

Switching Power Supply Type PSU 60W DIN rail mounting



- Universal AC input full range
- Installation on DIN rail 7.5 or 15mm
- Short circuit protection
- Overload protection
- Class 2 output
- High efficiency
- LED indicator for DC power ON
- Power Ok output
- CE, TUV approved and cULus Listed

Product Description

The Switching power supplies PSU 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

PS U 24 60 1 B

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

Input type: 1= single phase

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 Min.) | Typical Efficiency |
|-------|----------------------|--------------------|------------------|--------------------|----------|----------------------|--------------------|
| | | | | Min. VDC | Max. VDC | | |
| PSU05 | 5 | 10 | 50 | 5 | 5.5 | 4 | 79% |
| PSU12 | 12 | 5 | 60 | 12 | 14 | 9.6 | 86% |
| PSU24 | 24 | 2.5 | 60 | 24 | 28 | 19.2 | 89% |
| PSU48 | 48 | 1.25 | 60 | 48 | 55 | 37 | 89% |

Output data

| | | | |
|------------------------------------|----------|--|------------|
| Line regulation | ± 0.5% | Output Voltage accuracy | ± 2% |
| Load regulation | ± 0.5% | Temperature coefficient | ± 0.02%/°C |
| Minimum load | 0 | Hold up Time Vi = 115Vac | 20ms |
| Turn on time (full resistive load) | 1.0s max | Hold up time Vi = 230Vac | 30ms |
| Transient recovery time | 300µs | Voltage fall time (I _o nom) | 150ms max |
| Ripple and noise | 50mVpp | Voltage rise time at full resistive load | 150ms max |

Input data

| | | | |
|---------------------|--------------|-----------------|-----------|
| Rated input voltage | 100 - 240 | Frequency range | 47- 63 Hz |
| Voltage range | | Inrush current | |
| AC | 85 - 264 Vac | Vi= 115Vac | 30A |
| DC | 90 - 375 Vdc | Vi= 230Vac | 60A |

Controls and Protections

| | | | | |
|---|----------------------|--------------------------------|-------------|-------------|
| Overload | 110 – 150% | Over voltage protection | VDC | |
| Input Fuse | T2A/250Vac internal* | | Min. | Max. |
| Output Short Circuit | Fold forward | | PSU5 | 6.8 |
| Power ready output (only PSU 24) | | | PSU12 | 16.5 |
| On threshold | ≥20V ± 1V | | PSU24 | 33 |
| Off threshold | ≤19.2V ± 1V | PSU48 | 60 | 66 |

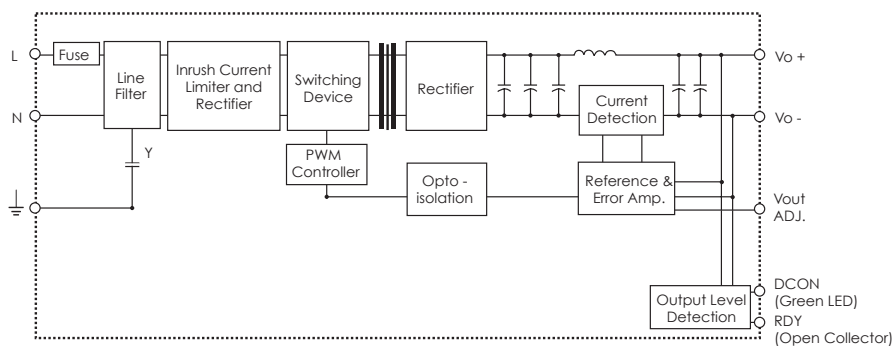
General data (@ nominal line, full load, 25°C)

| | | | |
|-------------------------------------|----------------|-----------------------------|----------------------|
| Ambient temperature | -10°C to 71°C | Cooling | Free air convection |
| Derating (>60°C to +71°C) | 2.5%/°C | MTBF (MIL-HDBK-217F) | 500.000h |
| 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 40.5 x 115 |
| Protection degree | IP20 | Weight | 360g |

