MEAN WELL

100W Single Output Switching Power Supply

LRS-100-12

User's Manual

R33100
RoHS

IS 13252
(NOTE 9)

AS/NZS62368-1 GB 4943.1 UL62368-1 TP TC004 IEC62368-1 (for LRS-100-12/24 only)

ECO Automate Industrial Security Network Telecom

■ Features

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 second
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Miniature size and 1U low profile
- 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.7)
- Withstand 5G vibration test
- LED indicator for power on
- No load power consumption<0.3W
- Over voltage category Ⅲ
- 100% full load burn-in test
- High operating temperature up to 70℃
- High efficiency, long life and high reliability
- 3 years warranty

■ Applications

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

■ GTIN CODE

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

■ Description

LRS-100-12 series is a 100W single-output enclosed type power supply with 30mm of low profile design. Adopting the full range 85~264VAC input.

In addition to the high efficiency up to 91%, the design of metallic mesh case enhances the heat dissipation of LRS-100-12 that the whole series operates from -30℃ through 70℃ under air convection without a fan. Delivering an extremely low no load power consumption (less than 0.3W), it allows the end system to easily meet the worldwide energy requirement. LRS-100-12 has the complete protection functions and 5G anti- vibration capability; it is complied with the international safety regulations such as TUV BS EN/EN2368-1, BS EN/ EN60335- 1, BS EN/ EN61558- 1/- 2- 16, UL62368- 1 and GB 4943. 1. LRS- 100 series serves as a high price-to-performance power supply solution for various industrial applications.

■ Model Encoding

LRS - 100 - 12

- 12 — Output voltage
- 100 — Rated wattage
- LRS — Series name

MEAN WELL

100W Single Output Switching Power Supply

LRS-100-12

SPECIFICATION

MODEL		LRS-100-12
OUTPUT	DC VOLTAGE	12V
	RATED CURRENT	8.5A
	CURRENT RANGE	0 ~ 8.5A
	RATED POWER	102W
	RIPPLE & NOISE (max.) Note.2	120mVp-p
	VOLTAGE ADJ. RANGE	10.2 ~ 13.8V
	VOLTAGE TOLERANCE Note.3	±1.0%
	LINE REGULATION Note.4	±0.5%
	LOAD REGULATION Note.5	±0.5%
	SETUP, RISE TIME	500ms, 30ms/230VAC 500ms,30ms/115VAC at full load
	HOLD UP TIME (Typ.)	55ms/230VAC 10ms/115VAC at full load
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	88%
	AC CURRENT (Typ.)	1.9A/115VAC 1.2A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 50A/230VAC
	LEAKAGE CURRENT	<0.75mA / 240VAC
PROTECTION	OVER LOAD	110 ~ 150% 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 ~ +70℃ (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
	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 (Note 8)	SAFETY STANDARDS	UL 62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16, GB 4943.1, BSMI CNS15598-1, EAC TP TC 004,S/NZS62368.1(by CB),KC K60950-1(for LRS-100-12/24 only), BIS IS13252(Part1): 2010/IEC 60950-1: 2005(NOTE 9) 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℃/ 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN55014, BS EN/EN61000-3-2,-3, GB17625.1,GB/T 9254.1, BSMI CNS15936, EAC TP TC 020,KC KN32,KN35(for LRS-100-12/24 only)
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61000-6-2 (BS EN/EN50082-2),BS EN/EN55035, heavy industry level, EAC TP TC 020,KC KN32,KN35(for LRS-100-12/24 only)
OTHERS	MTBF	3348.9K hrs min. Telcordia SR-332 (Bellcore) ; 677.4Khrs min. MIL-HDBK-217F (25℃)
	DIMENSION	129*97*30mm (L*W*H)
	PACKING	0.34Kg ; 40pcs/14.6Kg/0.92CUFT

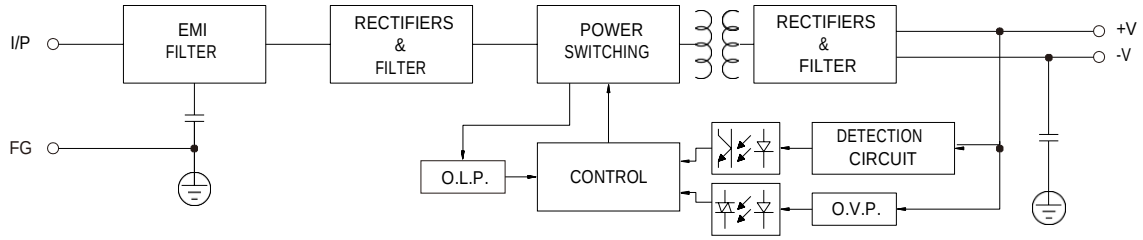
OTE

1. All parameters NOT specially mentioned are measured at 230VAC 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 0.1uf & 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 start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.
7. The ambient temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m(6500ft).
8. 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)
9. Some model may not have the BIS logo, please contact your MEAN WELL sales for more information.

