

SPS Series 12W - 150W AC-DC DIN Rail Power Supplies



Key Features

- Class 2 (Limited Power Source)
- Universal input 90-264VAC / 127-370VDC
- Class II Isolation
- 100% full load burn-in test
- Modular design
- IP20 rated protection



Technical Specification

| Model | SPS-1-012-5DC | SPS-1-015-12DC | SPS-1-015-24DC | SPS-1-024-12DC | SPS-1-030-24DC |
|---------------------------------|--|----------------|----------------|--------------------|----------------|
| Frame Size | 1 | | | 2 | |
| Input Voltage | 85-264VAC or 120-370VDC | | | | |
| Output Wattage | 12W | 15W | 15W | 24W | 30W |
| Output Voltage | 5VDC | 12VDC | 24VDC | 12VDC | 24VDC |
| Output Current | 2.4A | 1.25A | 0.63A | 2A | 1.25A |
| Efficiency | 82% | 88% | 89% | 88% | 89% |
| General Specification | | | | | |
| Approval | cURus - Class 2 | | | | |
| Isolation Voltage | 3000VAC / 4242VDC | | | | |
| Isolation Resistance | 100MΩ @ 500VDC | | | | |
| Ambient Temperature | -20 to +70°C | | | | |
| Derating | (50 to 70°C) 2.5%/°C | | | | |
| Storage Temperature | -40 to +85°C | | | | |
| Relative Humidity | 20 to 90% RH | | | | |
| Cooling | Free air convection | | | | |
| Dimensions | 90 x 18 x 58mm | | | 90 x 35 x 58mm | |
| Weight | 78g | | | 120g | |
| Case Material | Plastic | | | | |
| Input Specifications | | | | | |
| Rated Input Voltage | 85-264VAC or 120-370VDC | | | | |
| Line Frequency | 47 to 63Hz | | | | |
| Inrush Current (115/230VAC) | 25/45A | | | | |
| Output Specifications | | | | | |
| Output Voltage Accuracy | ±1% | | | | |
| Minimum Load | 0% | | | | |
| Line Regulation | ±1% | | | | |
| Load Regulation | ±1% | | | | |
| Turn On Time | 2000ms at full load | | | 500ms at full load | |
| Voltage Fall Time | 80ms | | | | |
| Voltage Rise Time | 80ms | | | | |
| Hold Up Time (115/230VAC) | 30/12ms | | | | |
| Temperature Coefficient | ±0.03%/°C (0-50°C) RH non-condensing | | | | |
| Ripple & Noise | 80mVp-p | 120mVp-p | 150mVp-p | 120mVp-p | 150mVp-p |
| Voltage Trim Range | 4.5-5.5VDC | 10.8-13.8VDC | 21.6-29VDC | 10.8-13.8VDC | 21.6-29VDC |
| DC ON Indicator (Green LED) | 3.5-4.5VDC | | | | |
| DC LOW Indicator (Red LED) | 3.5-4.5VDC | | | | |
| Control & Protection | | | | | |
| Rated Overload Protection | 110 to 145% | | | 105 to 160% | |
| Over Voltage Protection | 5.75-6.5VDC | 14.2-16.2VDC | 30-36VDC | 15-18VDC | 30-36VDC |
| Output Short Circuit | Hiccup Mode | | | | |
| Connector Size Range | AWG 24-12 (0.2-2.5mm ²) flexible / solid cable | | | | |

