

Constant Voltage Power Supply

DR150-12/15/24/48V



Product description

DR150-12/15/24/48V is a cost-effective ultra-thin rail type power supply that meets German industrial standards. The cabinet body is designed to be 105mm(6SU) wide, within the allowed space saving size in cabinets. The entire series uses input full range AC input (277VAC is also applicable) and all comply with BS EN/EN61000-3-2 standard for harmonic current. Designed with a plastic casing, it can effectively prevent electrical hazards to users, with a work efficiency of up to 92%. The entire series can operate in ambient temperatures ranging from -30 °C to 70 °C under air circulation conditions. It has complete protection functions and complies with relevant certifications for home automation and industrial control equipment, making it a highly competitive power solution for home and industrial applications.

Standards

BS EN/EN61558
IEC62368-1
EN61558-2
EN60335-1
UL62368-1
UL508
UL1310

Characteristics

- Applicable voltage range (100-240VAC)
- Suitable for installation on TS-35/7.5 or TS-35/15 tracks
- Suitable for indoor environments
- Protection type: Short circuit/overload/open circuit protection
- Adopting a plastic shell design
- Compliant with relevant certifications for home automation and industrial control equipment
- Compliant with LPS(Limited Power Source)
- Warranty for 3 years

Specifications

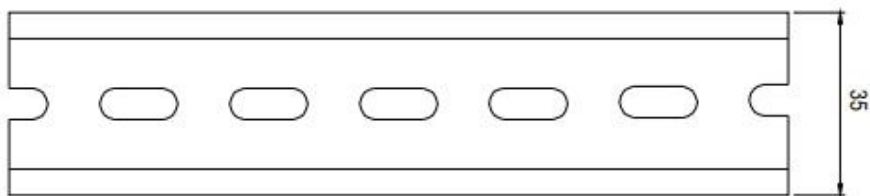
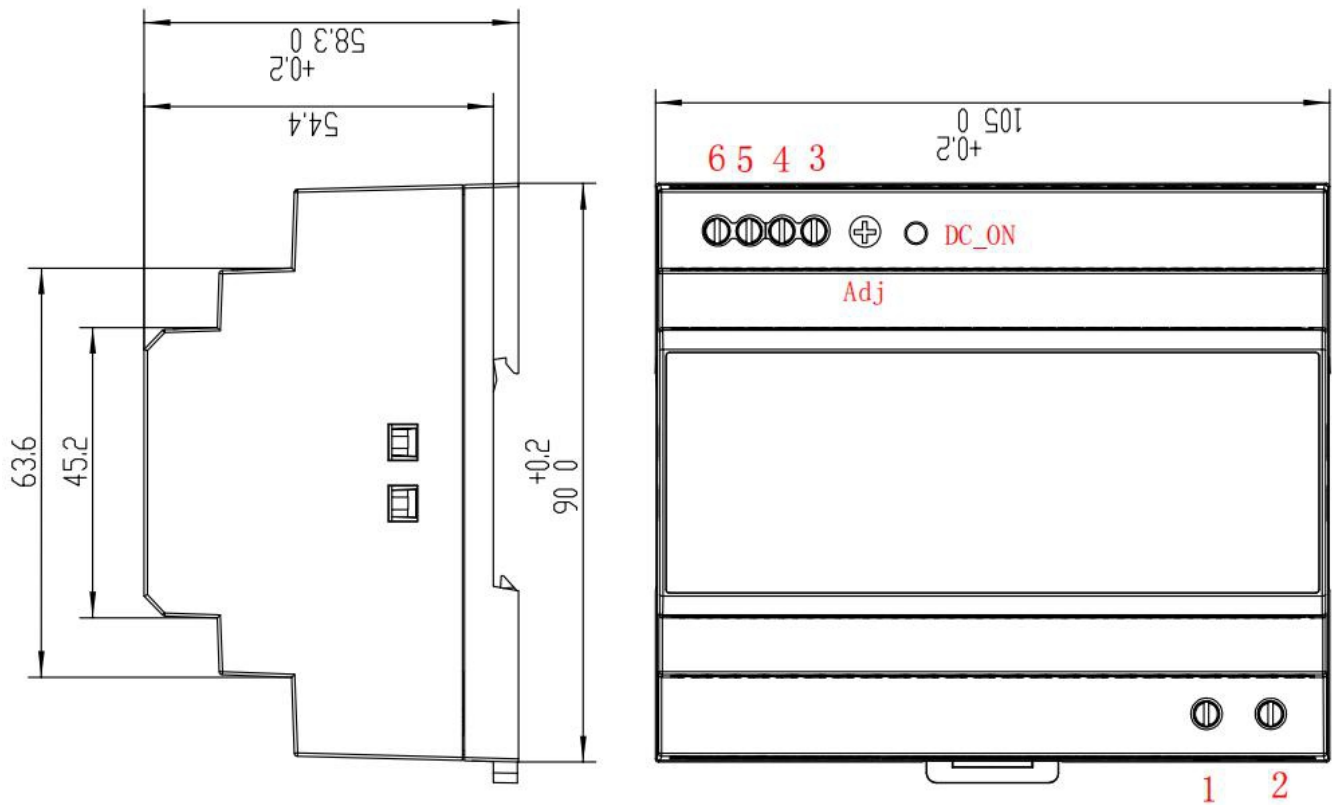
Model		DR150-12	DR150-15	DR150-24	DR150-48
Output	Turn on time(S)	500ms	500ms	500ms	500ms
	Output power(W)	135.9(220-240V) 122.4(100-120V)	142.5(220-240V) 128.3(100-120V)	150(220-240V) 127.4(100-120V)	153.6(220-240V) 130.6(100-120V)
	Output voltage(V)	12	15	24	48
