# Constant Voltage Power Supply
## DR60-5/12/15/24/48V

## Product description

DR60-5/12/15/24/48V is a cost-effective, ultra-thin rail-mounted power supply that complies with German industrial standards. The cabinet body is designed to be 52.5mm (3SU) wide, within the allowed space saving size in cabinets. The entire series uses input full range AC input (277VAC is also applicable) and complies with BS EN/EN61000-3-2 standards for harmonic current specifications specified by the European Union. Designed with a plastic casing, it can effectively prevent electrical hazards to users, with a work efficiency of up to 91.8%. The entire series can operate in ambient temperatures ranging from -30 ℃ to 70 ℃ 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
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



SNAPPY
KNOW HOW. NO LIMITS.

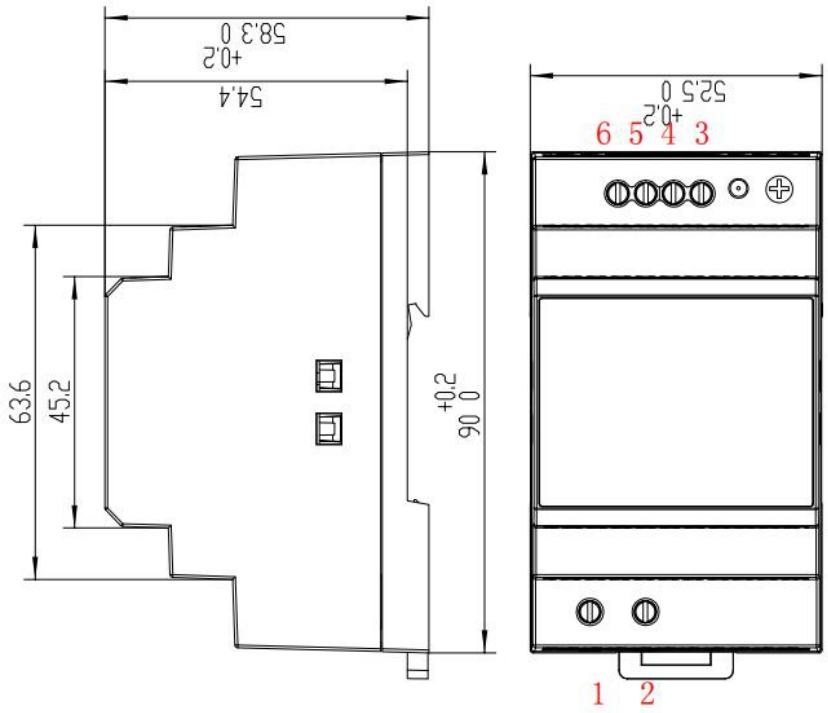
## Specifications

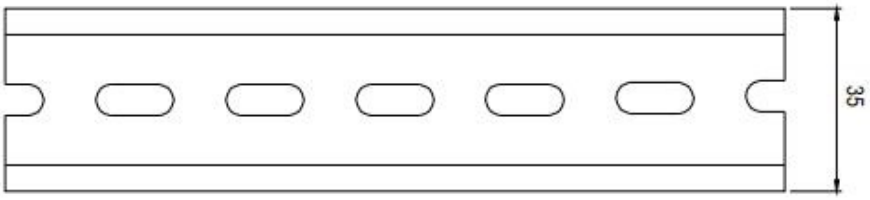
| Model | | DR60-5 | DR60-12 | DR60-15 | DR60-24 | DR60-48 |
|---|---|---|---|---|---|---|
| Output | Turn on time(S) | 500ms | 500ms | 500ms | 500ms | 500ms |
| | Output power(W) | 32.5 | 54 | 60 | 60 | 60 |
| | Output voltage(V) | 5 | 12 | 15 | 24 | 48 |
| | Output voltage tolerance | ±2% | ±1% | ±1% | ±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) | 30ms/230VAC 12ms/115VAC(full load) | | | | |
| | Voltage regulation range（ V） | 4.9-5.5V | 10.8-13.8V | 13.5-18V | 21.6-29V | 43.2-55.2V |
| | Working current range(A) | 0-6.5 | 0-4.5 | 0-4 | 0-2.5 | 0-1.25 |
| Input | Rated supply voltage(Vac) | 100-240 | | | | |
| | Voltage range | 90-264VAC / 120-370DC | | | | |
| | Line frequency(Hz) | 47-63 | | | | |
| | Input current(A) | 1.2A/115V 0.8A/230V | 1.2A/115V 0.8A/230V | 1.2A/115V 0.8A/230V | 1.2A/115V 0.8A/230V | 1.2A/115V 0.8A/230V |
| | Efficiency Full Load | 88%115V/ 89%230V | 89.38%115V/ 91.03%230V | 89%115V/ 90%230V | 90.65%115V/ 90.65%230V | 91.5%115V/ 91.8%230V |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Average efficiency 3 | 88%115V/ 89%230V | 90.1%115V/ 90.8%230V | 89%115V/ 90%230V | 88.78%115V/ 90.01%230V | 88.78%115V/ 90.01%230V |
| | No load power consumption(W) | ≤0.3W | | | | |
| | Inrush current(Ipk) | cold start 30A/115V 60A/230V | | | | |
| | Leakage current | ≤0.25mA | | | | |
| Protection | Short circuit protection | hiccup mode | | | | |
| | Over load protection | hiccup mode，1.1-2.0 times | | | | |
| | Over voltage protection | Turn off the output | | | | |
| | Over temperature protection | Turn off the output | | | | |
| | Surge capacity | Level 4,2KV/L-N, criteria A | | | | |
| | Insulation impedance | I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH | | | | |
| | Withstand voltage | I/P-O/P:4KVAC | | | | |
| Ambient and Life | Ta(℃) | -30～+70℃ (Please refer to the Reduction Curve) | | | | |
| | Storage Temperature(℃) | -40 ~ +85℃, 10 ~ 95% RH,No condensation | | | | |
| | Ambient humidity range | 20 ~ 90% RH,No condensation | | | | |
| | altitude | 2000 meters | | | | |
| | MTBF | 300000HR MIL-HDBK-217F (25℃) | | | | |
| | Dimensions (L×W×H)(mm) | 52.5*90*54.5mm (W*H*D) | | | | |
| | Weight(g) | 185g | | | | |

