

Constant Voltage Power Supply

DR15-5/12/15/24/48V



Product description

DR15-5/12/15/24/48V is a cost-effective ultra-thin rail type power supply that meets German industrial standards. The cabinet body is designed with a width of 17.5mm (1SU) to save space, the whole series adopts 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 88%. The whole series can work in TA 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. It is 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

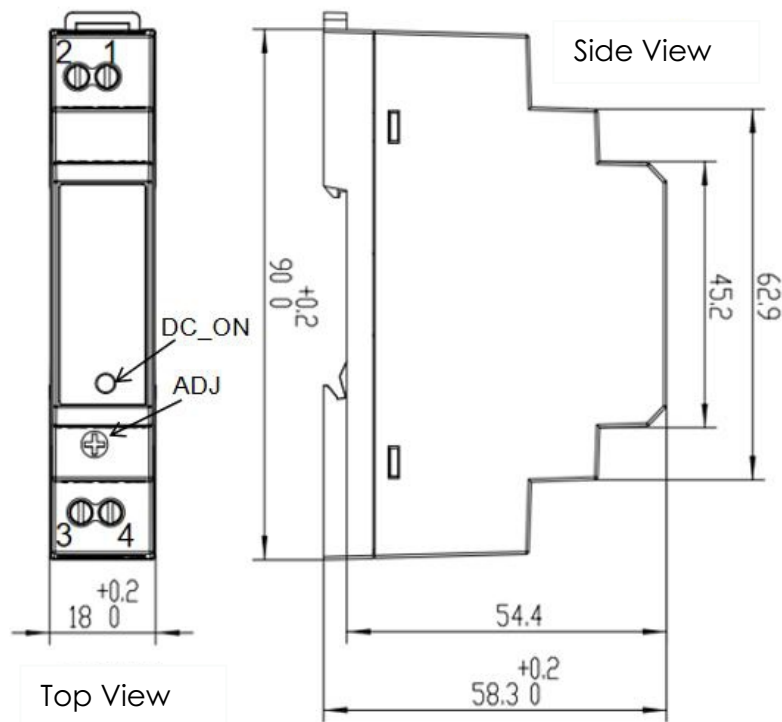
- Applicable voltage range (100-240VAC)
- Suitable for installation on TS-35/7.5 or TS-35/15 tracks
- Suitable for indoor environments
- Protection type: Short circuit/overload/open circuit protection
- Adopting a plastic shell design
- Compliant with relevant certifications for home automation and industrial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

Specifications

Model		DR15-5V	DR15-12V	DR15-15V	DR15-24V	DR15-48V
Output	Turn on time(S)	500ms	500ms	500ms	500ms	500ms
	Output power(W)	12	15	15	15	15
	Output voltage(V)	5	12	15	24	48
	Output voltage tolerance	±2%	±1%	±1%	±1%	±1%
	Ripple and noise(mV) (max)	80mV _{P-P}	120mV _{P-P}	120mV _{P-P}	150mV _{P-P}	240mV _{P-P}
	Line Regulation	±1%	±1%	±1%	±1%	±1%
	Load Regulation	±1%	±1%	±1%	±1%	±1%
	hold time(ms)	86ms/230VAC 40ms/115VAC(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)	0-2.4	0-1.25	0-1	0-0.63	0-0.32
Input	Rated supply voltage(Vac)	100-240				
	Voltage range(Vac)	90-264VAC/120-370DC				
	Line frequency(Hz)	47-63				
	Input current(A)	0.5A/115V 0.25A/230V	0.5A/115V 0.25A/230V	0.5A/115V 0.25A/230V	0.5A/115V 0.25A/230V	0.5A/115V 0.25A/230V
	Efficiency Full Load	80%230V	85%230V	85.5%230V	88%230V	88%230V
	Average efficiency 3	80%230V	85%230V	84%230V	86%230V	87%230V
	No load power consumption(W)	≤0.3W				
	Inrush current(lpk)	cold start 25A/115V 46A/230V				

	Leakage current	$\leq 0.25\text{mA}$
Protection	Short circuit protection	Hiccup mode
	Over load protection	Hiccup mode, 1.1-1.8 times
	Over voltage protection	Turn off output
	Surge capacity	Level 4, 2KV/L-N, criteria A
	Insulation impedance	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	2000m
	MTBF	300000HR MIL-HDBK-217F (25°C)
Other	Dimensions (L×W×H) (mm)	90*58.3*18mm (W*H*D)
	Dimensions Weight(g)	70g
	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

