

# POWER RDN MOS-40

DIN Rail Redundancy Module 9 - 60 V DC/ 2 x 40 A Input - 40 A Output



**DIN Rail Redundancy Module with MOSFET technology for 9–60 VDC, 2x 40 A inputs, ultra-low voltage drop and N+1 redundancy.**

The POWER RDN MOS-40 represents advanced redundancy technology utilizing high-efficiency MOSFET switching for superior power distribution performance in demanding industrial applications. With MOSFET-based redundancy architecture, this module achieves an ultra-low voltage drop of just 0.30V typical, maximizing system efficiency while delivering robust 40A dual-channel redundancy protection.

## Key Technical Features:

**Wide Input/Output Range:** 9-60 VDC operation supporting 12V, 24V, and 48V nominal voltages

**MOSFET-Based Redundancy:** High-efficiency MOSFET technology with ultra-low voltage drop of 0.30V (Vin-Vout) - more than 50% lower than diode-based solutions

**High Current Capacity:** 40A rated current per input channel with 80A peak current capability (7 seconds)

**Advanced Monitoring:** Built-in 2-channel LED DC OK indicators and relay alarm contact for comprehensive system diagnostics

**Superior Protection:** Overload and short circuit protection up to 80A for 7 seconds without damage

**Industrial Reliability:** Enhanced conformal coating, 65 VDC reverse voltage protection, and Class I safety rating

**Optimized Design:** DIN rail mounting with natural convection cooling

**Applications:** Perfect for high-power industrial automation, heavy machinery control, robotics systems, energy management, telecommunications infrastructure, and demanding applications where maximum efficiency and high current capacity are critical requirements.

**Statement:**

Redundancy Modules should be considered as a part of the system components, and electromagnetic compatibility needs to be checked in conjunction with the terminal equipment.

When working at an altitude of over 2000 meters, please derate 5% per KM.

Installation distance: Recommended top 40mm, bottom 20mm, left and right 5mm. If adjacent devices are heating up, lateral distance of 5 mm.

The case needs to be connected to ground of system when terminal equipment in operating.

All indicators in this guidebook are tested according to our company's standards.

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ORDER DETAILS

**Function:** DIN Rail MOSFET Module 9 - 60 V DC/ 2 x 40 A Input - 40 A Output, N+1 redundancy,DC OK monitoring.

**SKU/Order No.:** SA-P-RDN-M-40



# Features



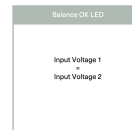
## Ultra Slim Dimensions

To save space in your control cabinet, our power supplies are designed to reduce size.



## DC OK LED

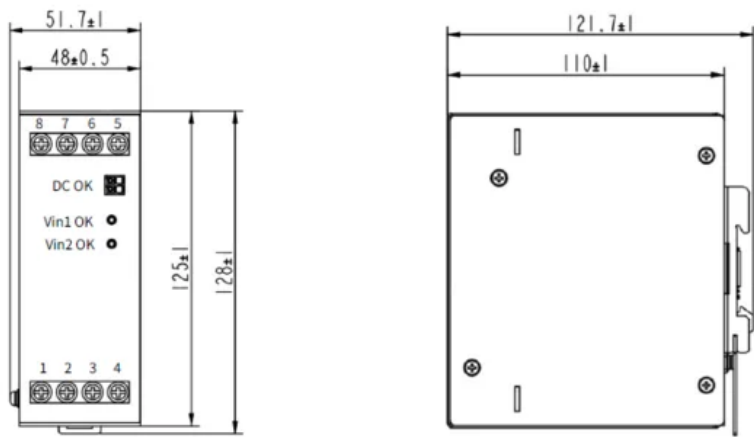
If output voltage is decreasing the DC OK LED turns off. In "normal" output voltage condition the LED is on.



## Input Voltage Balance OK LED

LED Indication to signaling the input voltage balance is OK.

