

Constant Voltage Power Supply

DR30-5/12/15/24/48V



Product description

DR30-5/12/15/24/48V is a cost-effective, ultra-thin rail-mounted power supply that complies with German industrial standards. Designed with a 35mm (2SU) width to conserve space within cabinets. The entire series features full-range AC input (compatible with 277VAC) and meets the BS EN/EN61000-3-2 standard for harmonic current emissions as specified by the EU. Featuring a plastic enclosure, it effectively protects users from electrical hazards and achieves a maximum efficiency of up to 90%. Under air circulation conditions, the entire series can operate within an ambient temperature range of -30°C to 70°C. It offers comprehensive protection features and complies with certifications relevant to home automation and industrial control equipment, making it a highly competitive power solution for both household and industrial applications.

Standards

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

Characteristics

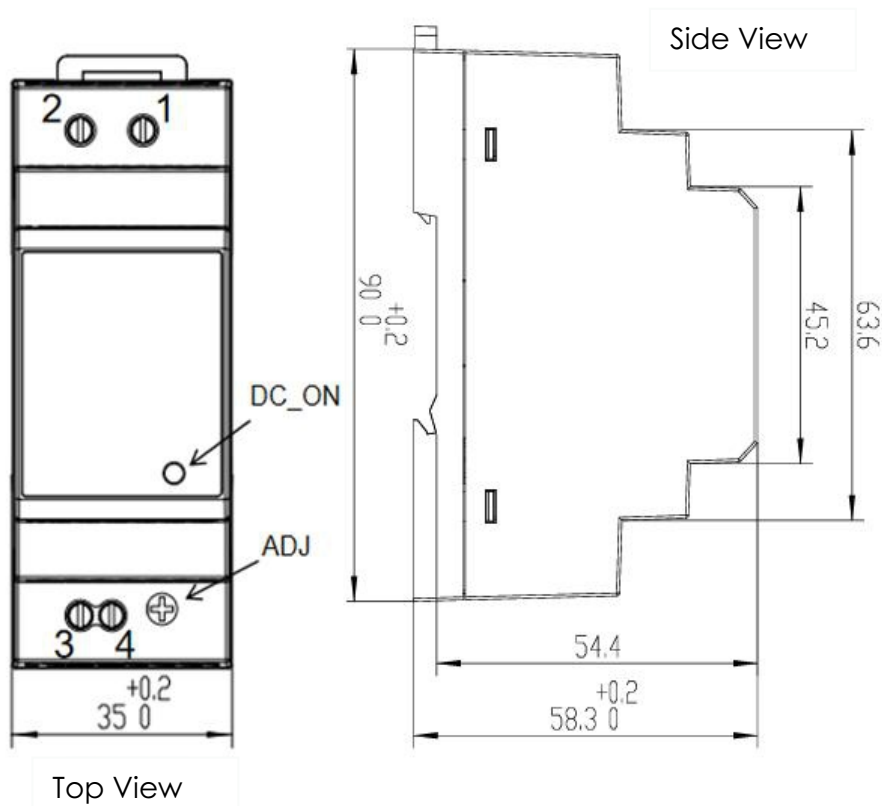
- Applicable voltage range (100-240VAC)
- Suitable for installation on TS-35/7.5 or TS-35/15 tracks
- Suitable for indoor environments
- Protection type: Short circuit/overload/open circuit protection
- Adopting a plastic shell design
- Compliant with relevant certifications for home automation and industrial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

Specifications

Model		DR30-5V	DR30-12V	DR30-15V	DR30-24V	DR30-48V
Output	Turn on time(S)	500ms	500ms	500ms	500ms	500ms
	Output power(W)	15	24	30	36	36
	Output voltage(V)	5	12	15	24	48
	Output voltage tolerance	±2%	±1%	±1%	±1%	±1%
	Ripple and noise(mV) (max)	80mVP-P	120mVP-P	120mVP-P	150mVP-P	240mVP-P
	Line Regulation	±1%	±1%	±1%	±1%	±1%
	Load Regulation	±1%	±1%	±1%	±1%	±1%
	Hold time(ms)	40ms/230VAC 20ms/115VAC(A† full load)				
	Voltage regulation range(V)	4.5-5.5V	10.8-13.8V	13.5-18V	21.6-29V	43.2-55.2V
	Working current range(A)	0-3	0-2	0-2	0-1.5	0-0.75
Input	Rated supply voltage(Vac)	100-240				
	Voltage range(Vac)	90-264VAC/120-370DC				
	Line frequency(Hz)	47-63				
	Input current(A)	0.88A/115V 0.48A/230V	0.88A/115V 0.48A/230V	0.88A/115V 0.48A/230V	0.88A/115V 0.48A/230V	0.88A/115V 0.48A/230V
	Efficiency Full Load	82%230V	85%230V	89%230V	89%230V	90%230V
	Average efficiency 3	82%230V	85%230V	88%230V	88%230V	89%230V
	No load power consumption(W)	≤0.3W				
	Inrush current(Ipk)	Cold Start 30A/115V 56A/230V				
	Leakage current	≤0.25mA				
Protection	Short circuit protection	Hiccup Mode				
	Over load protection	Hiccup Mode, 1.1-1.8 times				
	Over voltage protection	Output Cut-off				
	Surge capacity	Level 4, 2KV/L-N, criteria A				
	Insulation Resistance	I/P-O/P:100M Ohms / 500VDC / 25℃ / 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)	90*58.3*35mm (W*H*D)
	Weight(g)	125g
	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)



