



Dimension: 215\*115\*30mm



### ■ Features:

- AC input range selected by switch(115/230)
- Withstand 300VAC surge input for 5 second
- Miniature size and 1U low profile,low weight
- Protections:Short circuit/Overload/Over voltage  
Over temperature
- Forced air cooling by built-in DC fan
- Built-in cooling fan ON-OFF control
- No load power consumption < 0.75W
- Operating altitude up to 5000 meters ( Note6 )
- LED indicator for power on
- 100% full load burn-in test
- High efficiency,long life and high reliability
- 3 years warranty

### ■ Applications:

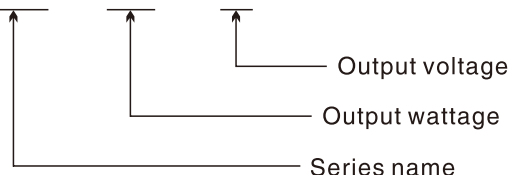
- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments,equipments or  
apparatus

### ■ Description:

LRS-350 series is a 350W single-output enclosed type power supply with 30mm of low profile design. Adopting the input of 115VAC or 230VAC(selectable by switch) ,the entire series provides an output voltage line of 5V,12V ,15V,24V,36V and 48V.

In addition to the high efficiency up to 89%,with the built-in long life fan LRS-350 can work under -25°C~70°C with full load.Delivering an extremely low no load power consumption (less than 0.75W) ,it allows the end system to easily meet the worldwide energy requirement ,LRS-350 has the complete protection functions and 5G anti-vibration capability ; it is complied with the international safety regulations such as TUV EN60950-1, UL60950-1 and GB 4943,LRS-350 series serve as a high price-to-performance power supply solution for various industrial applications.

### ■ Model Encoding

**LRS - 350 - 12**

## SPECIFICATION

Model		LRS-350-5	LRS-350-12	LRS-350-15	LRS-350-24	LRS-350-36	LRS-350-48
Output	DC voltage	5V	12V	15V	24V	36V	48V
	Rated current	60A	29A	23.2A	14.6A	9.7A	7.3A
	Current range	0~60A	0~29A	0~23.2A	0~14.6A	0~9.7A	0~7.3A
	Rated power	300W	348W	348W	350.4W	349.2W	350.4W
	Ripple&noise	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p
	DC voltage ADJ. range	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%
	Voltage tolerance <small>Note.3</small>	± 3%	± 2%	± 1%	± 1%	± 1%	± 1%
	Line regulation <small>Note.4</small>	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
	Load regulation <small>Note.5</small>	± 2%	± 1%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
Setup, rise, hold up time		800ms, 50ms, 16ms/230VAC (full load)					
Input	Voltage range	90~132VAC/180~264VAC(selected by switch) ,240~373VDC( Withstand 300VAC surge input for 5 second)					
	Frequency range	47~63Hz					
	AC current	6.8A/115VAC 3.4/230VAC					
	Efficiency	83%	85%	86%	88%	88%	89%
	Inrush current	Cold start 55A/230VAC					
	leakage current	< 2mA/240VAC					
Protection	Overload	Rated output power 110% ~ 140% Start overload protection					
		Protection type: hiccup mode, auto-recovery after fault condition is removed					
	Over voltage	Rated output voltage 115%~135% Start over voltage protection					
		Protection type: cut off the output, auto-recovery after fault condition is removed					
Function	Over temperature	100°C±10°C (RTH3 detect beside magnetic core)					
		Protection type: cut off the output, auto-recovery after the temperature become normal					
Function	Fan ON-OFF control	RTH3 ≥ 50°C Fan ON, ≤ 40°C Fan OFF					
Environment	Working temperature	-25°C ~ +70°C (Please refer to "derating curve")					
	Working humidity	20%~90%RH Non-condensing					
	Storage temp& humidity	-40°C ~ +85°C; 10%~95%RH Non-condensing					
	Withstand vibration	10~500Hz, 3G 10min./1Cycle, Period for 60min, Each axes					
Safety	Withstand voltage	I/P-O/P: 3KVAC 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					
Standards compliance	Safety standards	Compliance to UL60950-1, TUV EN60950-1, GB4943					
	EMC emission	Compliance to EN55022(CISPR22) Class B, GB9254 Class B, EN55014, EN61000-3-2, 3					
	EMC immunity	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-1					
Others	Dimension	215*115*30 mm ( L*W*H )					
	Weight	0.76kg/20pcs/16.2kg/0.024m³/0.85CUFT					
	MTBF	≥ 295K hrs min. MIL-HDBK-217F(25°C)					

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 0.1uf & 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.

