

POWER RDN DIO-20

DIN Rail Redundancy Module 9 - 60 V DC/ 2 x 20 A Input - 20 A Output



DIN Rail Redundancy Diode Module 9 - 60 V DC/ 2 x 20 A Input - 20 A Output, N+1 redundancy, and DC OK monitoring.

A safe redundant system results from the parallel connection of two decoupled power supplies.

The POWER RDN DIO-20 is a high-performance industrial DIN rail redundancy module utilizing diode-based redundancy technology for reliable power distribution. Designed for 24V DC industrial systems, this module supports N+1 redundancy configurations with dual input channels rated at 20A each, ensuring continuous operation even in the event of primary power supply failure.

Key Technical Features:

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

Diode-Based Redundancy: Reliable diode technology with typical voltage drop of 0.65V (Vin-Vout)

Dual Channel Operation: 20A rated current per input channel with 40A peak current capability (7 seconds)

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

Robust Protection: Overload and short circuit protection up to 40A for 7 seconds without damage

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

Compact Design: DIN rail mounting with natural convection cooling

Applications: Ideal for factory automation, process control systems, building automation, transportation systems, and any industrial environment requiring high-availability power distribution with N+1 redundancy support.

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.

ORDER DETAILS

Function: DIN Rail Redundancy Diode Module 9 - 60 V DC/ 2 x 20 A Input - 20 A Output, N+1 redundancy, DC OK monitoring.

SKU/Order No.: SA-P-RDN-D-20



Features



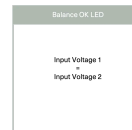
Ultra Slim Dimensions

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



DC OK LED

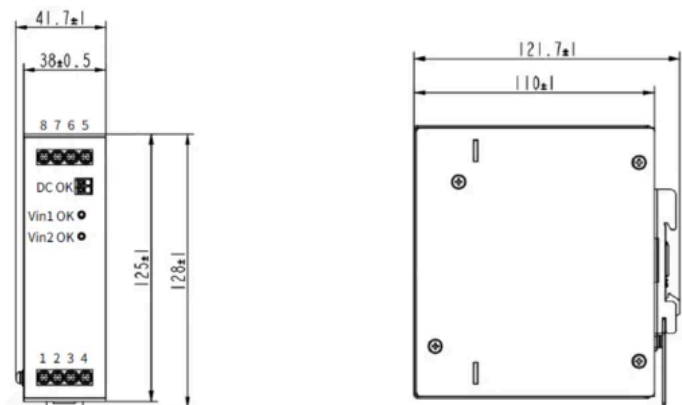
If output voltage is decreasing the DC OK LED turns off. In "normal" output voltage condition the LED is on.



Input Voltage Balance OK LED

LED Indication to signaling the input voltage balance is OK.

