



E-Star Power Development Co., Ltd. (E-STAR)

6F., No. 114, Sec. 3, Minquan E. Rd., Songshan Dist., Taipei City 10543, Taiwan (R.O.C.)

Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

600W Enclosed type single output power supply > LRS-600



IS 13252(Part 1):2010/
IEC 60950-1:2005
R-41179035
(except for 48V)



R33100
RoHS



AS/NZS62368-1



TPTC004



IEC62368-1



UL62368-1



(Note.11)



UKCA



ECO



Automate



Industrial



Security



Network



Telecom

Features

- AC input range selectable by switch
- Withstand 300VAC surge input for 5 second
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling
- Built-in cooling Fan ON-OFF control
- 1U low profile
- Withstand 5G vibration test
- High operating temperature up to 65°C
- Operating altitude up to 5000 meters (Note.10)
- 3 years warranty
- MTBF>1KK hrs

Applications

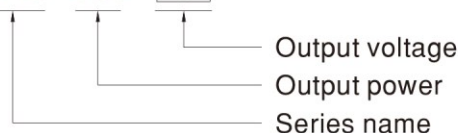
- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus

Description

LRS-600 series is a 600W single-output enclosed type power supply with 41mm of low profile design. Adopting the input of 115VAC or 230VAC (select by switch), the entire series provides an output voltage line of 5V, 12V, 15V, 24V, 27V, 36V and 48V. In addition to the high efficiency up to 92%, with the built-in long life fan LRS-600 can work under -20~+65°C with full load. LRS-600 has the complete protection functions and 5G anti-vibration capability; It is complied with complete international safety regulations. LRS-600 series serves as a high price-to-performance power supply solution for various industrial applications.

Model Encoding

LRS - 600 - 5





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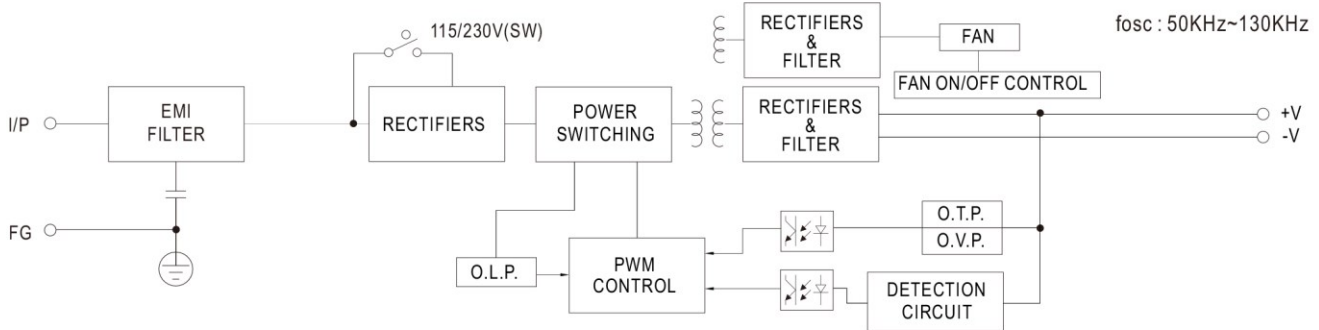
SPECIFICATION

