

Switching Power Supply Type SPD 18W DIN rail mounting

CARLO GAVAZZI



- Universal AC input full range
- Installation on DIN rail 7.5 or 15mm
- Short circuit protection
- Overload protection
- High efficiency
- LED indicator for DC power ON
- LED indication for DC low
- Internal input filter
- 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 18 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 performances

| Model | Output Voltage (VDC) | Output Current (A) | Output Power (W) | Voltage Trim Range | | DC on LED (VDC) | DC low LED (VDC) | | Typical Efficiency |
|-------|----------------------|--------------------|------------------|--------------------|------------|-----------------|------------------|------|--------------------|
| | | | | Min. (VDC) | Max. (VDC) | | Min. | Max. | |
| SPD05 | 5 | 3 | 15 | 4.5 | 5.75 | 4.5 | 3.75 | 4.5 | 75% |
| SPD12 | 12 | 1.5 | 18 | 10.8 | 13.8 | 10.8 | 9 | 10.8 | 77% |
| SPD15 | 15 | 1.2 | 18 | 13.5 | 17.25 | 13.5 | 11.25 | 13.5 | 77% |
| SPD24 | 24 | 0.75 | 18 | 21.3 | 28.8 | 21.6 | 18 | 21.6 | 77% |

Output data

| | | | |
|-------------------------|--------|--------------------------|------------|
| Line regulation | ± 1% | Output Voltage accuracy | ± 1% |
| Load regulation | ± 2% | Temperature coefficient | ± 0.02%/°C |
| Minimum load | 0 | Hold up Time Vi = 115Vac | 20ms |
| Transient recovery time | 300µs | Hold up time Vi = 230Vac | 75ms |
| Ripple and noise | 50mVpp | | |

Input data

| | | | |
|---------------------|---------------|-----------------|-----------|
| Rated input voltage | 100 - 240 | Frequency range | 47- 63 Hz |
| Voltage range | | Inrush current | |
| AC | 90 - 265 Vac | Vi= 115Vac | 10A |
| DC | 120 - 370 Vdc | Vi= 230Vac | 18A |

Controls and Protections

| | | | |
|------------|----------------------|------------------------|-------------|
| Overload | 110 – 135% | Overvoltage Protection | 125 – 145% |
| Input Fuse | T2A/250Vac internal* | Output Short Circuit | Hiccup mode |

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

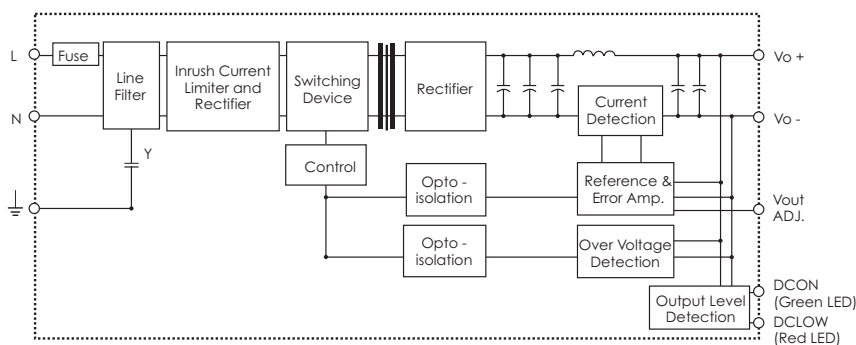
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|---------------------------|---------------------|----------------------|----------------------|
| Ambient temperature | -10°C to 71°C | Switching frequency | 100kHz |
| Derating (>60°C to +71°C) | 3%/°C | MTBF (MIL-HDBK-217F) | 800.000h |
| Ambient humidity | 20 - 90%RH | Case material | Plastic: PC, UL94-V0 |
| Storage | -25°C to +85°C | Dimensions L x W x D | 90 x 22.5 x 115 |
| Protection degree | IP20 | Weight | 150g |
| Cooling | Free air convection | | |