Note:

Dimension unit: mm [inch]

ADJ: for output voltage adjustment knob

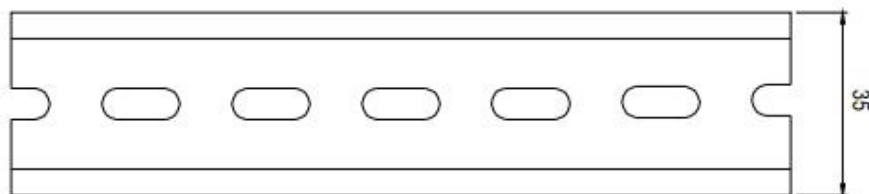
Wiring range: 24-12 AWG

Tightening torque: Max 0.4 N.m

Rail type: TS35, and the rail requires grounding

Unmarked tolerance: +1.00 [-0.039 inch]

Pin Configuration	
pin	function
1	AC(N)
2	AC(L)
3	-Vo
4	+Vo



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

Wiring Diagram

Terminal Pin Definitions:

Pin number	Pin function	Pin number	Pin function
1	+V	3	AC/L
2	-V	4	AC/N

Electrical curves

Fig. 1 Output load-Temperature curve

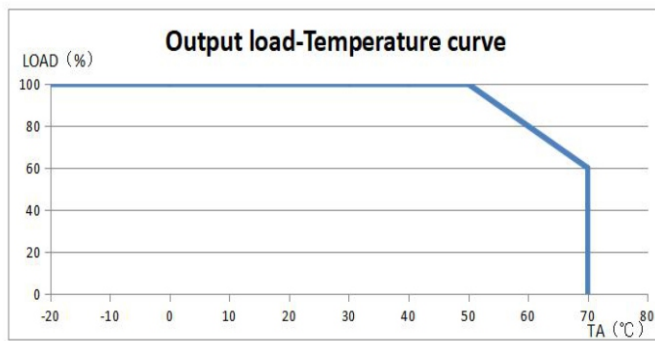


Fig. 2 Static characteristic curve

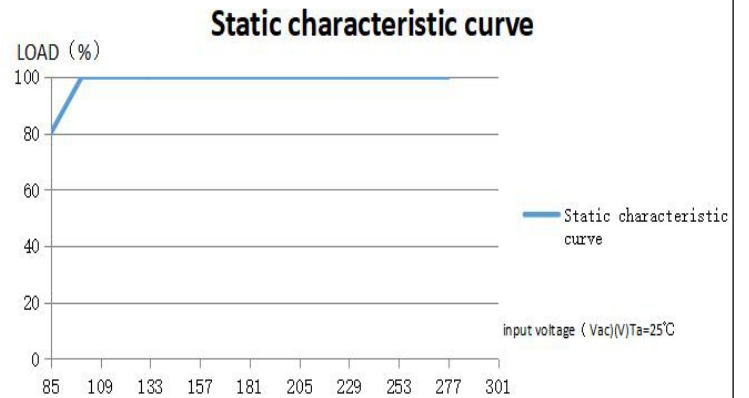


Fig. 3 I-V curve

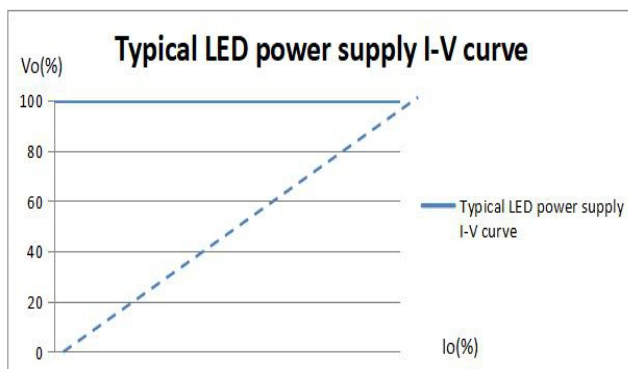
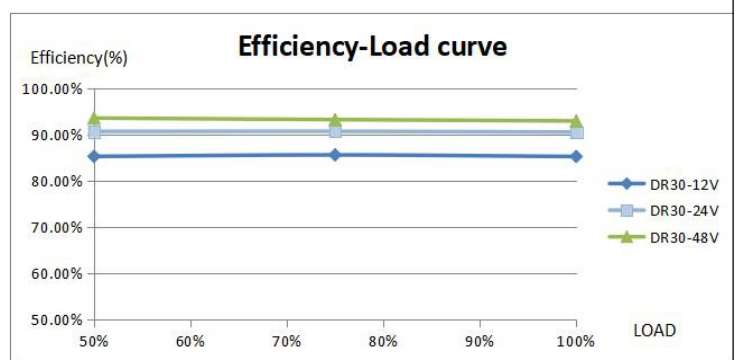


Fig.4 Efficiency-Load curve



Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
DR30-5V			
DR30-12V			
DR30-15V			
DR30-24V			
DR30-48V			

Revision history

Date	Rev.	Remark
2024.11.28	A0	Initial release.
2025.02.08	A1	A0 to A1