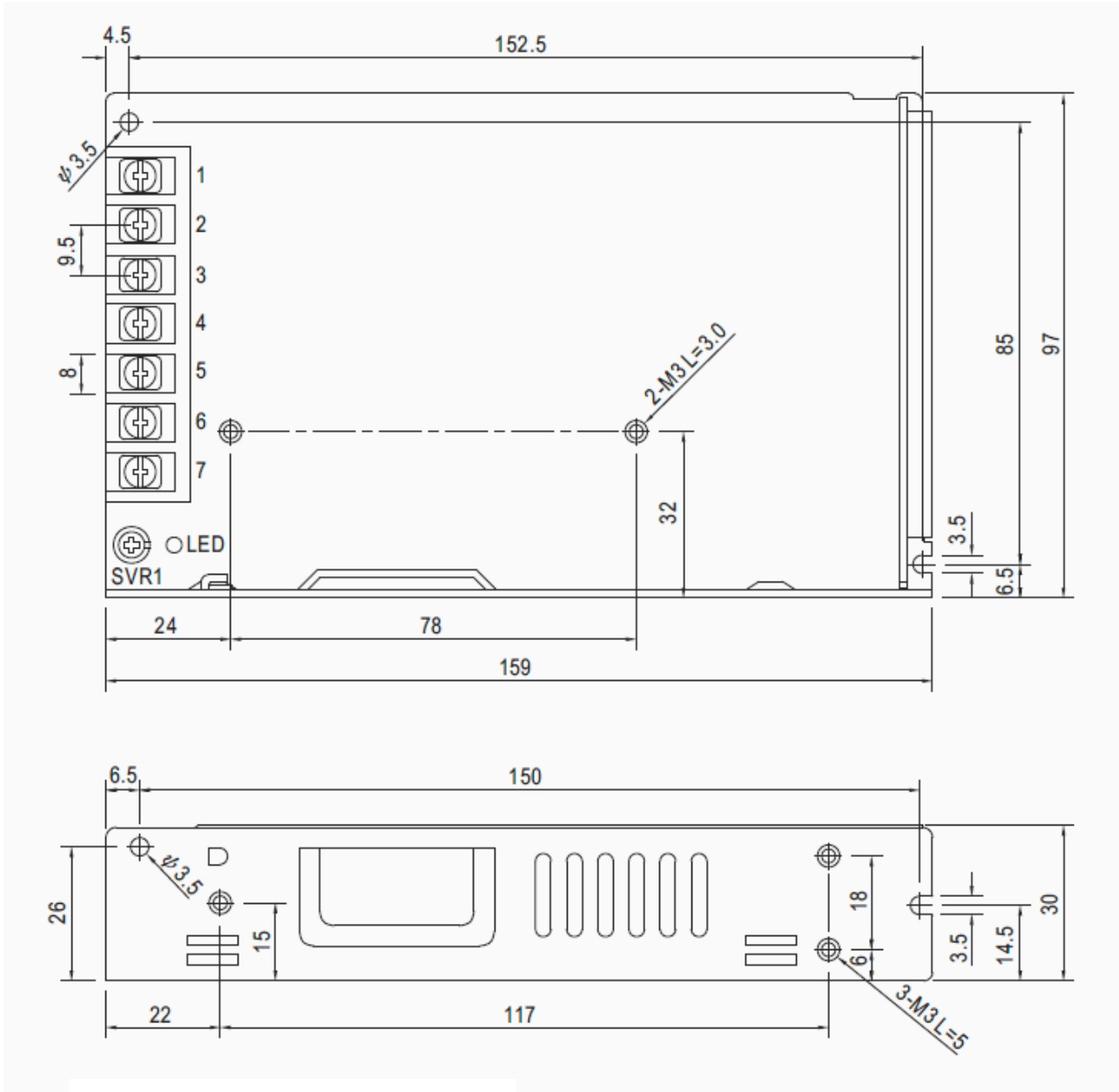
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Mechanical Specification



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 \equiv		



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