MODEL		LRS-600-5	LRS-600-12	LRS-600-15	LRS-600-24	LRS-600-27	LRS-600-36	LRS-600-48	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	27V	36V	48V	
	RATED CURRENT	100A	50A	40A	25A	22.2A	16.6A	12.5A	
	CURRENT RANGE	0 ~ 100A	0 ~ 50A	0 ~ 40A	0 ~ 25A	0 ~ 22.2A	0 ~ 16.6A	0 ~ 12.5A	
	RATED POWER	500W	600W	600W	600W	599.4W	597.6W	600W	
	RIPPLE & NOISE (max.) Note.2	200mVp-p	200mVp-p	200mVp-p	240mVp-p	270mVp-p	360mVp-p	360mVp-p	
	VOLTAGE ADJ. RANGE Note.3	4.75 ~ 5.5V	11.4 ~ 13.2V	14.25 ~ 16.5V	22.8 ~ 26.4V	25.65 ~ 29.7V	34.2 ~ 39.6V	45.6 ~ 52.8V	
	VOLTAGE TOLERANCE Note.4	±2.0%	±1.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION Note.5	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION Note.6	±2.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME Note.7	1300ms, 50ms/230VAC 1300ms, 50ms/115VAC at full load							
HOLD UP TIME (Typ.)	20ms/230VAC 16ms/115VAC at full load								
INPUT	VOLTAGE RANGE Note.8	90 ~ 132VAC / 180 ~ 264VAC by switch 255 ~ 370VDC (switch on 230VAC)							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY (Typ.)	86%	90%	90%	91%	91%	92%	92%	
	AC CURRENT (Typ.)	12A/115VAC 7.5A/230VAC							
	INRUSH CURRENT (Typ.)	35A/115VAC 60A/230VAC							
	LEAKAGE CURRENT	<2mA / 240VAC							
PROTECTION (Note.9)	OVER LOAD	105 ~ 150% rated output power Constant current limiting, unit will shutdown after 3 sec. re-power on to recover							
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	18 ~ 21V	27.6 ~ 32.4V	31 ~ 36.5V	41.4 ~ 48.6V	55.2 ~ 64.8V	
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover							
FUNCTION	FAN ON/OFF CONTROL (Typ.)	RTH3 ≥ 50°C FAN ON, ≤ 40°C FAN OFF							
ENVIRONMENT	WORKING TEMP.	-20 ~ +65°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)							
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes							
SAFETY	SAFETY STANDARDS	BS IEC/UL 62368-1, EAC TP TC 004, AS/NZS 62368.1 approved, BIS IS 13252(Part1):2010/IEC60950-1:2005(except for 48V), BSMI CNS15598-1							
	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 EAC TP TC 020, BSMI CNS15936							
	EMC IMMUNITY	Compliance to EAC TP TC 020							
OTHERS	MTBF	1533.4K hrs min. Telcordia SR-332(Bellcore) ; 301.7K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION	225*124*41mm (L*W*H)							
	PACKING	0.95Kg/12pcs/12.4Kg/0.78CUFT							
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Voltage adjustment can only be operated within the input range of 100~120VAC or 200-240VAC. If the voltage adjustment is performed outside this range, it may cause abnormal output. Tolerance : includes set up tolerance, line regulation and load regulation. Line regulation is measured from low line to high line at rated load. Load regulation is measured from 0% to 100% rated load. Length of set up time is measured at cold start. Turning the power supply on/off frequently may lead to increase of the set up time. Derating may be needed under low input voltages. Please refer to "Static Characteristics" sections for details. Once protections are triggered, 4min(Typ.) of cold down time is required before restart. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft). This power supply does not meet the harmonic current requirements outlined by EN61000-3-2. Please do not use this power supply under the following conditions: <ol style="list-style-type: none"> the end-devices is used within the European Union, and the end-devices is connected to public mains supply with 220Vac or greater rated nominal voltage, and the power supply is: <ul style="list-style-type: none"> installed in end-devices with average or continuous input power greater than 75W, or belong to part of a lighting system Exception: Power supplies used within the following end-devices do not need to fulfill EN61000-3-2 <ol style="list-style-type: none"> professional equipment with a total rated input power greater than 1000W; symmetrically controlled heating elements with a rated power less than or equal to 200W 								

