

SDP™ Low Power DIN Rail Series

The compact, lightweight DIN Rail power supplies come in output voltages from 5 to 48 VDC and power ratings of up to 100 Watts. These extra small, efficient units are designed specifically for the industrial environment. Each unit is rated from -10°C to 70°C, with no derating necessary until above 60°C.

Many extra “industrial” features are standard for the SDP™ PowerBoost™ overload circuitry can start up industrial loads (i.e. motors, relays, solenoids and DC-DC converters), that can cause ordinary power supplies to foldback or shutdown. Each unit contains a DC indicator and front panel adjustment potentiometer. With the Sola SDP™ series, you can count on a high grade design.



UL 508 Listed
IND. CONT. EQ.
E61379



UL 60950
E137632
CUL/CSA-C22.2
No. 234-M90



EMC and
Low Volt.
Directive

Features

- Ultra slim 15W footprint
- No tools required for mounting
- Adjustable output
- PowerBoost™ industrial overload design
- Overvoltage, short circuit protection
- NEC Class 2 current limited
- Continuous short circuit protection
- Low output noise
- Screw terminal connections
- Three year warranty

Related Products

- SDN™ Series
- SCP Series
- SCL Series

Applications

- Industrial control
- Process control
- Machine control
- Building Automation
- Instrumentation

Selection Table

| Catalog Number | DC Output Voltage | Output Current | Ripple / Noise | Size (H x W x D) |
|----------------|-------------------|----------------|----------------|---|
| SDP5-5-100T | 5 - 6 V | 5 A | <50 mVpp | 2.95 in x 1.77 in x 3.58 in (75 mm x 45 mm x 91 mm) |
| SDP2-12-100T | 10 - 12 V | 3 - 2.5 A | | |
| SDP3-15-100T | 12 - 15 V | 4.2 - 3.4 A | | |
| SDP1-48-100T | 48 - 56 V | 1 A | | |
| SDP06-24-100T | 24-28 VDC | 0.6 A | | 2.95 in x 0.9 in x 3.8 in (75mm x 22.8 mm x 96.7 mm) |
| SDP1-24-100T | | 1.3 A | | 2.95 in x 1.77 in x 3.58 in (75 mm x 45 mm x 91 mm) |
| SDP2-24-100T | | 2.1 A | | 2.95 in x 2.85 in x 3.8 in (75 mm x 72.5 mm x 96.7 mm) |
| SDP4-24-100LT | | 3.8 A | | |
| SDP4-24-100RT* | | 4.2 A | | |

* NEC Class 1

SDP™ Series Specifications (24 V models)