Norms and Standards

| | | | |
|--------------------------|---|----|---|
| Insulation voltage I / O | 3.000Vac min. | CE | EN50081-1 / EN55022 Class B EN50082-1 / EN55024 EN61000-3-2 EN61000-3-3 |
| Insulation resistance | 100Mohm min. | | |
| UL / cUL | UL508, UL60950-1, UL1310 Class 2 Recognised | | |
| TUV | EN60950-1 | | |

* fuse not replaceable by user

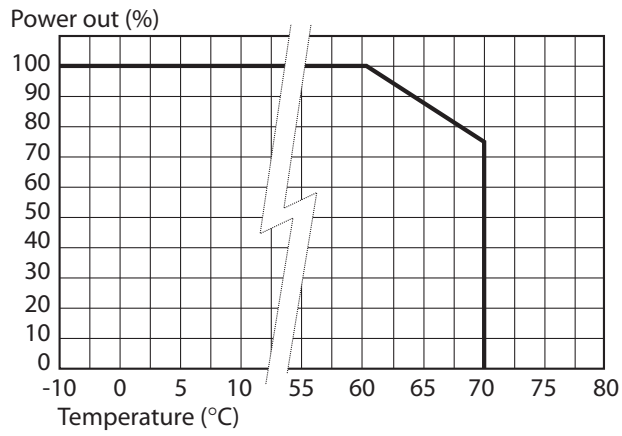
Block diagrams



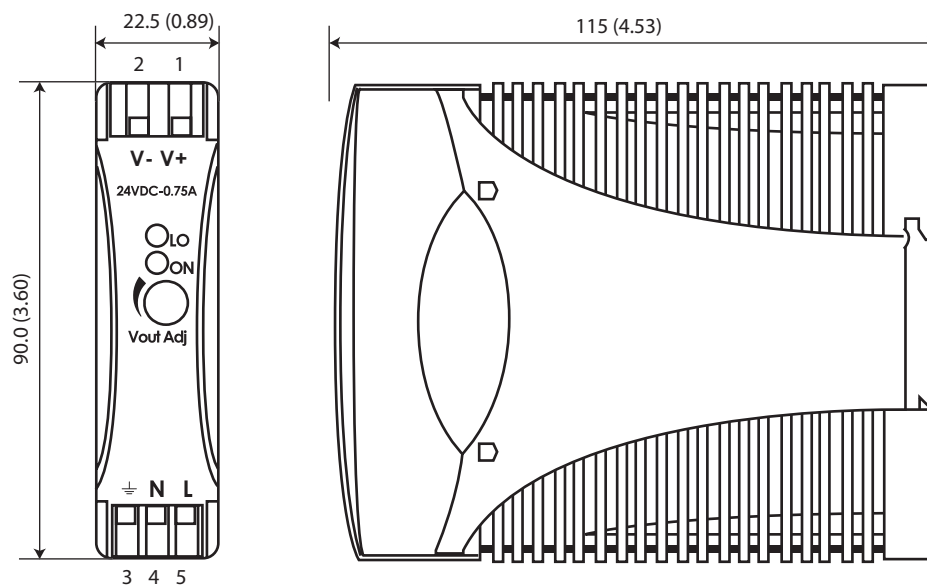
Pin assignement and front controls

| Pin No. | Designation | Description |
|---------|-------------|--|
| 1 | V+ | Positive output terminal |
| 2 | V- | Negative output terminal |
| 3 | GND | Ground terminal to minimise High frequency emissions |
| 4 | N | Neutral input (no polarity with DC input) |
| 5 | L | Phase input (no polarity with DC input) |
| | Vout ADJ. | Trimmer for fine output voltage adjustment |
| | ON | DC output ready LED |
| | LO | DC low indicator LED |

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 – 2mm²
 (AWG24-14)
 (use copper conductors only)