

Constant Voltage Power Supply

DR100-12/15/24/48V



Product description

DR100-12/15/24/48V is a cost-effective, ultra-slim DIN-rail power supply that complies with German industry standards. The body is designed to be 70mm (4SU) wide to allow for space-saving cabinetry, and the entire series features full-range AC input (277VAC is also available) and complies with BS EN/EN61000-3-2 for EU-specified harmonic current specifications. The series is designed with a plastic case. Designed with a plastic casing that effectively protects the user from electrical hazards, with an operating efficiency of up to 91%, the whole series can operate in ambient temperatures from -30°C to 70°C under air circulation conditions, it has complete protection features and meets the relevant certifications for home automation, industrial control equipment, a highly competitive power solution for home and industrial applications.

Standards

BS EN/EN61558
BS EN/EN62368-1
IEC62368-1
EN61558-2
EN60335-1
UL62368-1
UL508

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

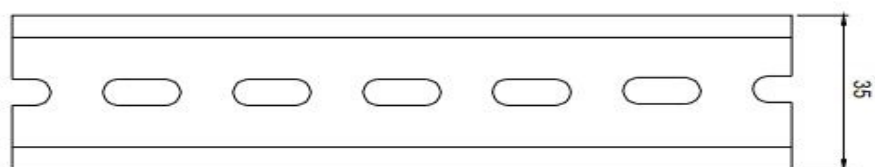
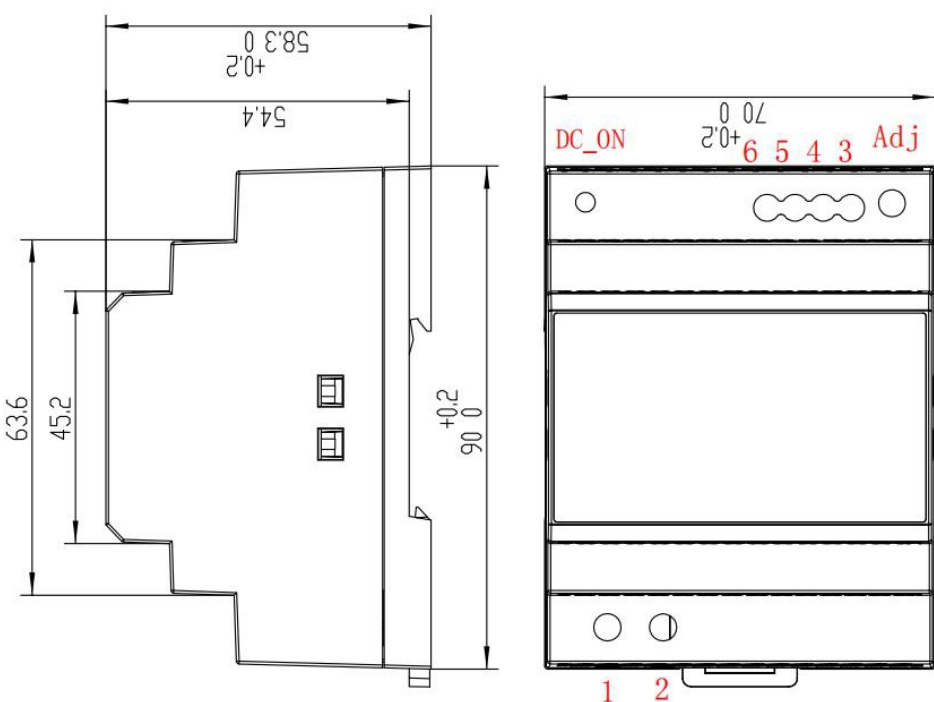
Specifications

Model		DR100-12	DR100-15	DR100-24	DR100-48
Output	Turn on time(S)	500ms	500ms	500ms	500ms
	Output power(W)max	90	97.5	100.8	100.8
	Output voltage(V)	12	15	24	48
	Output voltage tolerance	±2%	±1%	±1%	±1%
	Ripple and noise(mV) (max)	120mV _{P-P}	120mV _{P-P}	150mV _{P-P}	240mV _{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) (Adoption of LPS standards)	12-13V	15-17V	24-24.5V	48-48.7V
	Voltage regulation range(V) (No LPS optional)	12-13.8V	13.5-18V	21.6-29V	43.2-55.2V
	Working current range(A)(Adoption of LPS standards)	0-7.1	0-6.13	0-3.83	0-1.92
	Working current range(A)(No LPS optional)	0-7.5	0-6.5	0-4.2	0-2.1
Input	Rated supply voltage(Vac)	100-240			
	Voltage range	90-264VAC / 120-370DC			
	Line frequency(Hz)	47-63			
	Input current(A)	3A/115V 1.6A/230V	3A/115V 1.6A/230V	3A/115V 1.6A/230V	3A/115V 1.6A/230V