| Description | Catalog Number | | | | |
|---|---|--|---|--------------------------------------|------------------|
| | SDP06-24-100T | SDP1-24-100T | SDP2-24-100T | SDP4-24-100RT | SDP4-24-100LT |
| Input | | | | | |
| Input Voltage ³ | 85-264 VAC, 90-375 VDC | | | 85-132 / 176-264 VAC 210-375 VDC | |
| Input Frequency | 47-63 Hz | | | | |
| Input Current | 0.4 A / 0.25 A | 0.7 A / 0.4 A | 1.1 A / 0.7 A | 2.2 A / 1.2 A | 1.8 A / 1.0 A |
| External Fusing | Not required. Unit provides internal fuse (T3A, not accessible) | | | | |
| Hold-Up Time | > 25 ms | | | | |
| Efficiency | > 80% typ. | > 83% typ. | > 86% typ. | > 88% typ. | |
| Losses | < 3.75 W typ. | < 6.1 W typ. | < 8.1 W typ. | < 12 W typ. | |
| Output | | | | | |
| Output Voltage | 24 V (22.5 - 28.5 VDC Adj.) | | | | |
| Voltage Regulation | Static 0.5% V_{out} dynamic + 2% V_{out} overall | | | | |
| Ripple/Noise ¹ | < 50 mVpp | | | | |
| Overvoltage Protection (OVP) | > 30 VDC, but < 33 VDC, auto recovery | | | | |
| Output Noise Suppression | Radiated EMI values below EN61000-6-2 | | | | |
| Rated Continuous Loading | 0.63 A @ 24 VAC / 0.54 A @ 28 VAC | 1.3 A @ 24 VDC / 1.1 A @ 28 VDC | 2.1 A @ 24 VDC / 1.8 A @ 28 VDC | 4.2 A @ 24.5 VDC / 3.6 A @ 28 VDC | 3.8 A @ 24.5 VDC |
| Overload Behavior | Continuous operation at overload/short-circuit: up to 1.5 x Nominal Current Continuous | | | | |
| Protection | Unit is continuously protected against short-circuit, overload and open-circuit. | | | | |
| Power Back Immunity | 35 V | | | | |
| Installation | | | | | |
| Status Indicators | Green LED on, when V_{out} "OK". | | | | |
| Case & Mounting | Molded plastic housing using UL 94 approved flameproof material rating 94V-2. Simple snap-on to DIN TS35/7.5 or TS35/15 rail system. | | | | |
| Dimensions | | | | | |
| (H x W x D) (in/mm) | 2.95 in x 0.9 in x 3.8 in (75 mm x 22.8 mm x 96.7 mm) | 2.95 in x 1.77 in x 3.58 in (75 mm x 45 mm x 91 mm) | 2.95 in x 2.85 in x 3.8 in (75 mm x 72.5 mm x 96.7 mm) | | |
| Weight | 0.35 lbs (150 g) | 0.5 lbs (240 g) | 0.7 lbs (320 g) | | |
| Mounting Orientation | Standard: Vertical; Optional: Horizontal or On Top (Contact Technical Services). | | | | |
| Ventilation/Cooling •Free space for cooling | Normal convection, no fan required; Above/below: 25 mm recommended. | | | | |
| Connection •Connector size range | Input: screw terminals, connector size range: 20-12AWG (1.5 - 6 mm ²) for solid or stranded conductors. | | | | |
| General | | | | | |
| Temperature | Storage: -25°C...+85°C Operation: -10°-60°C full power with linear derating to half power from 60°C to 70°C. (Convection cooling, no forced air required). | | | | |
| MTBF | > 500,000 hours according to Telcordia/Bellcore Document SR-332, Issue 1. | | | | |
| Humidity | Up to 90% RH, noncondensing; IEC 68-2-2, 68-2-3 | | | | |
| Electromagnetic Emissions (EME) | EN61000-6-3 (Includes EN61000-6-4) Class B (EN 55022) incl. Annex A | | | | |
| Electromagnetic Immunity (EMI) | EN61000-6-2 (Includes EN61000-6-1) (EN55024) Criterion A: no derogation of performance | | | | |
| Safe Low Voltage | SELV (acc. EN60950) | | | | |
| Protection Class/Voltage | IP20 (IEC529), Protection Class 1 (IEC536) | | | | |
| Warranty | 3 years | | | | |
| Safety | | | | | |
| CB Scheme, EN60950, EN50178, EN60204, EN60079-15 (Class 1, Zone 2 Hazardous Locations, Temp Class T3), UL508 Listed, cULus, UL 60950, cURus, CE (LVD 73/23 & 93/68/EEC). (EMC 89/336 & 93/68/EEC). EN61000-3-2, NEC Class 2 power supply acc. To NFPA 70 art. 725-41 (a)(2). ² | | | | | |

Notes:

¹ Ripple/noise is stated as typical values when measured with a 20 MHz, bandwidth scope and 50 Ohm resistor.

² For models less than 100W.

³ Not UL listed for DC input.