	Output voltage tolerance	±2%	±1%	±1%	±1%
	Ripple and noise(mV) _(max)	100mV _{P-P}	120mV _{P-P}	150mV _{P-P}	200mV _{P-P}
	Line Regulation	±1%	±1%	±1%	±1%
	Load Regulation	±1%	±1%	±1%	±1%
	hold time(ms)	30ms/230VAC 12ms/115VAC(Full load)			
	Voltage regulation range(V)	10.8-13.8V	13.5-18V	21.6-29V	43.2-55.2V
	Working current range(A)	0-11.3(220-240V) 0-10.2(100-120V)	0-9.50(220-240V) 0-8.55(100-120V)	0-6.25(220-240V) 0-5.31(100-120V)	0-3.2(220-240V) 0-2.72(100-120V)
Input	Rated supply voltage(Vac)	100-240			
	Voltage range(Vac)	90-264VAC / 120-370DC			
	Line frequency(Hz)	47-63			
	Input current(A)	2.3A/115V 1.6A/230V	2.3A/115V 1.6A/230V	2.3A/115V 1.6A/230V	2.3A/115V 1.6A/230V
	Efficiency Full Load	88.6%120V 90.8%230V	88.6%120V 90.8%230V	90.5%120V 92.5%230V	90.45%120V 92.5%230V
	Average efficiency 3	90.36%120V 91.36%230V	90.36%120V 91.36%230V	91%120V 92.3%230V	91.4%120V92.69% %230V
	No load power consumption(W)	≤0.3W			
	Inrush current(Ipk)	Cold start 35A/115V 70A/230V			
	Leakage current	≤0.25mA			

Protection	Short circuit protection	Hiccup mode
	Over load protection	Hiccup mode, 1.1-1.5times
	Over voltage protection	Close output
	Over temperature protection	Close output, Restart after the temperature decreases
	Surge capacity	Level 4,2KV/L-N, criteria A
	Insulation resistance	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH
	Withstand voltage	I/P-O/P:4KVAC
Ambient and Life	Ta(°C)	-30~+70°C (Please refer to the reduction curve)
	Storage Temperature(°C)	-40 ~ +85°C, 10 ~ 95% RH,No condensation
	Ambient humidity range	20 ~ 90% RH,No condensation
	Altitude	2000meters
	MTBF	300000HR MIL-HDBK-217F (25°C)
Other	Dimensions (L×W×H) (mm)	105*90*58.3mm (W*H*D)
	Weight(g)	295g
	Casing material	Plastic
	Housing colour	White
	Protection class	class II
	Certificate	

