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 -10ºC to 70ºC, with no derating necessary until above 60ºC.

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.
E6I379

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

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		
SDP4-24-100LT		3.8 A		2.95 in x 2.85 in x 3.8 in (75 mm x 72.5 mm x 96.7 mm)
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	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	
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.

SDP™ Series Specifications (Other Voltages)

Description	Catalog Number			
	SDP5-5-100T	SDP2-12-100T	SDP3-15-100T	SDP1-48-100T
Input				
Input Voltage	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	<1.0 A @ 100 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.	90% 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 platic 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.