

# Switching Power Supply Type SPD 24 30 DIN Rail mounting



- Universal AC Input Full range
- Installation on DIN Rail 7.5 or 15mm
- Short circuit protection
- Overload protection
- High efficiency
- LED indicator for power on
- Power Ok output
- CE, TUV approved and cULus Listed

## Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the

Installation is on a DIN rail and compact dimensions and performance are a must.

## Ordering Key

**SP D 24 30 1 B**

Model \_\_\_\_\_  
 Mounting ( D = Din rail ) \_\_\_\_\_  
 Output voltage \_\_\_\_\_  
 Output power \_\_\_\_\_  
 Input Type \_\_\_\_\_  
 Optional features \_\_\_\_\_

Input type: 1= single phase

## Approvals



## Optional Features

| Description       | code |
|-------------------|------|
| Spring connectors | B    |

## Output data

|                        |              |                          |            |
|------------------------|--------------|--------------------------|------------|
| Output nominal voltage | 24Vdc*       | Transient recovery time  | 300 ms     |
| Current                | 1.25 A       | Ripple and noise         | 50mVpp     |
| Output voltage range   | 24 to 28 Vdc | Efficiency typ.          | 84%        |
| Line regulation        | ± 1%         | Output Voltage accuracy  | ± 2%       |
| Load regulation        | ± 2%         | Temperature coefficient  | ± 0.02%/°C |
|                        |              | Hold up Time Vi = 115Vac | 20ms       |
|                        |              | Hold up time Vi = 230Vac | 75ms       |

## Input data

|                     |               |                 |           |
|---------------------|---------------|-----------------|-----------|
| Rated input voltage | 100 - 240     | Frequency range | 47- 63 Hz |
| Voltage range       |               | Inrush current  |           |
| AC                  | 90 - 265 Vac  | Vi= 115Vac      | 16A       |
| DC                  | 120 - 370 Vdc | Vi= 230Vac      | 32A       |

\* 5Vdc, 12Vdc and 48Vdc available, see specific data sheets

## Controls and Protections

|            |                      |                      |             |
|------------|----------------------|----------------------|-------------|
| Overload   | 105 – 125%           | Output Short Circuit | Hiccup mode |
| Input Fuse | T2A/250Vac internal* | Power ready          | 20-24 Vdc   |

## General data (@ nominal line, full load, 25°C )

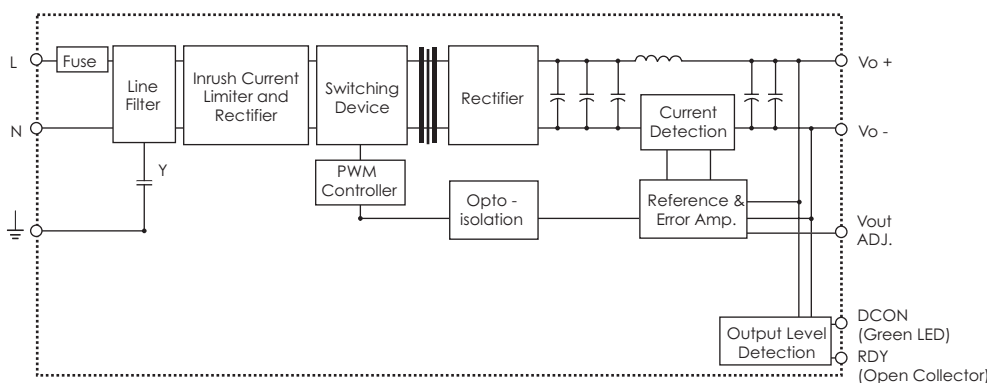
|                           |                |                      |                     |
|---------------------------|----------------|----------------------|---------------------|
| Ambient temperature       | -10°C to 71°C  | Cooling              | Free air convection |
| Case temperature V/I nom  | +85°C          | Switching frequency  | 50kHz               |
| Derating (>60°C to +71°C) | 2.5%/°C        | MTBF (MIL-HDBK-217F) | 200.000h            |
| Ambient humidity          | <90%RH         | Case material        | Plastic             |
| Storage                   | -25°C to +85°C | Dimensions L x W x D | 90 x 40.5 x 115     |
| Protection degree         | IP20           | Weight               | 290g                |

## Approvals and EMC

|                          |   |    |   |
|--------------------------|---|----|---|
| Insulation voltage I / O | 3.000Vac  | CE | EN55022<br>Class B<br>EN55024<br>EN61000-3-2<br>EN61000-3-3 |
| Insulation resistance    | 100Mohm   |    |   |
| UL / cUL                 | UL508 listed, UL1950,<br>UL1310 Class 2<br>Recognised |    |   |
| TUV                      | EN60950   |    |   |