- 1.Tolerance:includes set up tolerance, line regulation and load regulation.
- 2.Tested at full load,120V/230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs.
- 3.Calculate the model's average efficiency for each test voltage by testing at 100%, 75%, 50%, and 25% of rated current and then computing the simple arithmetic average of these four values.
- 4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature.
- 5.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- 6.To test the ripple, test the load terminal and capacitance (0.1uF ceramic capacitor and 47uF high frequency low resistance electrolytic capacitor) , 20MHZ bandwidth;

Note

Dimensions(mm)



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

Wiring Diagram

Definition of terminal pins

Pin number	Pin function	Pin number	Pin function
1	AC/N	3.4	V-
2	AC/L	5.6	V+

Electrical curves

Fig. 1 Output load-Temperature curve

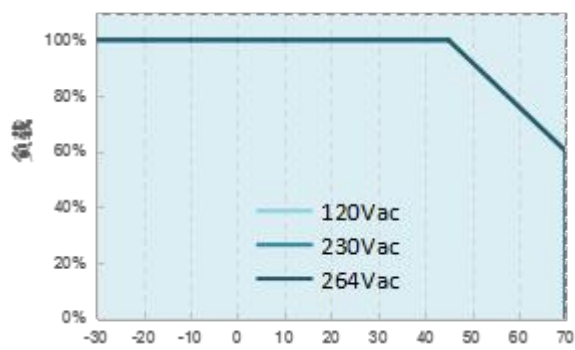


Fig. 2 Static characteristic curve

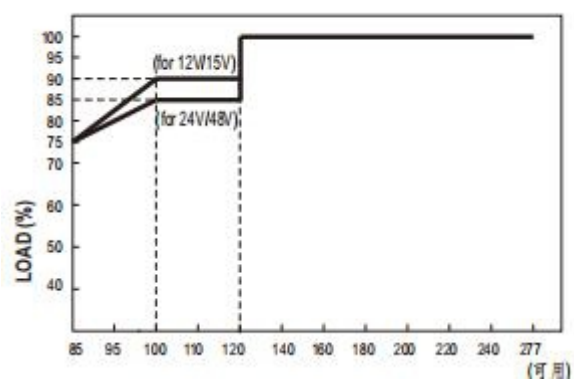


Fig. 3 I-V curve

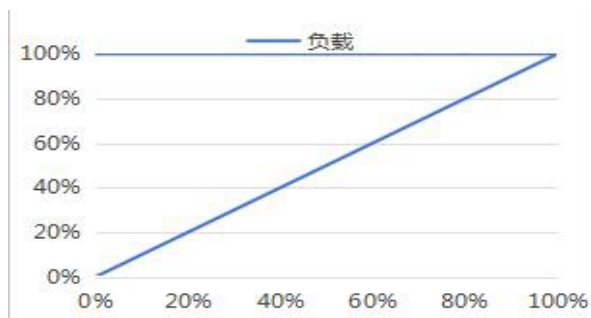
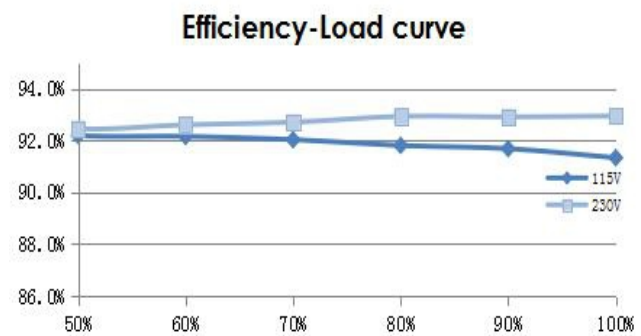


Fig.4 Efficiency-Load curve



Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)

Revision history

Date	Rev.	Remark
2025.02.6	A0	Initial release.
2025.04.16	A1	Change from A0 to A1