



## MEAN WELL LRS-50 Series 50W Single Output Switching Power Supply Instruction Manual

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LRS-50 Series 50W Single Output Switching Power Supply  
Instruction Manual



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## LRS-50 Series 50W Single Output Switching Power Supply

50W Single Output Switching Power Supply

### Features

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 second
- No load power consumption<0.3W
- Miniature size and 1U low profile
- High operating temperature up to 70°C
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Compliance to IEC/BS EN/EN 60335-1(PD3) and IEC/BS EN/EN61558-1, -2-16 for household appliances
- Operating altitude up to 5000 meters (Note.8)
- Withstand 5G vibration test
- High efficiency, long life and high reliability
- LED indicator for power on
- Over voltage category III
- 100% full load burn-in test
- 3 years warranty

### Description

LRS-50 series is a 50W single-output enclosed type power supply with 30mm of low profile design. Adopting the full range 85-264VAC input, the entire series provides an output voltage line of 3.3V, 5V, 12V, 15V, 24V, 36V and 48V. In addition to the high efficiency up to 90%, the design of metallic mesh case enhances the heat dissipation of LRS-50 that the whole series operates from -30°C through 70°C under air convection without a fan. Delivering an extremely low no load power consumption (less than 0.2W), it allows the end system to easily meet the worldwide energy requirement. LRS-50 has the complete protection functions and 5G anti-vibration capability; it is complied with the international safety regulations such as TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16, UL62368-1 and GB4943. LRS-50 series serves as a high price-to-performance power

supply solution for various industrial applications.

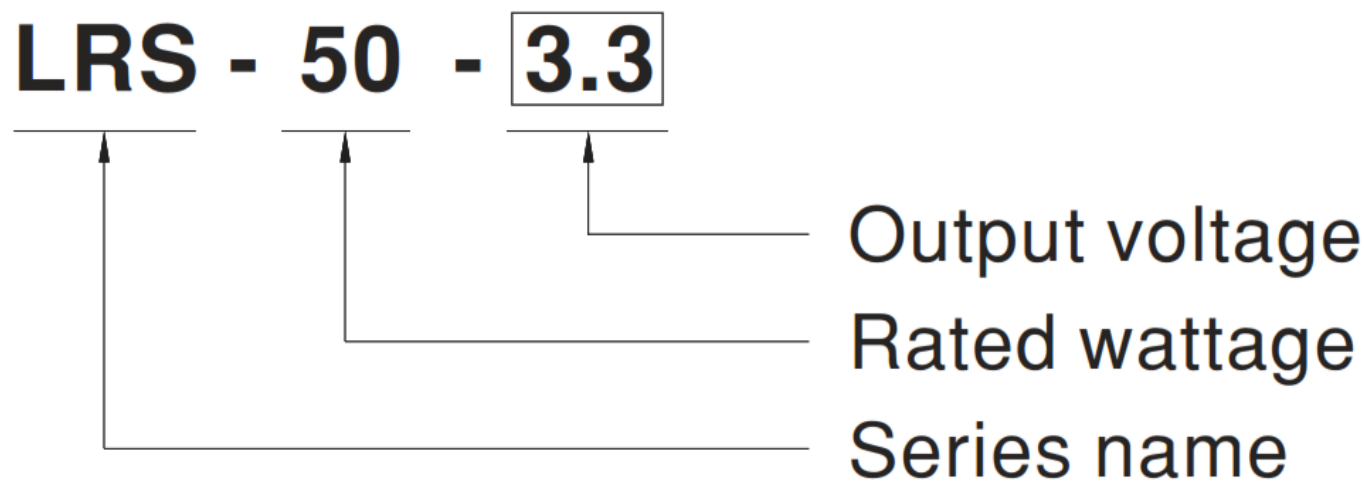
Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus
- Household appliances

GTIN CODE

MW Search <https://Awatmeanwell.com/seMceGTIN.aspx>

Model Encoding



SPECIFICATION

MODEL		LRS-50-3.3	LRS-50-5	LRS-50-12	LRS-50-15	LRS-50-24	LRS-50-36	LRS-50-48
	DC VOLTAGE	3.3V	5V	12V	15V	24V	36V	48V
	RATED CURRENT	10A	10A	4.2A	3.4A	2.2A	1.45A	1.1A
	CURRENT RANGE	0 ~ 10A	0 ~ 10A	0 ~ 4.2A	0 ~ 3.4A	0 ~ 2.2A	0 ~ 1.45A	0 ~ 1.1A
	RATED POWER	33W	50W	50.4W	51W	52.8W	52.2W	52.8W