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Technical Specification

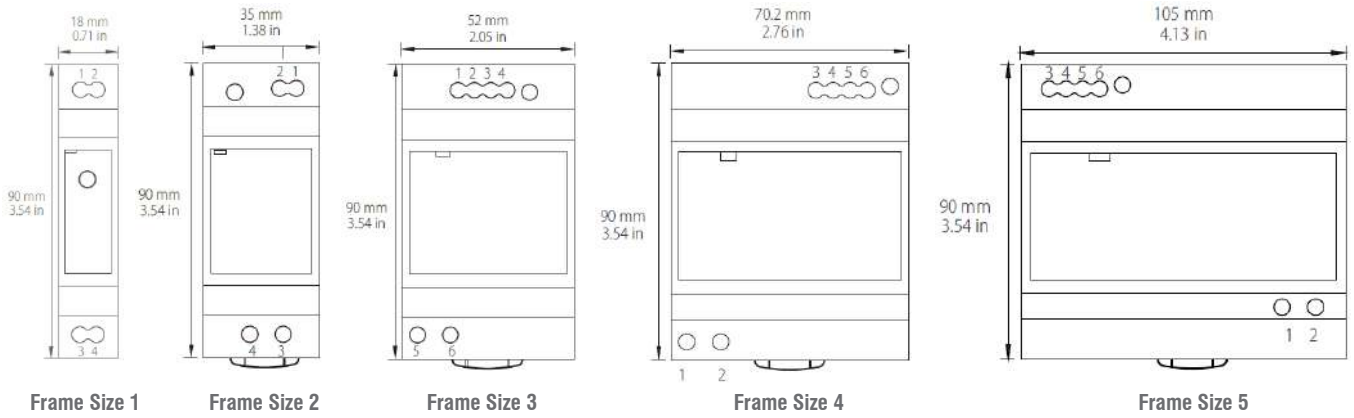
| Model | SPS-1-060-24DC | SPS-1-092-24DC | SPS-1-150-24DC* |
|---------------------------------|--|--------------------|---------------------------------|
| Frame Size | 3 | 4 | 5 |
| Input Voltage | 85-264VAC or 120-370VDC | | |
| Output Wattage | 60W | 92W | 150W (230VAC) / 127.4W (115VAC) |
| Output Voltage | 24VDC | | |
| Output Current | 2.5A | 3.83A | 6.25A (230VAC) / 5.3A (115VAC) |
| Efficiency | 90% | | |
| General Specification | | | |
| Approval | cURus - Class 2 | | cURus |
| Isolation Voltage | 3000VAC / 4242VDC | | |
| Isolation Resistance | 100MΩ @ 500VDC | | |
| Ambient Temperature | -20 to +70°C | | |
| Derating | (50 to 70°C) 2.5%/°C | | |
| Storage Temperature | -40 to +85°C | | |
| Relative Humidity | 20 to 90% RH | | |
| Cooling | Free air convection | | |
| Dimensions | 90 x 52 x 58mm | 90 x 70.2 x 58.4mm | 90 x 105 x 58.4mm |
| Weight | 190g | 270g | 320g |
| Case Material | Plastic | | |
| Input Specifications | | | |
| Rated Input Voltage | 85-264VAC or 120-370VDC | | |
| Line Frequency | 47 to 63Hz | | |
| Inrush Current (115/230VAC) | 30/60A | 35/70A | 60A (240VAC) |
| Output Specifications | | | |
| Output Voltage Accuracy | ±1% | | |
| Minimum Load | 0% | | |
| Line Regulation | ±1% | | |
| Load Regulation | ±1% | | |
| Turn On Time | 500ms at full load | | |
| Voltage Fall Time | 80ms | | |
| Voltage Rise Time | 80ms | | |
| Hold Up Time (115/230VAC) | 12/30ms | 30ms (100-240VAC) | |
| Temperature Coefficient | ±0.03%/°C (0-50°C) RH non-condensing | | |
| Ripple & Noise | 150mVp-p | | |
| Voltage Trim Range | 21.6-29VDC | 24-25.5VDC | 21.6-29VDC |
| DC ON Indicator (Green LED) | 3.5-4.5VDC | | |
| DC LOW Indicator (Red LED) | 3.5-4.5VDC | | |
| Control & Protection | | | |
| Rated Overload Protection | 105 to 160% | 102 to 110% | 105 to 135% |
| Over Voltage Protection | 30-36VDC | | |
| Output Short Circuit | Hiccup Mode | | |
| Connector Size Range | AWG 24-12 (0.2-2.5mm ²) flexible / solid cable | | |

* Not Class 2

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Dimensions (mm)



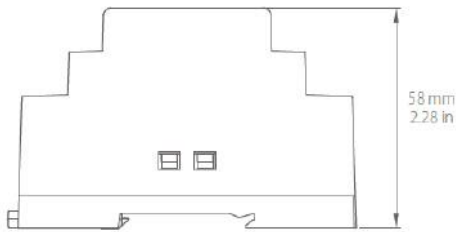
Frame Size 1

Frame Size 2

Frame Size 3

Frame Size 4

Frame Size 5



Side Profile (All Models)

Construction

Easy, safe and secure snap-on, snap-off
DIN Rail mounting (TS25/7.5 or TS35/15)

Installation

Ventilation / Cooling

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

Terminal Size Range

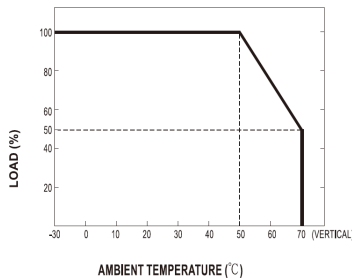
2 Solid: 0.2-2.0mm (AWG24-14) - Use copper conductors only

