SDR120 Series

120 W AC/DC Switching Power Supply – DIN rail

CoolPower Solutions

- High efficiency 91% and low power dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 150% peak load capability
- Built-in active PFC function, PF>0.93
- UL 508 (industrial control equipment) approved
- Built-in DC OK relay contact



Electrical specifications

Model No.		SDR120-12	SDR120-24	SDR120-48
Max Output Wattage (W)		120W (Peak 180W)	120W (Peak 180W)	120W (Peak 180W)
Input	Voltage	88 ~ 264VAC or 124-370 VDC		
	Frequency (Hz)	47-63 Hz		
	Power Factor (typ)	0,93 / 230VAC		
	Current (typ)	1,4 A (115 VAC) / 0,96 A (230 VAC)		
	Inrush Current (typ)	Cold start 35 A (115 VAC) / 70 A (230 VAC)		
	Leakage Current	<1 mA /240 VAC		
Output	Voltage (V.DC.)	12V	24V	48V
	Voltage Adjustable Range	12 - 14V	24 - 28V	48 - 55V
	Voltage Tolerance	±1%	±1%	±1%
	Rated Current	10 A (Peak 15A)	5 A (Peak 7,5A)	2,5 A (Peak 3,75A)
	Line Regulation	±0,5%	±0,5%	±0,5%
	Load Regulation	±1%	±1%	±1%
	Ripple % Noise (max)	$100mV_{p-p}$	$100mV_{p-p}$	$120mV_{p-p}$
	Efficiency (typ)	89%	91%	90,5%
	Hold-up Time	20 ms / 230 VAC		
	Setup, Rise Time	1500 ms, 60 ms / 230 VAC		
Protection	Over Load	Normally works within 110 ~ 150% rated output power for more than 3s and then shut down o/p voltage		
		>150% rated power, constant current limiting with auto-recovery within 3 seconds and shut down o/p voltage after 3 seconds		
	Over Voltage	14 ~ 17V	29 ~ 33V	56 ~ 65V
		Protection type : Shut down o/p voltage, re-power on to recover		
	Over Temperature	95±5°C (TSW) detect on heatsink of power switch		
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
Function	DC OK Relay contact	Ratings max. 60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load		
Environment	Operating Temperature	-25°C…+70°C (with derating)		
	Storage Temperature	-40°C…+85°C, 10 – 95% RH		
	Temperature coefficient	±0.03%/°C (0…50°C)		
	Humidity	20 - 95% RH		
	MTBF	289 900 h @ 25°C (MIL-HDBK-217F)		
Physical	Dimension (L x W x H)	40 x 113,5 x 125,2 mm		
	Weight	670 g		
	Cooling Method	Free air convection		
Safety	Safety standards	UL508, TUV EN60950-1 approved;(meet EN60204-1)		
	Withstand Voltage	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC		
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH		
	EMC Emission	Compliance to EN55011, EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3		
	EMC Immunity	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024,EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A		

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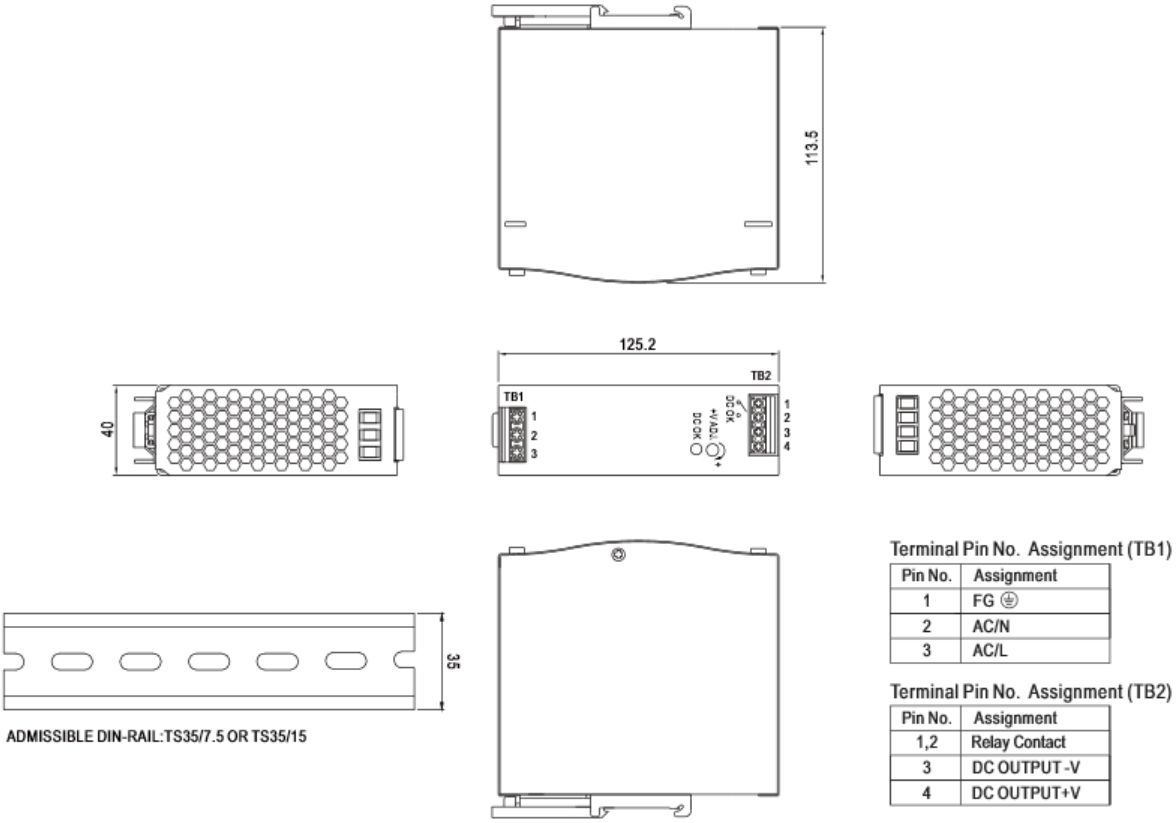
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Mechanical Specifications