	Efficiency Full Load	89.1%120/ 90.7%230V	89.1%120/ 90.7%230V	89.5%120/ 91.3%230V	91.1%120/ 92.6%230V
	Average efficiency 3	90.5%120V/ 90.6%230V	90.5%120V/ 90.6%230V	89.5%120V/ 90.8%230V	91.6%120V/ 92.05%230V
	No load power consumption(W)	$\leq 0.3W$			
	Inrush current(Ipk)	cold start 35A/115V 70A/230V			
	Leakage current	$\leq 0.25mA$			
Protection	Short circuit protection	hiccup mode			
	Over load protection	hiccup mode, 1.1-1.3 times			
	Over voltage protection	Close Output			
	Over temperature protection	hiccup mode			
	Surge capacity	Level 4,2KV/L-N, criteria A			
		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	2000 meters			
	MTBF	300000HR MIL-HDBK-217F (25°C)			
Other	Dimensions (L×W×H) (mm)	70*90*58.3mm (W*H*D)			
	Weight(g)	235g			
	Casing material	Plastic			

	Housing colour	White
	Protection class	class II
	Certificate	
Note	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.	

Dimensions(mm)



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

Wiring Diagram

Terminal Pin Definition

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

Electrical curves

Adoption of LPS standards

Fig. 1 Output load-Temperature curve

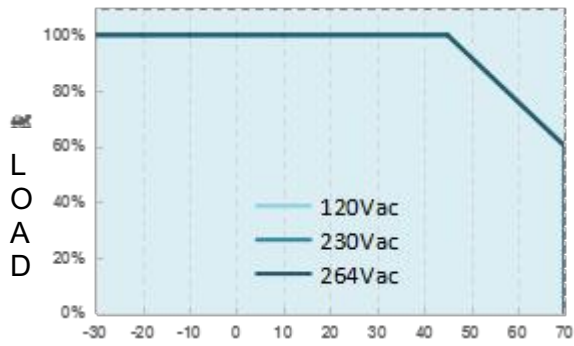


Fig. 2 Static characteristic curve

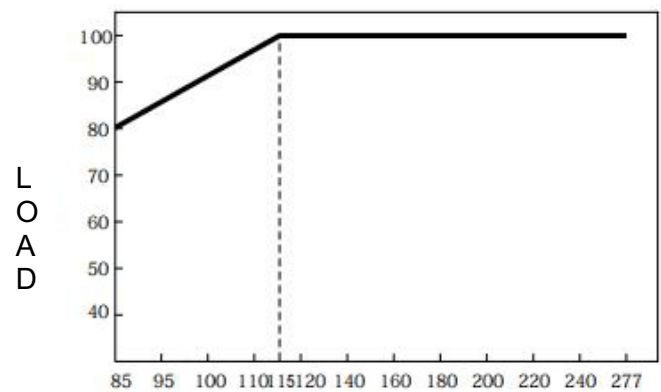


Fig. 3 I-V curve

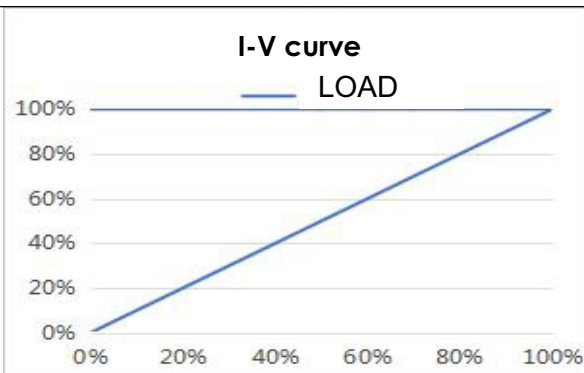
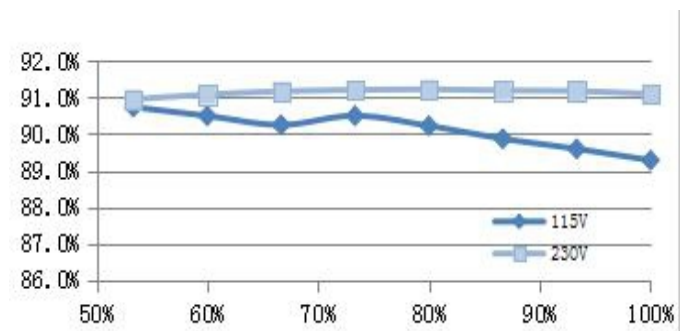