Terminal Assignment

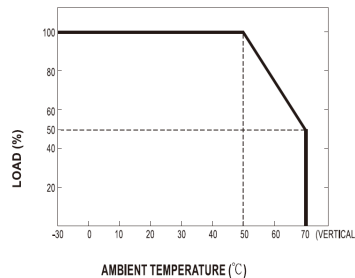
| | | Frame 1 | Frame 2 | Frame 3 | Frame 4 | Frame 5 | Description |
|--------|---|---------|---------|---------|---------|---------|---|
| Output | + | 1 | 1 | 1, 2 | 5, 6 | 5, 6 | Positive Output Terminal |
| | - | 2 | 2 | 3, 4 | 3, 4 | 3, 4 | Negative Output Terminal |
| Input | N | 3 | 4 | 6 | 2 | 1 | Input (phase) No Polarity at DC Input |
| | L | 4 | 3 | 5 | 1 | 2 | Input (neutral) No Polarity at DC Input |

Derating Curves

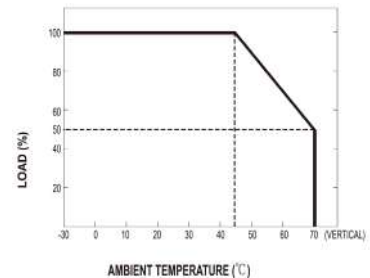
Deduction Curve & Temperature - Frame 1



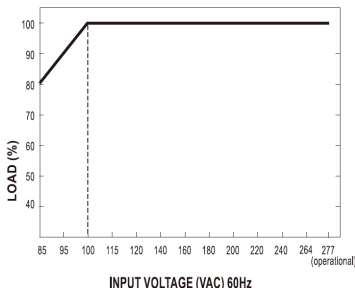
Deduction Curve & Temperature - Frame 2



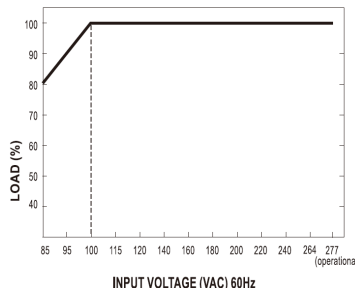
Deduction Curve & Temperature - Frame 3



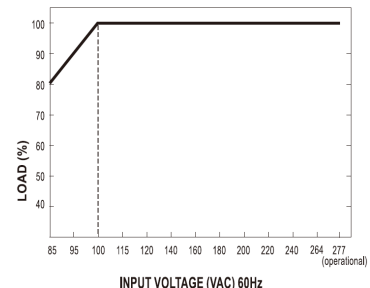
Minus Output & Input Voltage Curve - Frame 1



Minus Output & Input Voltage Curve - Frame 2



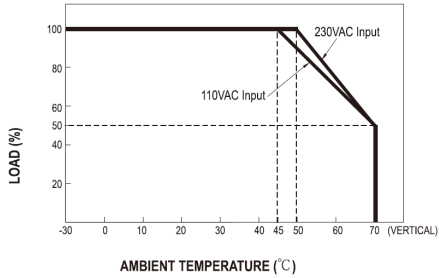
Minus Output & Input Voltage Curve - Frame 3



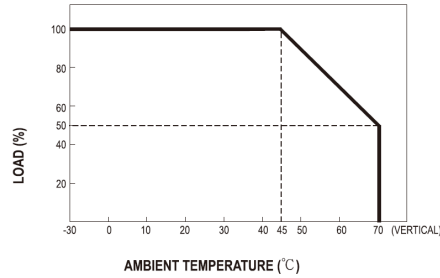
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Derating Curves (continued)

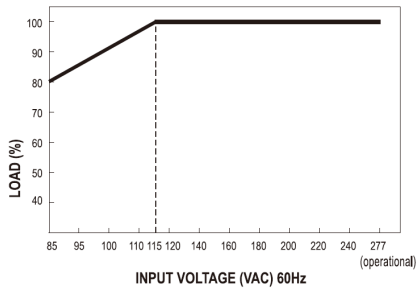
Deduction Curve & Temperature - Frame 4



Deduction Curve & Temperature - Frame 5



Minus Output & Input Voltage Curve - Frame 4



Minus Output & Input Voltage Curve - Frame 5