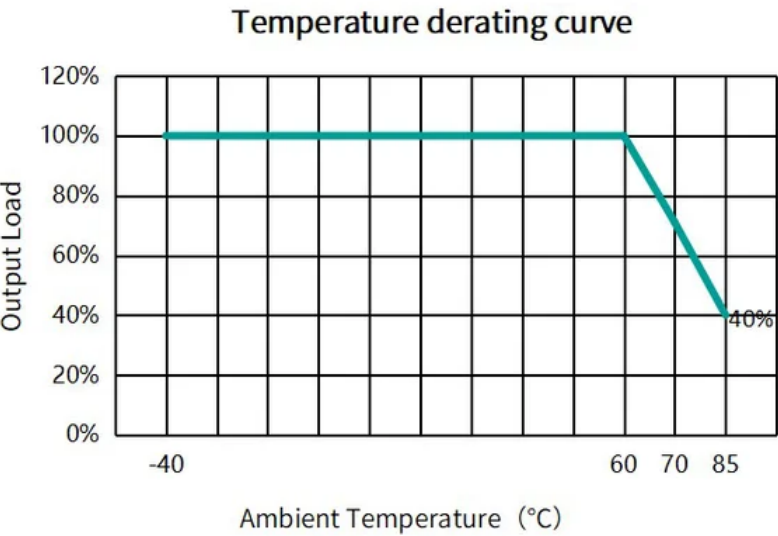
# Mechanical Dimensions

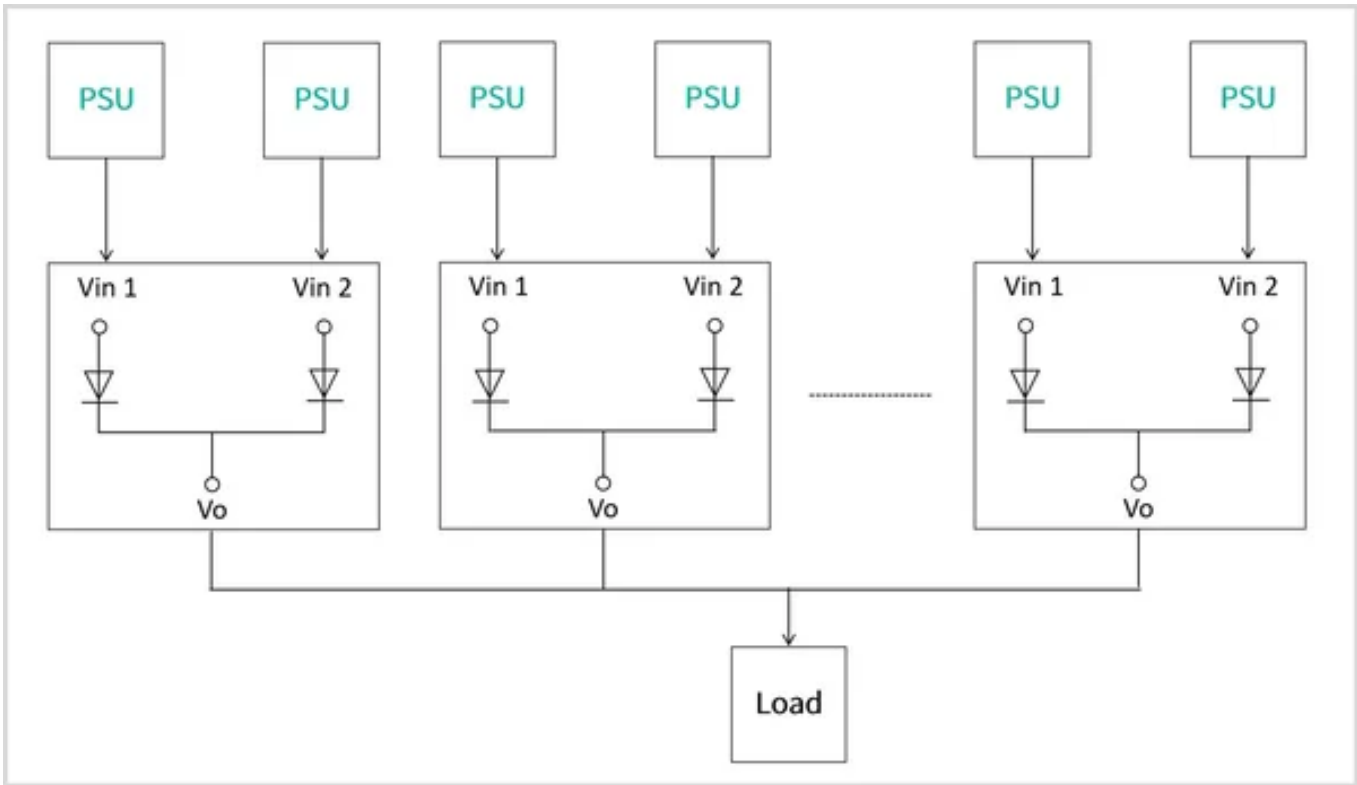
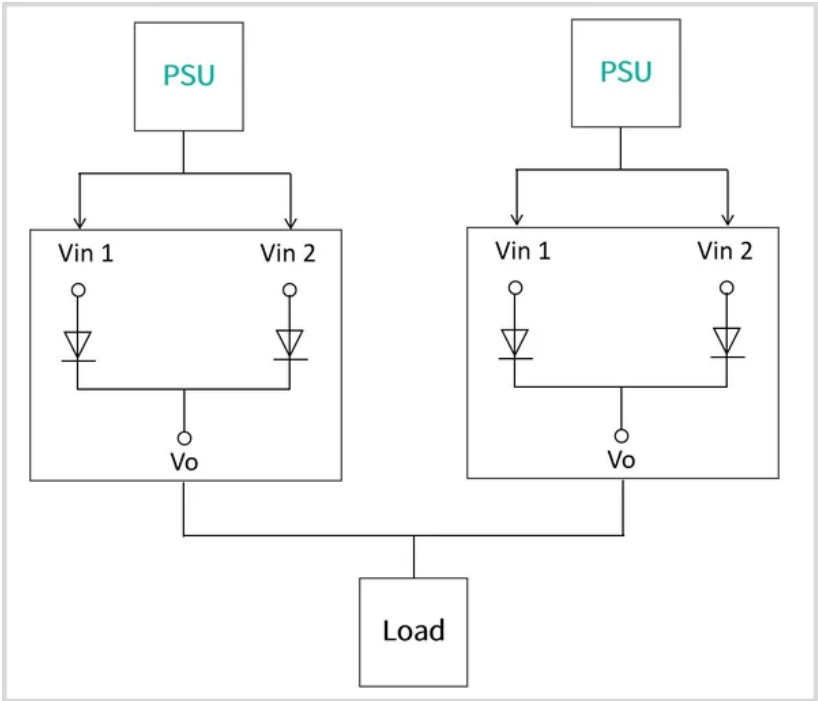
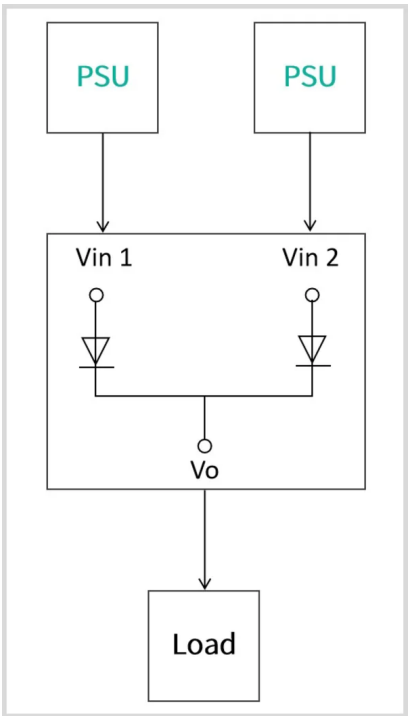


| Terminal Pin No. Assignment |            |
|-----------------------------|------------|
| Pin No.                     | Assignment |
| 1,2                         | -Vo        |
| 3,4                         | +Vo        |
| 5                           | +Vin1      |
| 6                           | -Vin1      |
| 7                           | +Vin2      |
| 8                           | -Vin2      |