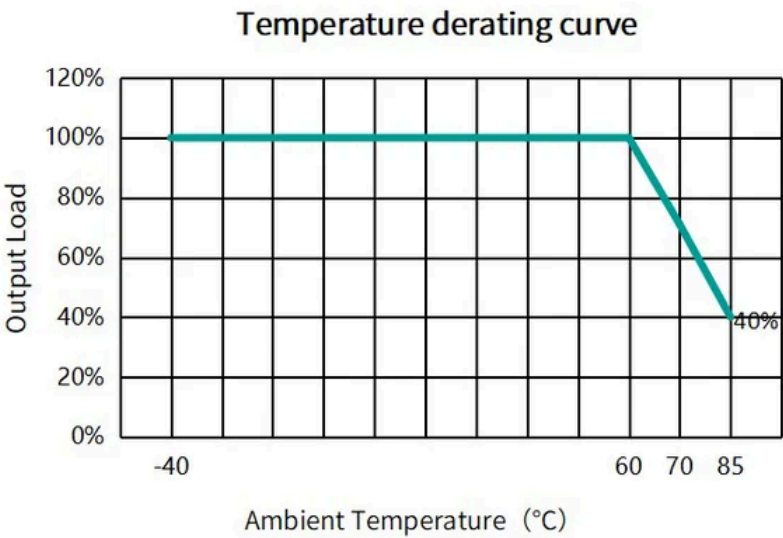
Mechanical Dimensions

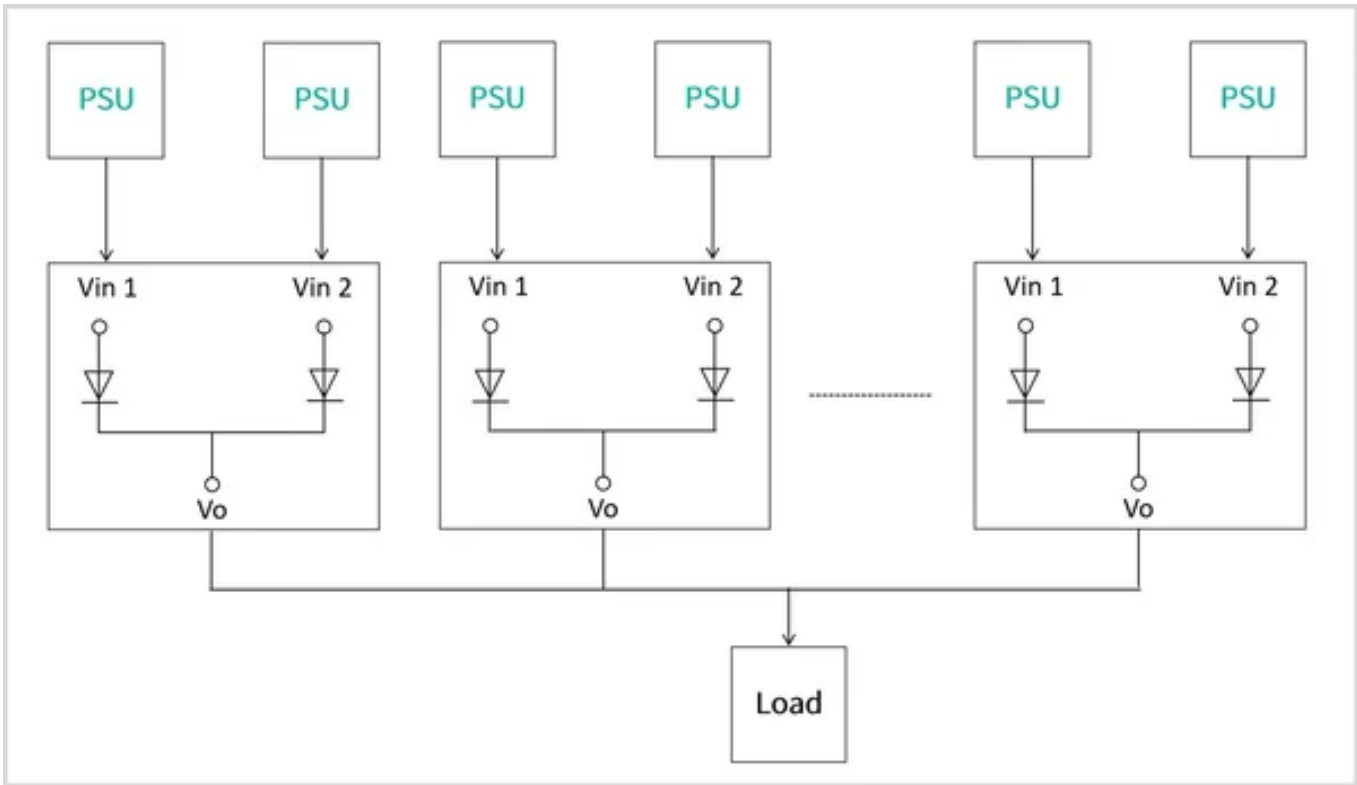
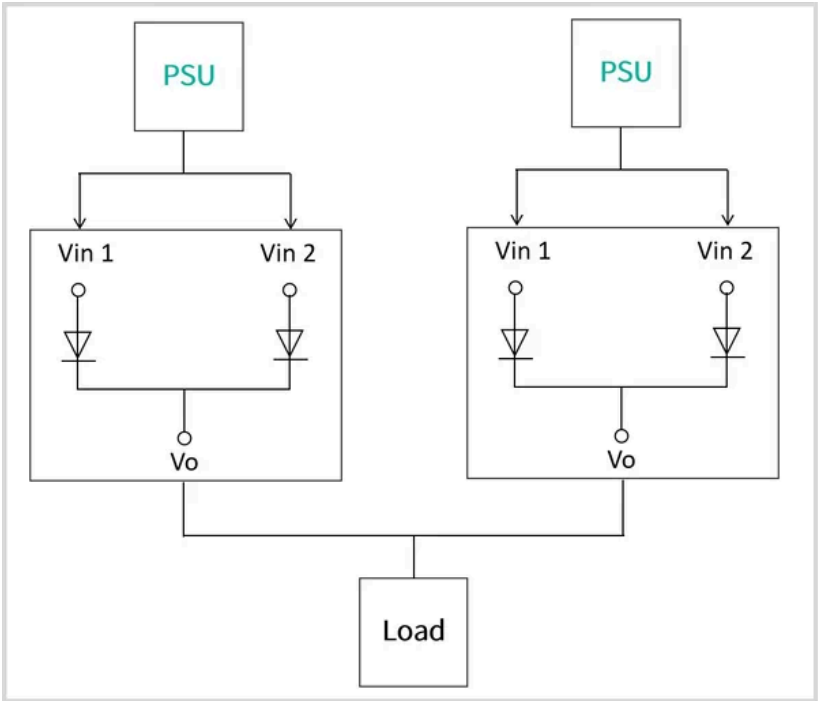
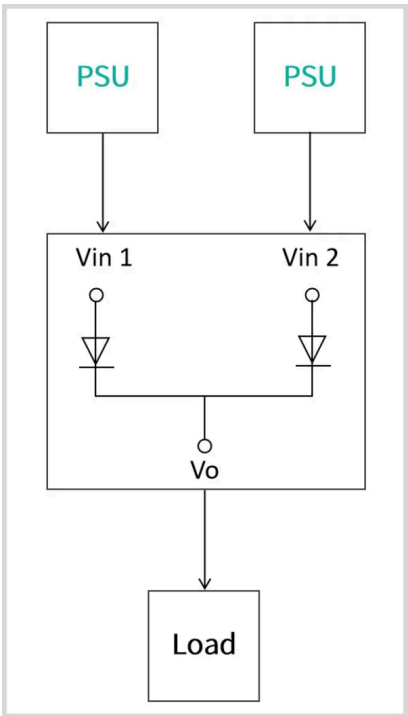


Terminal Pin No. Assignment	
Pin No.	Assignment
1,2	-Vo
3,4	+Vo
5	+Vin1
6	-Vin1
7	+Vin2
8	-Vin2

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 x20 A
Input Peak Current	2 x 40 A (7 sec.)
Input-Output Potential Difference	0.65 V
Reverse Voltage	65 VDC

Output Data

Output Current	20 A
Output Current (Peak Power)	40 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)	38 mm
Depth (mm)	110 mm
Height (mm)	125 mm

Commercial Data

GTIN	4262552160069
Customs Tariff Number	85044030

Standards and Regulations

In Compliance With	CE, UL, FCC, ROHS
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Safety Standards

Protection Rating	I (Protection Class I)
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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)