

## SDR-120-48

120W Single Output Industrial DIN RAIL Power Supply



### Features

- High efficiency 91% and low power dissipation
- 150% peak load capability
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty



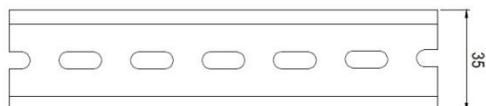
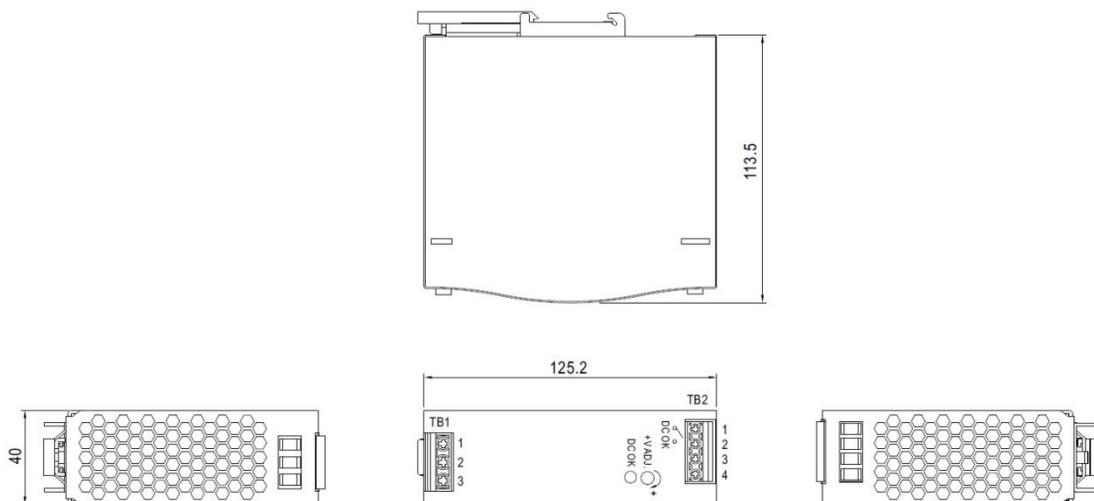
### Specification

MODEL	SDR-120-48	
OUTPUT	DC VOLTAGE	48V
	RATED CURRENT	2.5A
	CURRENT RANGE	0 ~ 2.5A
	RATED POWER	120W
	PEAK CURRENT	3.75A
	PEAK POWER	Note.6 180W (3 sec.)
	RIPPLE & NOISE (max.)	Note.2 120mVp-p
	VOLTAGE ADJ. RANGE	48 ~ 55V
	VOLTAGE TOLERANCE	Note.3 ±1.0%
	LINE REGULATION	±0.5%
	LOAD REGULATION	±1.0%
	SETUP, RISE TIME	1500ms, 60ms/230VAC 3000ms, 60ms/115VAC at full load
	HOLD UP TIME (Typ.)	20ms/230VAC 20ms/115VAC at full load
INPUT	VOLTAGE RANGE	Note.7 88 ~ 264VAC 124 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz
	POWER FACTOR (Typ.)	0.93/230VAC 0.96/115VAC at full load
	EFFICIENCY (Typ.)	90.5%
	AC CURRENT (Typ.)	1.4A/115VAC 0.7A/230VAC
	INRUSH CURRENT (Typ.)	35A/115VAC 70A/230VAC
LEAKAGE CURRENT	<1mA / 240VAC	
PROTECTION	OVERLOAD	Normally works within 110 ~ 150% rated output power for more than 3 seconds 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	56 ~ 65V Protection type : Shut down o/p voltage, re-power on to recover
	OVER TEMPERATURE	95°C ±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 REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load