Note:  
Unit: mm  
General tolerances:±1.00

# Drawings





# Technical Data

## Input Data

|                                   |                        |
|-----------------------------------|------------------------|
| Input Voltage Range DC            | 9 ... 60 V             |
| Nominal Operating Voltage         | 12 VDC, 24 VDC, 48 VDC |
| Input Current (typ.)              | 2 x40 A                |
| Input Peak Current                | 2 x 80 A (7 sec.)      |
| Input-Output Potential Difference | 0.30 V                 |
| Reverse Voltage                   | 65 VDC                 |

## Output Data

|                             |               |
|-----------------------------|---------------|
| Output Current              | 40 A          |
| Output Current (Peak Power) | 80 A (7 sec.) |

## Protection Circuit

|                          |                                                                                                                         |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------|
| DC OK Signalling         | LED (Green)                                                                                                             |
| Balance OK indicator     | LED (Green)                                                                                                             |
| Alarm Signalling         | Either input fault or output fault, relay changes from on to off                                                        |
| Balance OK Output        | When voltage of that channel is lower than another channel (typically 3V) or there is no voltage, the LED will turn off |
| Short Circuit Protection | 40A, 7s. No damage                                                                                                      |

## Ambient Condition

|                                           |                |
|-------------------------------------------|----------------|
| Ambient Temperature (operating)           | -40 ... +85 °C |
| Ambient Temperature (storage/transport)   | -40 ... +85 °C |
| Operating Humidity (non-condensing)       | 5 ... 95 % RH  |
| Storage Humidity (non-condensing)         | 5 ... 95 % RH  |
| Degree of Protection                      | IP20           |
| Operating Altitude (max. above sea level) | < 5000 m       |

## Mechanical Data

|                                 |           |
|---------------------------------|-----------|
| Tightening Moment (min. / max.) | max. 1 Nm |
| Housing                         | Metal     |

|                                      |            |
|--------------------------------------|------------|
| Mounting DIN Rail according EN 60715 | TH35       |
| Weight (typ.)                        | 480 g      |
| Cooling Method                       | Convection |

Dimensions

|             |        |
|-------------|--------|
| Width (mm)  | 48 mm  |
| Depth (mm)  | 110 mm |
| Height (mm) | 125 mm |

Commercial Data

|                       |               |
|-----------------------|---------------|
| GTIN                  | 4262552160632 |
| Customs Tariff Number | 85363030      |

Standards and Regulations

|                    |                   |
|--------------------|-------------------|
| In Compliance With | CE, UL, FCC, ROHS |
|--------------------|-------------------|

Safety Standards

|                   |                        |
|-------------------|------------------------|
| Protection Rating | I (Protection Class I) |
|-------------------|------------------------|

Isolation

|                                                  |                                                 |
|--------------------------------------------------|-------------------------------------------------|
| Input/PE Isolation (at room temperature)         | 0.5KVac, ≥100MΩ (500VDC /70% RH/Non-Condensing) |
| Output/PE Isolation (at room temperature)        | 0.5KVac, ≥100MΩ (500VDC /70% RH/Non-Condensing) |
| Input/Output Isolation (at room temperature)     | 0.5KVac, ≥100MΩ (500VDC /70% RH/Non-Condensing) |
| Output/RC, DC OK Isolation (at room temperature) | 0.5KVac, ≥100MΩ (500VDC /70% RH/Non-Condensing) |