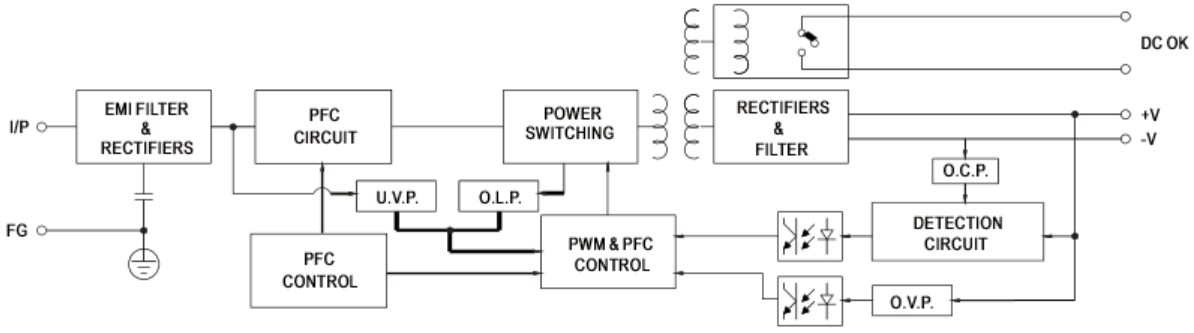
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG ⏚
2	AC/N
3	AC/L

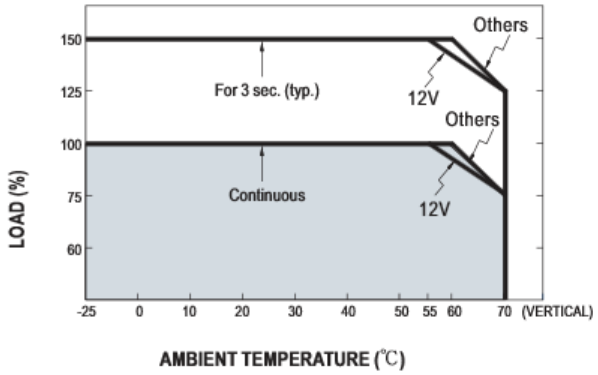
Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	Relay Contact
3	DC OUTPUT -V
4	DC OUTPUT+V

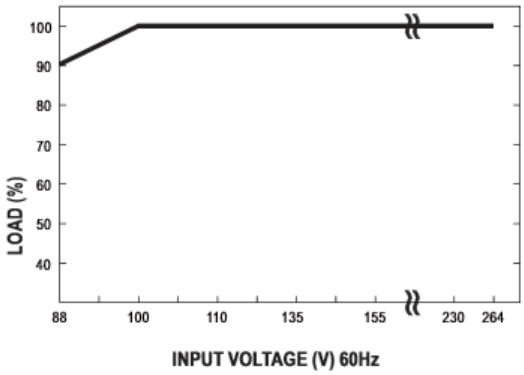
Block Diagramm



Derating Curve



Output Derating vs Input Voltage



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