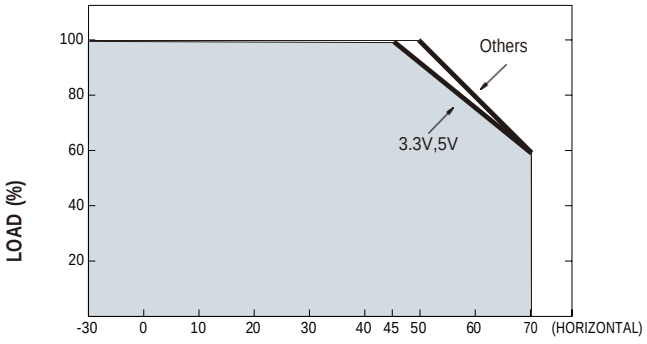
※ Product Liability Disclaimer：For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

Block Diagram

fosc : 65KHz

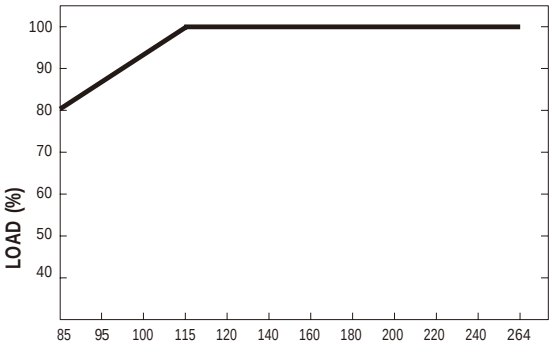


Derating Curve



AMBIENT TEMPERATURE (℃)

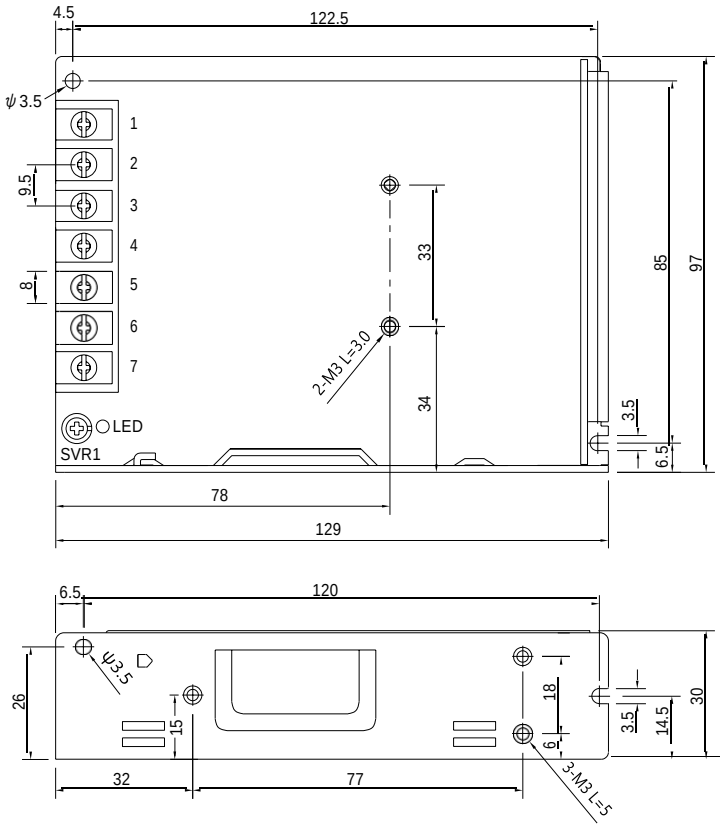
Static Characteristics



INPUT VOLTAGE (VAC) 60Hz

■ Mechanical Specification

Case No.238A Unit:mm



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 ⏚		

■ Installation Manual

Get more info to : https://www.led-card.com/manufacturer/meanwell/