\* fuse not replaceable by user

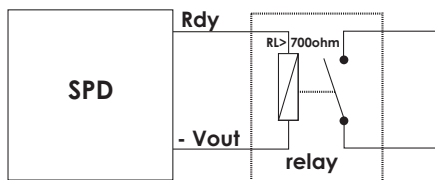
## Block diagrams



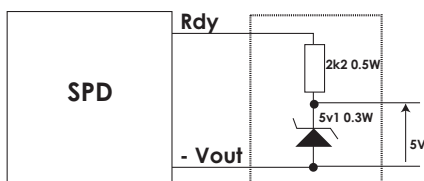
## Pin assignement and front controls

| Pin No. | Designation | Description  |
|---------|-------------|--|
| 1       | RDY         | DC OK, output for relay (only on 24Vdc models)       |
| 3       | +           | Positive output terminal                             |
| 4       | +           | Positive output terminal                             |
| 5       | -           | Negative output terminal                             |
| 6       | -           | Negative output terminal                             |
| 7       | GND         | Ground terminal to minimise High frequency emissions |
| 8       | L           | Phase input ( no polarity with DC input )            |
| 9       | N           | Neutral input ( no polarity with DC input )          |
|         | Vout ADJ.   | Trimmer for fine output voltage adjustment           |
|         | DC ON       | DC output ready LED                                  |

## Output Rdy Wiring diagram

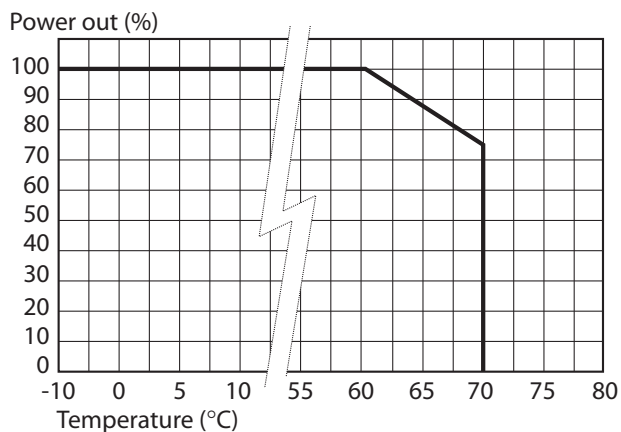


Relay connection diagram

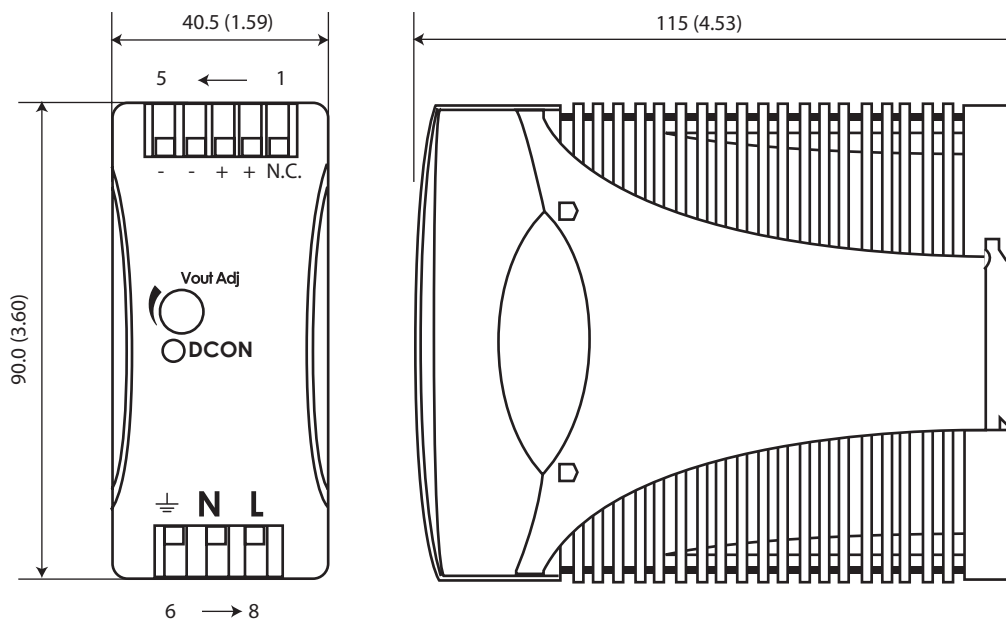


5V signal

## Derating Diagram



## Mechanical Drawings



## Installation

### Ventilation and cooling

Normal convection  
 All sides 25mm free space  
 for cooling is recommended

### Connector size range

Solid: 0.2 – 2mm<sup>2</sup>  
 (AWG24-14)  
 (use copper conductors only)