Fig.4 Efficiency-Load curve



No LPS optional

Fig. 1 Output load-Temperature curve

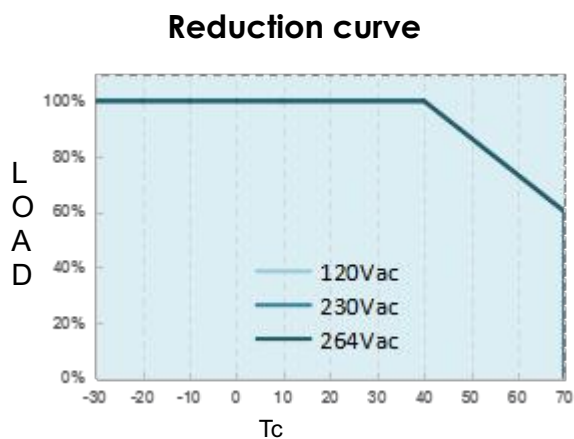


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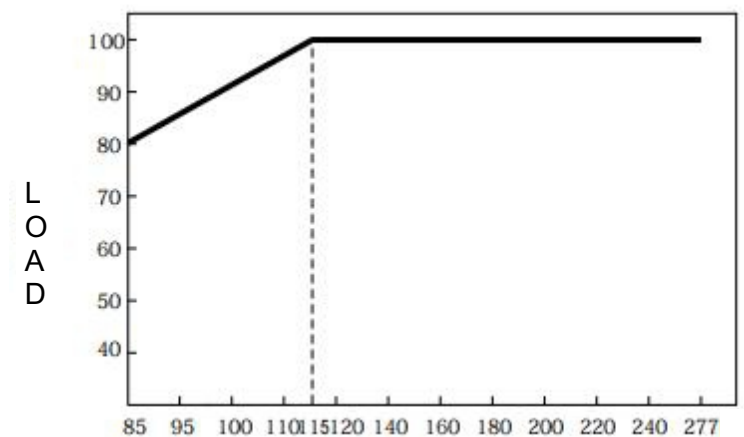


Fig. 3 I-V curve

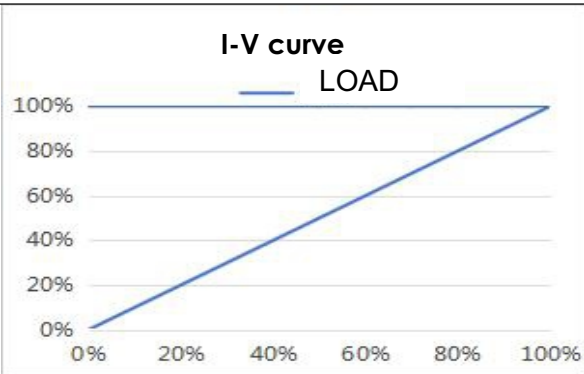
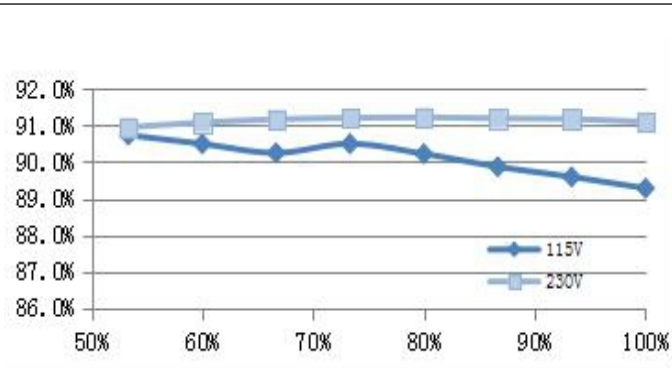


Fig.4 Efficiency-Load curve



Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
DR100-12V			
DR100-24V			
DR100-48V			

Revision history

Date	Rev.	Remark
2024.12.10	A0	Initial release.
2025.4.16	A1	Change A0 to A1