<b>MODEL</b>	<b>SDR-120-48</b>	
<b>ENVIRONMENT</b>	<b>WORKING TEMP.</b>	-25 ~ +70°C (Refer to "Derating Curve")
	<b>WORKING HUMIDITY</b>	20 ~ 95% RH non-condensing
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +85°C, 10 ~ 95% RH
	<b>TEMP. COEFFICIENT</b>	±0.03%/°C (0 ~ 50°C)
	<b>VIBRATION</b>	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6
<b>SAFETY &amp; EMC</b> (Note 4)	<b>SAFETY STANDARDS</b>	UL508, TUV EN60950-1 approved;(meet EN60204-1)
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC
	<b>ISOLATION RESISTANCE</b>	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH
	<b>EMC EMISSION</b>	Compliance to EN55011, EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3
	<b>EMC IMMUNITY</b>	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A, SEMI F47, GL approved
<b>OTHERS</b>	<b>MTBF</b>	289.9K hrs min. MIL-HDBK-217F (25°C)
	<b>DIMENSION</b>	40*125.2*113.5mm (W*H*D)
	<b>PACKING</b>	0.67Kg; 20pcs/14.4Kg/1.16CUFT
<b>NOTE</b>	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.</li> <li>3 seconds max., please refer to peak loading curves.</li> <li>Derating may be needed under low input voltage. Please check the derating curve for more details.</li> </ol>	

## Mechanical Specification

Case No.992A Unit:mm



ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

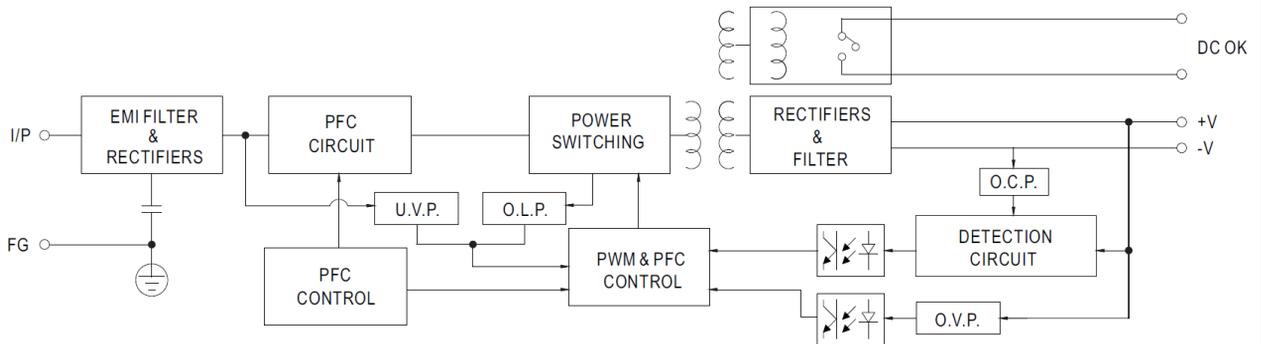
### Terminal Pin No. Assignment (TB1)

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

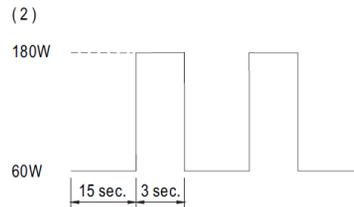
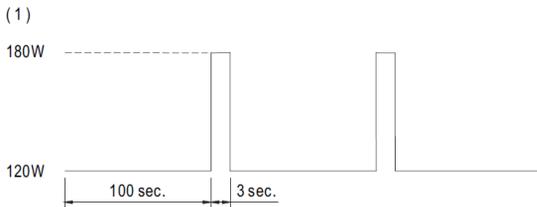
## Block Diagram



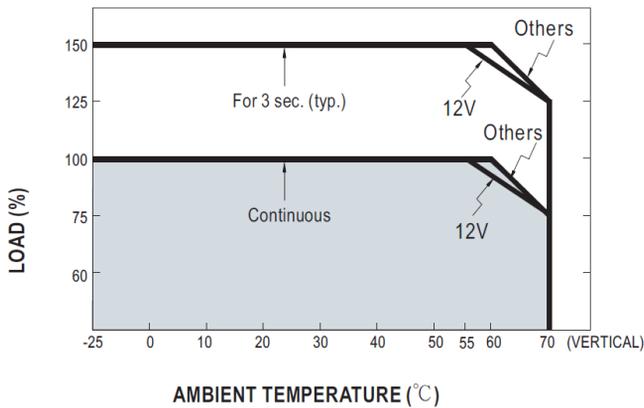
## DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

## Peak Loading



## Derating Curve



## Output derating VS input voltage