Norms and Standards

| | | | |
|---------------------------------------|---|-----------|--|
| Insulation voltage I / O | 3.000Vac min | CE | EN61000-6-3 - EN55022 Class B EN61000-3-2 - EN61000-3-3 EN61000-6-2 - EN550241 EN61000-4-2 - EN61000-4-3 EN61000-4-4 - EN61000-4-5 EN61000-4-6 - EN61000-4-8 EN61000-4-11 |
| Insulation resistance | 100Mohm min | | |
| UL / cUL | UL508 listed, UL1950, UL1310 Class 2 (5V without class 2) Recognised | | |
| TUV | EN60950 | | |
| * fuse not replaceable by user | | | |

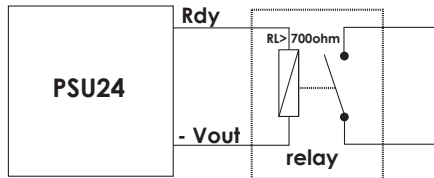
Block diagrams



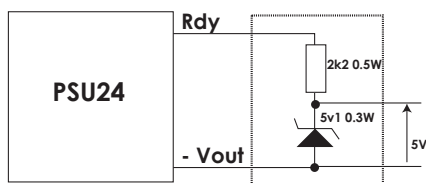
Pin assignment and front controls

| Pin No. | Designation | Description |
|---------|-------------|--|
| 1 | RDY | DC OK, output for relay (only on PSU 24) |
| 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

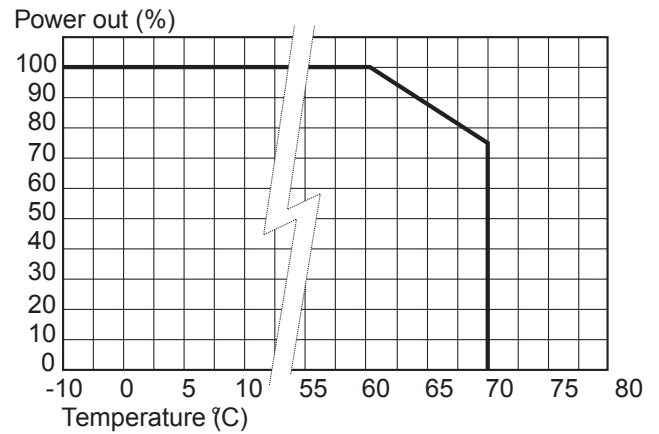


Relay connection diagram

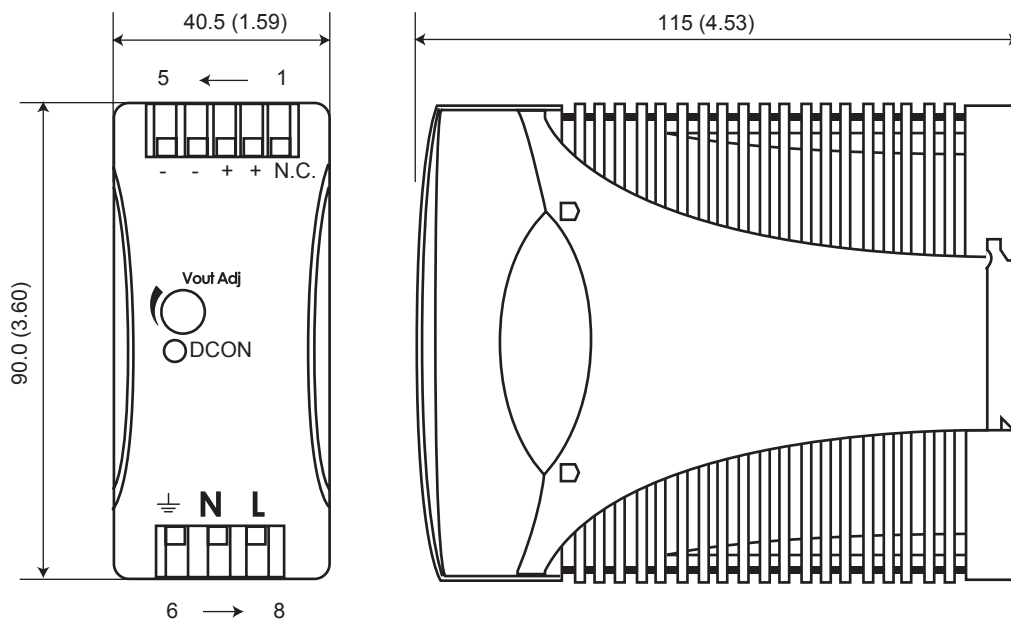


5V signal

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 ² (AWG24-14) (use copper conductors only) |