

# Switching Power Supply Redundant Module

## Type SPD24RM20

### DIN rail mounting

CARLO GAVAZZI



- Installation on DIN Rail 7.5 or 15mm
- 2 "Power RdY" relay outputs
- Up to 480W output
- Unlimited number of connectable redundant power supplies
- Very compact dimensions
- UL, cUL listed
- TUV approved
- Ce and RoHS compliant

### Product Description

This SPD additional module allows the connection of 1 power supply +1 or more additional redundant power supplies. In this case, the continuity of the 24VDC output is always guaranteed, even in case of failure of one power supply. 2 relay outputs provide voltage free outputs in order to send the alarm to a control unit when a failure occurs.

### Approvals



### Output Data

Output voltage drop	0.5V
Output maximum Current	20A
Output Peak Current >5ms	30A
Max Reverse Voltage	30V

### Controls and Protections

Power RDY relay Output	input 20...30V ±5% input 20...30V ±5% 1.0A
------------------------	--

### General Data

Insulation Voltage	100VDC
Input / Relay contact	
Insulation Resistance	100MΩ
Input / Relay contact @100VDC	
Operating temperature	-25°C...+71°C
Storage temperature	-25°C...+85°C
Relative Humidity	20...95%RH
MTBF (Bellcore issue 6 @ 40°C, GB)	659,000h
Cooling	Free air convection
Case material	Plastic
Dimensions L x W x D	90 x 54 x 114mm
Weight	210g

### Ordering Key

SP D 24 RM 20

Model \_\_\_\_\_  
Mounting ( D = Din rail ) \_\_\_\_\_  
Output voltage \_\_\_\_\_  
Redundant module \_\_\_\_\_  
Maximum current \_\_\_\_\_

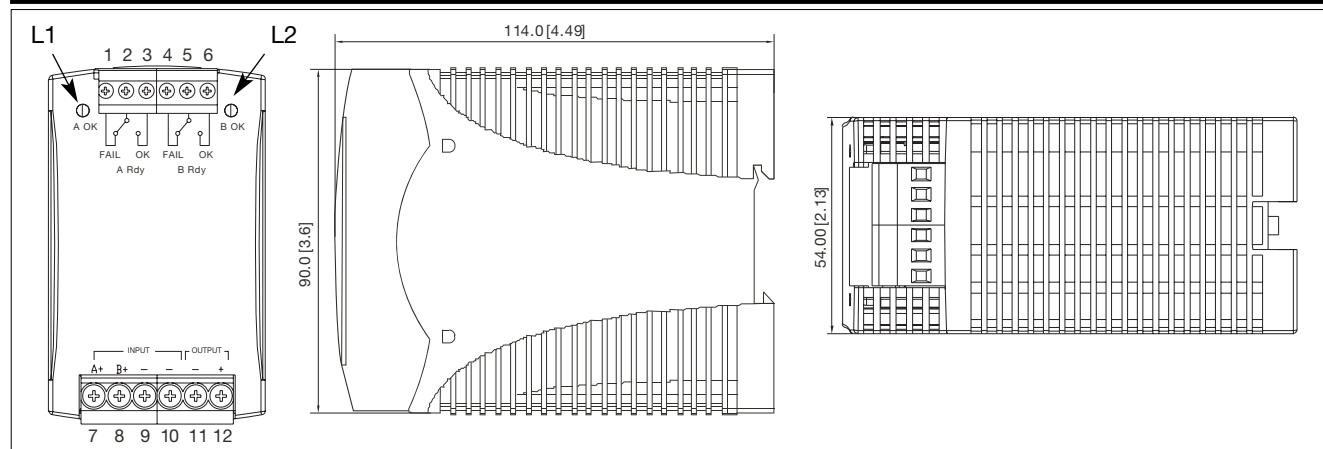
### Input Data

Rated input Voltage	21...28VDC
Number of inputs	2
Maximum input current	20A

### Approvals and EMC

Shock resistance	acc. to IEC 60068-2-27 (15G, 11ms, 3 Axis, 6 Faces, 3 times for each Face)
Vibration resistance	acc. to IEC 60068-2-6 (Mounting by rail: 10-500 Hz, 2G, along X, Y, Z each Axis, 60 min for each Axis)
UL / cUL	UL 508 Listed UL 60950-1 Recognized
TUV	EN 60950-1, CB scheme
CE	EN 55022 Class B, EN 55024, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-6, EN 61000-4-8, EN 61204-3