SDP™ Series Specifications (Other Voltages)

| Description | Catalog Number | | | |
|--|---|--------------------------------|-------------------------------------|-------------------------------------|
| | SDP5-5-100T | SDP2-12-100T | SDP3-15-100T | SDP1-48-100T |
| Input | | | | |
| Input Voltage ³ | 85-264 VAC, 90-375 VDC | | | |
| Input Frequency | 47-63 Hz | | | |
| Input Current | 0.6 A @ 102 VAC; 0.33 A @ 196 VAC | | 1.0 A @ 102 VAC; 0.6 A @ 196 VAC | |
| External Fusing | Not required. Unit provides internal fuse (T3A, not accessible) | | | |
| Hold-Up Time | > 25 ms | | | |
| Efficiency | > 80% typ | | > 86% typ. | |
| Losses | 7.5 W typ. | | 8.1 W typ. | |
| Output | | | | |
| Output Voltage | 5 - 5.5 VDC (5 - 6 min adj.) | 12 VDC (9.9 - 12.1 min adj.) | 15 VDC (11.9 - 15.1 min adj.) | 48 VDC (48 - 56 min adj.) |
| Voltage Regulation | < 2% Dynamic; < 0.5% Static | | | |
| Ripple/Noise ¹ | < 50 mVpp | | | |
| Overvoltage Protection (OVP) | > 6.7 VDC | > 18 VDC | > 20 VDC | > 60 VDC |
| Output Noise Suppression | Radiated EMI values below EN61000-6-2 | | | |
| Rated Continuous Loading | $I_{out} = 5 A @ V_{out} = 5.1V$ | 3 A @ 10 VDC 2.5 A @ 12 VDC | 4.2 A @ 12 VDC 3.4 A @ 15 VDC | Up to 1.05 A @ 48 V 0.9 A @ 56 V |
| Overload Behavior | Continuous operation at overload/short-circuit: up to 1.5 x Nominal Current Continuous. | | | |
| Protection | Unit is continuously protected against short-circuit, overload and open-circuit. | | | |
| Power Back Immunity | 10 V | 22 V | | 80 V |
| Installation | | | | |
| Status Indicators | Green LED on, when V_{out} "OK". | | | |
| Case & Mounting | Molded plastic housing using UL 94 approved flameproof material rating 94V-2. Simple snap-on to DIN TS35/7.5 or TS35/15 rail system. | | | |
| Dimensions | | | | |
| Dimensions (H x W x D) (in/mm) | 2.95 in x 1.77 in. x 3.58 in (75 mm x 45 mm x 91 mm) | | | |
| Weight | 0.5 lbs (240 g) | | | |
| Mounting Orientation | Standard: Vertical; Optional: Horizontal or On Top (Contact Technical Services). | | | |
| Ventilation/Cooling •Free space for cooling | Normal convection, no fan required; Above/below: 25 mm recommended. | | | |
| Connection •Connector size range | Input: screw terminals, connector size range: 20-12 AWG (1.5 - 6 mm ²) for solid or stranded conductors. | | | |
| General | | | | |
| Temperature | Storage: -25°C...+85°C Operation: -10°-60°C full power with linear derating to half power from 60°C to 70°C. (Convection cooling, no forced air required). | | | |
| MTBF | > 500,000 hours according to Telcordia/Bellcore Document SR-332, Issue 1. | | | |
| Humidity | Up to 90% RH, noncondensing; IEC 68-2-2, 68-2-3 | | | |
| Electromagnetic Emissions (EME) | EN61000-6-3 (includes EN61000-6-4) Class B (EN55022) incl. Annex A | | | |
| Electromagnetic Immunity (EMI) | EN61000-6-2 (Includes EN61000-6-1) (EN55024) Criterion A: no degradation of performance | | | |
| Safe Low Voltage | SELV (acc. EN60950) | | | |
| Protection Class/Voltage | IP20 (IEC529), Protection Class 1 (IEC536) | | | |
| Warranty | 3 years | | | |
| Safety | | | | |
| CB Scheme, EN60950, EN50178, EN60204, EN60079-15 (Class 1, Zone 2 Hazardous Locations, Temp Class T3), UL508 Listed, cULus, UL 60950, cURus, CE (LVD 73/23 & 93/68/EEC), (EMC 89/336 & 93/68/EEC). EN61000-3-2, NEC Class 2 power supply acc. To NFPA 70 art. 725-41 (a)(2). | | | | |

Notes:

¹ Ripple/noise is stated as typical values when measured with a 20 MHz, bandwidth scope and 50 Ohm resistor.

² Not to exceed 30 watts total.

³ Not UL listed for DC input.