| | | |
|---|---|---|
| Other | Casing material | Plastic flame retardant and heat-resistant(UL94V-0) |
| | Housing colour | White |
| | Protection class | class II |
| | Certificate | |
| Note | 1.Tolerance:includes set up tolerance, line regulation and load regulation.<br>2.Tested at full load,120V/230Vac.The actual adjustment range may exceed the stated values, should pay attention to ensure that the output voltage and power level remain within the published maximum values.<br>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.<br>4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature.<br>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.<br>6.Ripple and noise testing conditions: under rated voltage and load conditions, connect an oscilloscope with a bandwidth of 20MHz to the output terminal, and parallel a 47uF electrolytic capacitor and a 0.1uF ceramic capacitor at the same time | |

## 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/L | 3.4 | V+ |
| 2 | AC/N | 5.6 | V- |

## Electrical curves

Fig. 1 Output load-Temperature curve

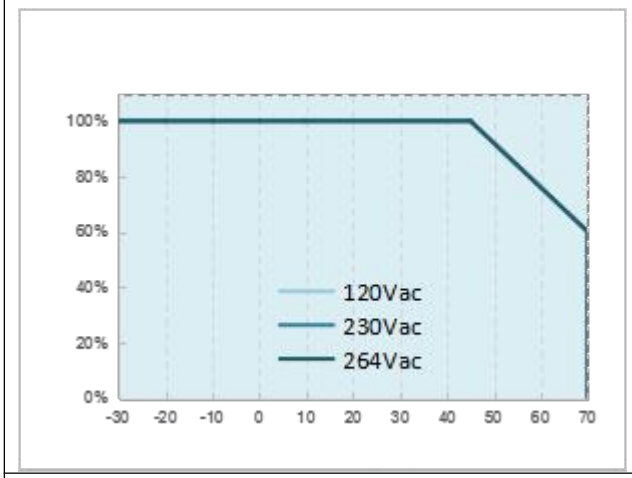



Fig. 2 Static characteristic curve

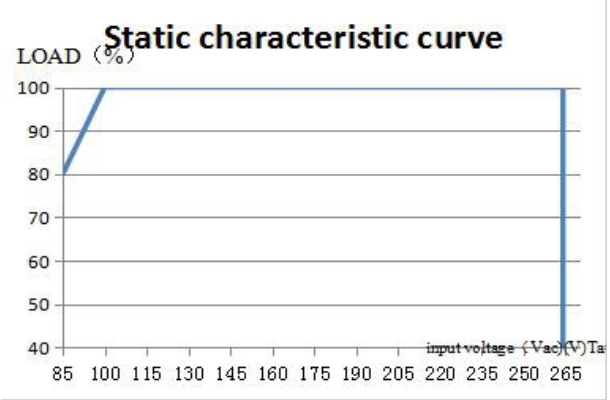



Fig. 3 I-V curve

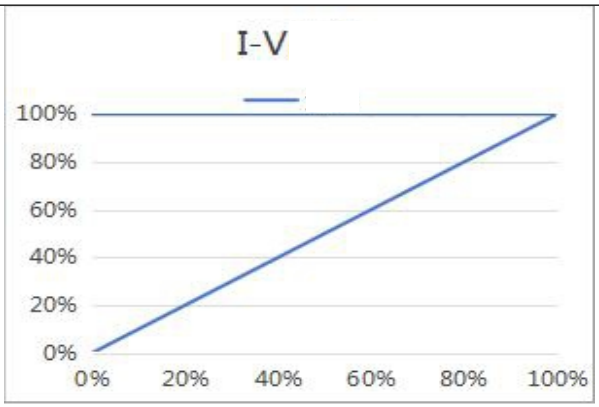
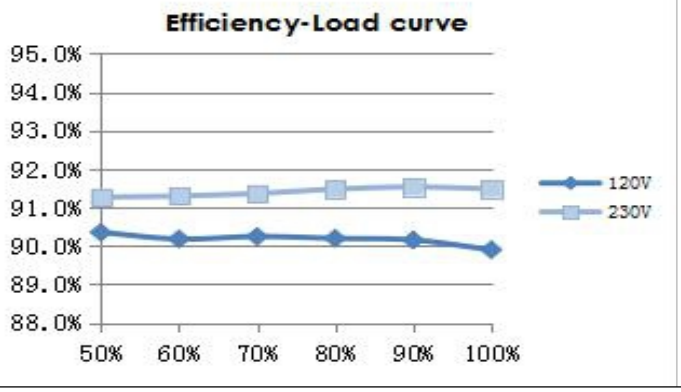



Fig.4 Efficiency-Load curve



## Package

| Model | Carton quantity(pcs) | Carton dimension(mm) | G.W./CTN(kg) |
|---|---|---|---|
| DR60-5V | | | |
| DR60-12V | | | |
| DR60-15V | | | |
| DR60-24V | | | |
| DR60-48V | | | |

## Revision history

| Date | Rev. | Remark |
|---|---|---|
| 2024.11.19 | A0 | Initial release. |
| 2025.02.13 | A1 | Official release |
| | | |
| | | |
| | | |