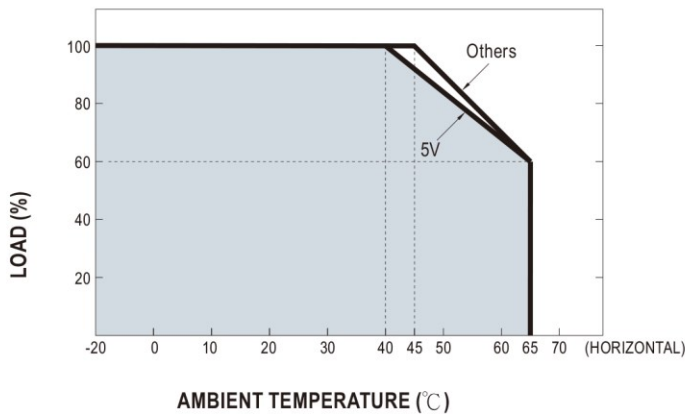


600W Enclosed type single output power supply > LRS-600

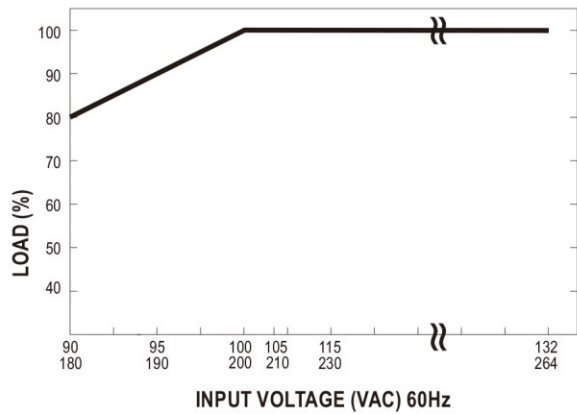
Block Diagram



Derating Curve



Static Characteristics



Note: Due to the test method difference, the rating on label differ from derating curve as follow.
 For 5V model, the output current states 100A on label when input voltage > 110Vac, and states 90A when input voltage < 110Vac, please refer to label for detail



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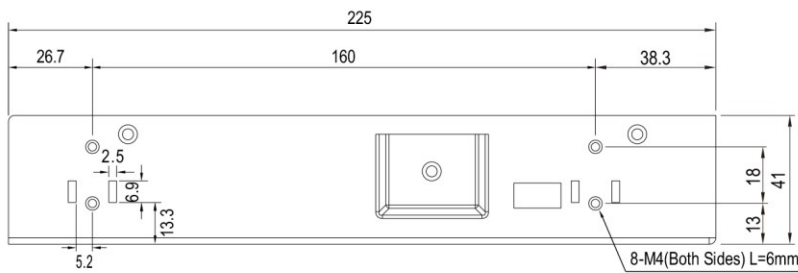
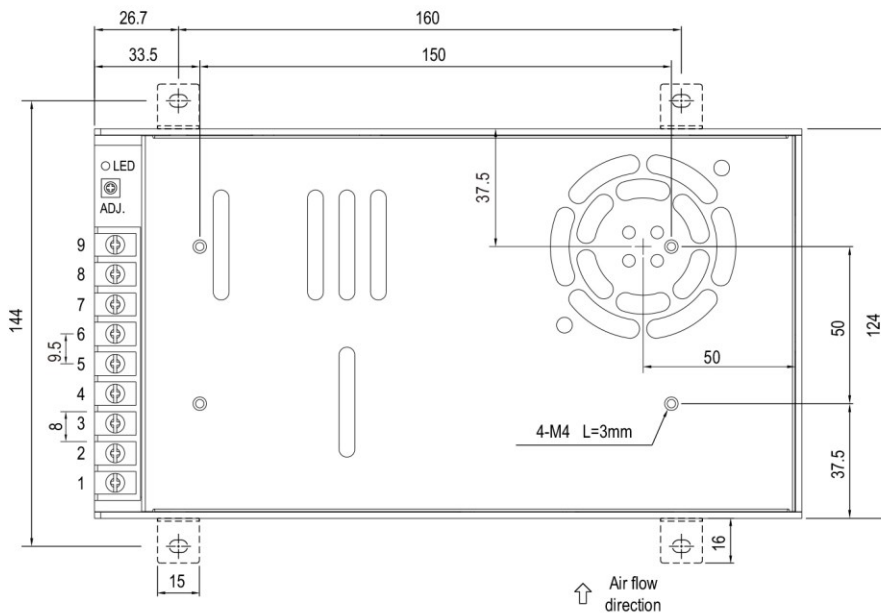
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Mechanical Specification

Case No. 292 Unit:mm



Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4~6	DC OUTPUT -V
2	AC/N	7~9	DC OUTPUT +V
3	FG \perp		