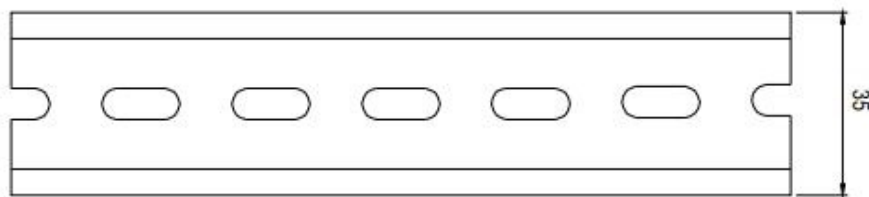
Wiring range: 24-12 AWG

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

Definition of terminal pins

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

Electrical curves

Fig. 1 Output load-Temperature curve

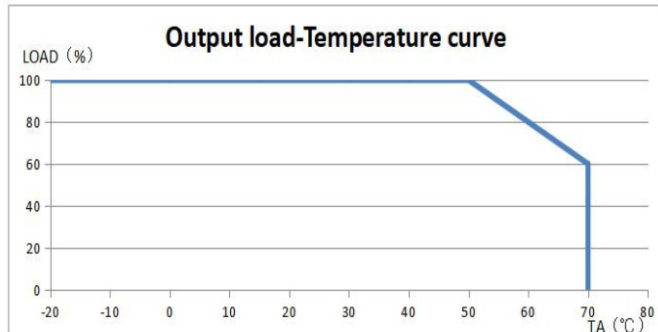


Fig. 2 Static characteristic curve

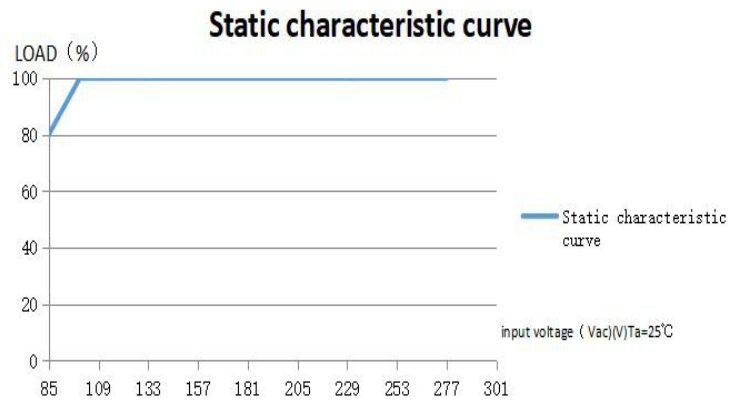


Fig. 3 I-V curve

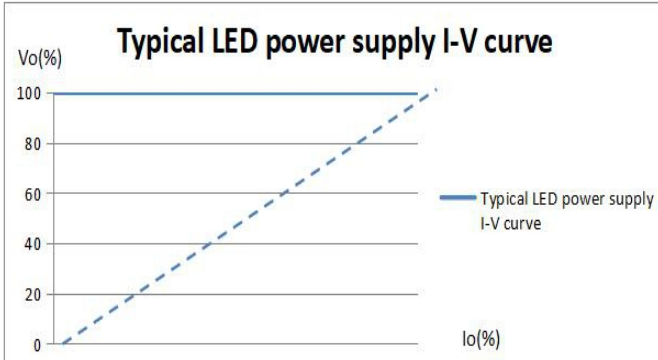
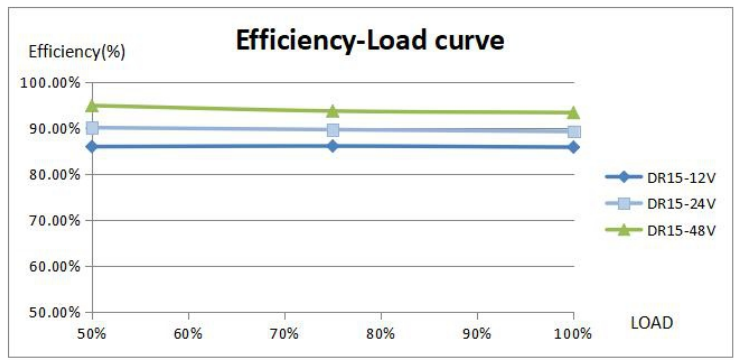


Fig.4 Efficiency-Load curve



Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
DR15-5V			
DR15-12V			
DR15-15V			
DR15-24V			
DR15-48V			

Revision history

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