PROTECTION	OVER LOAD	110 ~ 150% rated output power						
		Protection type : Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	3.8 ~ 4.4 5V	5.9~ 7.3V	13.8 ~ 17 .2V	18.7 ~25. 75V	28.8 ~ 36 .6V	41.4 ~ 51 .6V	55.2 ~ 67 .8V
Protection type : Shut down o/p voltage, re-power on to recover								
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°C (Refer to “Derating Curve”)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing						
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)						
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes						
	OVER VOLTAGE CATEGORY	III; Compliance to BS EN/EN61558, BS EN/EN50178, BS EN/EN60664-1, BS EN/EN62477-1; altitude up to 2000 meters						
SAFETY & EMC	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-1 6,CCC GB4943.1, BSMI CNS14336-1, EAC TP TC 004, AS/NZS 60950.1(by CB), KC K60950-1(for LRS-50-12/24 only), BIS IS13252(Part1): 2010/IEC 60950-1: 2005 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						

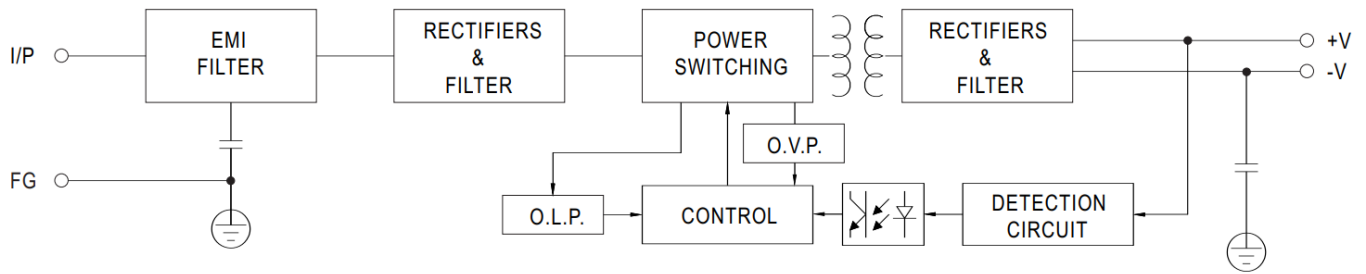
<b>(Note 9)</b>	<b>EMC EMISSION</b>	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN55014, BS EN/EN 61000-3-2,-3, GB/T 9254, BSMI CNS13438, EAC TP TC 020,KC KN32,KN35(for LRS-50-12/24 only)
	<b>EMC IMMUNITY</b>	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61000-6-2 (BS EN/EN 50082-2), heavy industry level, EAC TP TC 020,KC KN32,KN35(for LRS-50-12/24 only)
<b>OTHERS</b>	<b>MTBF</b>	3149.8K hrs min.Telcordia SR-332 (Bellcore) ; 561.6Khrs min. MIL-HDBK-217F (25°C)
	<b>DIMENSION</b>	99*82*30mm (L*W*H)
	<b>PACKING</b>	0.23Kg; 60pcs/14.8Kg/0.88CUFT

#### 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 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. Length of set up time is measured at cold first Turning ON/OFF the power supply very quickly may lead to increase of the set up time.
7. 3V,5V when the load factor 0~50%, the switching power less is reduced by burst operation, which will cause ripple and ripple noise to go beyond the specifications.
8. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft).
9. 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 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>)

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

#### Block Diagram



## Derating Curve

MEAN WELL LRS-50 Series 50W Single Output Switching Power Supply fig 1

## Static Characteristics

MEAN WELL LRS-50 Series 50W Single Output Switching Power Supply fig 2


## Mechanical Specification







Documents / Resources

	<p><a href="#">MEAN WELL LRS-50 Series 50W Single Output Switching Power Supply</a> [pdf] Instruction Manual</p> <p>LRS-50 Series 50W Single Output Switching Power Supply, LRS-50 Series, 50W Single Output Switching Power Supply, Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply</p>
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