## Mechanical Drawings mm (inches)

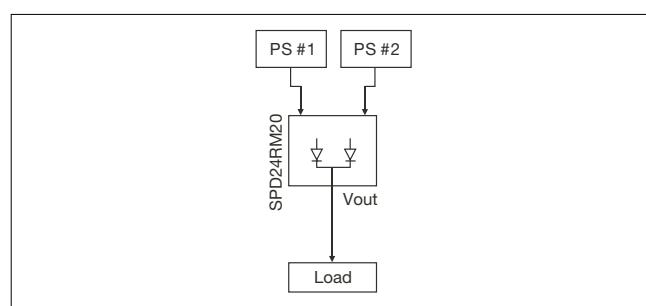


## Pin Assignment and Front Controls

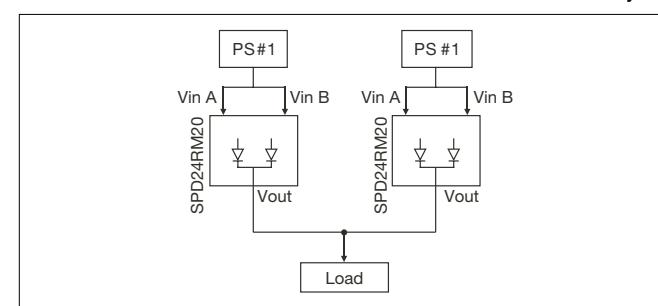
Pin No.	Designation	Description
1	<b>A Rd y Fail</b>	Relay normally closed contact (power supply A Fail)
2	<b>A Rd y COM</b>	Relay common contact
3	<b>A Rd y OK</b>	Relay normally open contact (power supply A OK)
4	<b>B Rd y Fail</b>	Relay normally closed contact (power supply B Fail)
5	<b>B Rd y COM</b>	Relay common contact
6	<b>B Rd y OK</b>	Relay normally open contact (power supply B OK)
7	<b>Input A+</b>	Positive Input power supply A
8	<b>Input B+</b>	Positive Input power supply B
9	<b>Input -</b>	Negative Input power supply A
10	<b>Input -</b>	Negative Input power supply B
11	<b>Output -</b>	Positive Output terminal
12	<b>Output +</b>	Negative Output terminal
<b>L1</b>	<b>A OK</b>	“A” power supply operation OK LED
<b>L2</b>	<b>B OK</b>	“B” power supply operation OK LED

## Typical Application Notes

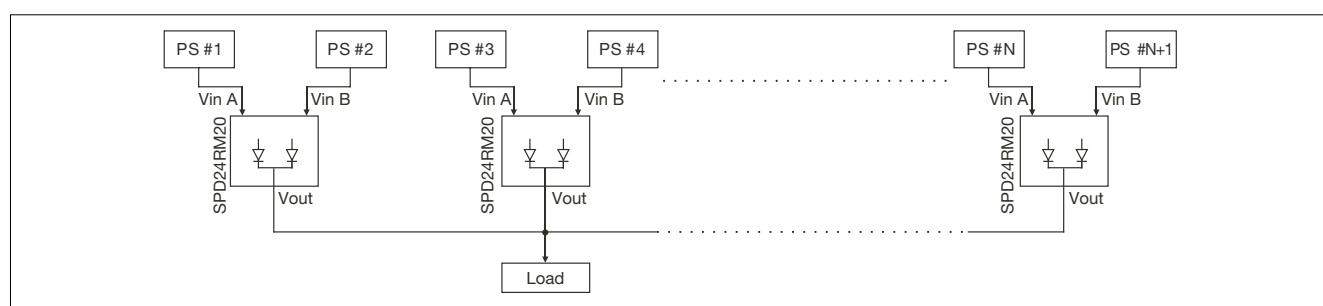
1.) 1+1 Redundancy: Using 1 more PS as the redundant unit.



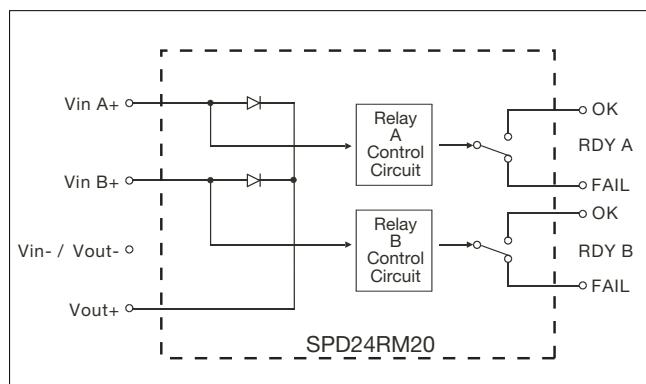
2.) Single Use: Connecting only one PS to one SPD24RM20 to reduce the stress of the diodes and hence increase the reliability.



3.) 1+N Redundancy: Using more than one PS as redundant units to increase the reliability.



## Circuit Diagram



## Installation

<b>Ventilation and cooling</b>	Normal convection All sides 25mm free space for cooling is recommended
<b>Screw terminals</b>	10-24AWG flexible or solid cable 8mm stripping recommend
<b>Max. torque for screws terminals</b> Input terminals Output terminals	1.008Nm (9.0lb-in) 0.616Nm (5.5lb-in)
<b>Plug-in connectors</b>	10-24AWG flexible or solid cable 7mm stripping recommend
<b>Max. torque for plug-in terminals</b> Input terminals Output terminals	0.784Nm (7.0lb-in) 0.784Nm (7.0lb-in)