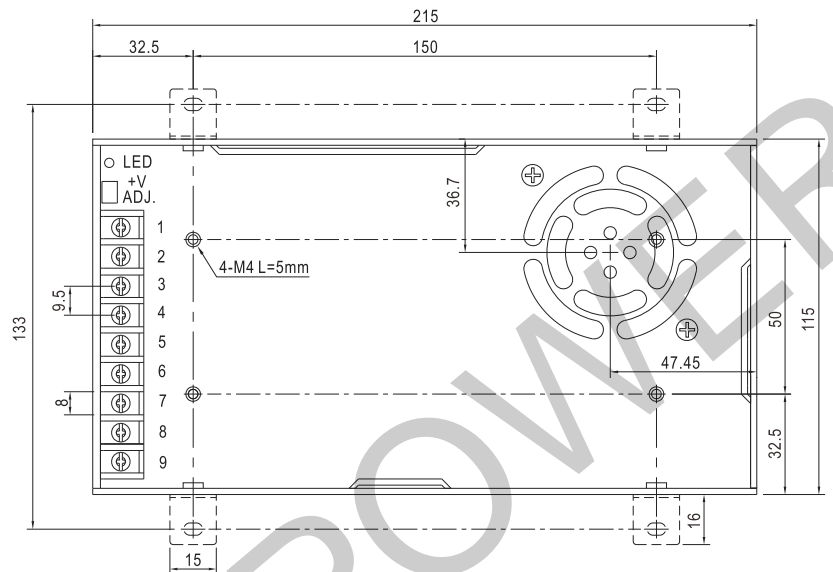
5. Load regulation is measured from 0% to 100% rated load

6. The ambient temperature derating of 5°C/1000 m is needed for operating altitude greater than 2000m(6500ft)

7. The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests.

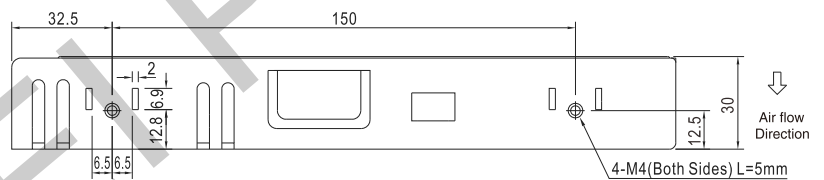
## Mechanical specification

Unit:mm



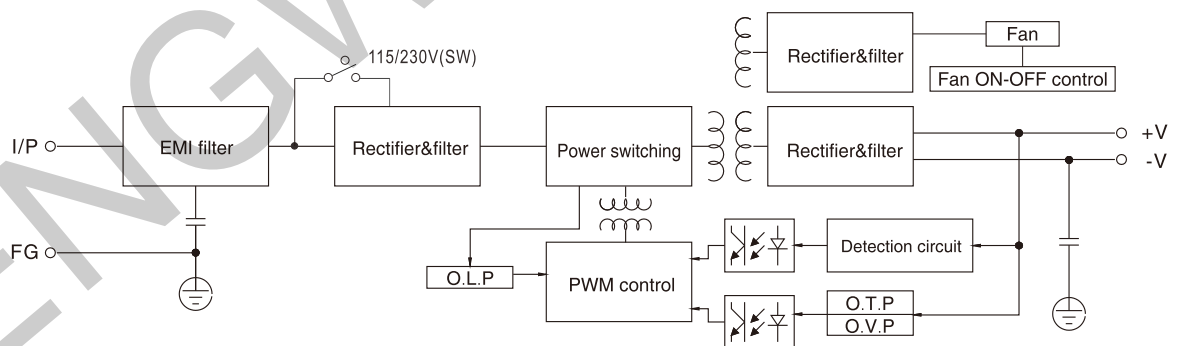
Terminal Pin No.Assignment

Pin No.	Assignment	Pin No.	Assignment
1~3	DC OUTPUT +V	7	FG $\perp$
4~6	DC OUTPUT -V	8	AC/L
		9	AC/N

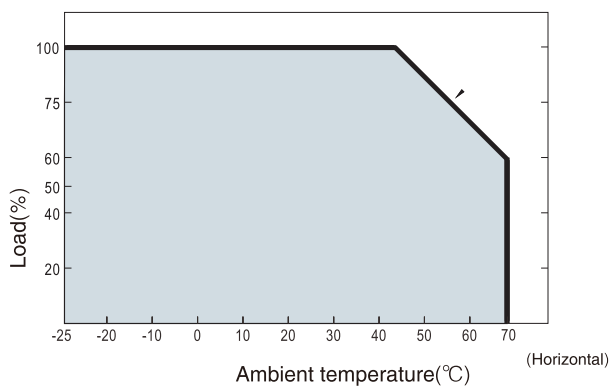


## Block diagram

PWM Frequency: 65KHz



## Derating curve



## Static characteristic

