


Compact 120 Watt, 48 Volt Single Output, DIN RAIL Power Supply

UNIT CODE	DESCRIPTION
C-SDR 120-48	Compact 120 Watt, 48 Volt, Single Output, DIN RAIL Power Supply with PFC (GL and SEMI F47 approved)

SPECIFICATIONS		
Input	Output	Approvals
Universal AC Input 88 ~ 264VAC	+48VDC @ 0 ~ 2.5A	

Features at a Glance:

- High efficiency 91% and high reliability
- Environmentally friendly, compact and quiet
- Slim (40mm), Installed on DIN rail TS35 / 7.5 or 15
- Working temperature range (-25 °C ~ +70 °C)
- Certificates: UL, CUL, TUV, CE, CB, SEMI F47, GL
- Built-in: active PFC function (PF>0.93) ; constant current Limiting; DC OK relay contact and LED indicator for power on
- Protections: Short circuit, Overload, Over voltage and Over temperature
- Complies with GL and SEMI F47 for marine and semi-conductor use
- Fan-less cooling by natural (free air) convection
- Safety & EMC: UL508 (industrial control equip), TUV EN60950-1, EN61000-3-2 for harmonic current and (EN50082-2) industrial immunity
- MTBF hours: 289.9K hr min. MIL-HDBK-217F (25 °C)
- Case: 992A
- Weight: 1.47 Lbs. (0.67 Kgs)
- Dimensions: 1.57" W x 4.9" H x 4.46" D
40x 125.2x 113.5mm
- 3 year warranty



The Compact C-SDR 120 Series are AC/DC isolation Class I power units for low to medium wattage DIN rail applications that need high performance in a small form-factor. With active PFC and 91% efficiency plus protections against short circuits, overloads, over voltage and over temperature C-SDR 120 is ideal for a wide range of applications including factory automation and electro-mechanical and complies with GL and SEMI F47 for marine and semi-conductor fabrication equipment.

With UL 508 (industrial control equipment) approval and a wide operating temperature range the C-SDR-120 series is reliable in most demanding environments.

Pricing	1-9	\$ 139.00
	10+	\$ 115.00
	25+	\$ 99.00

[Release & Application Notes](#)

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■ Features :

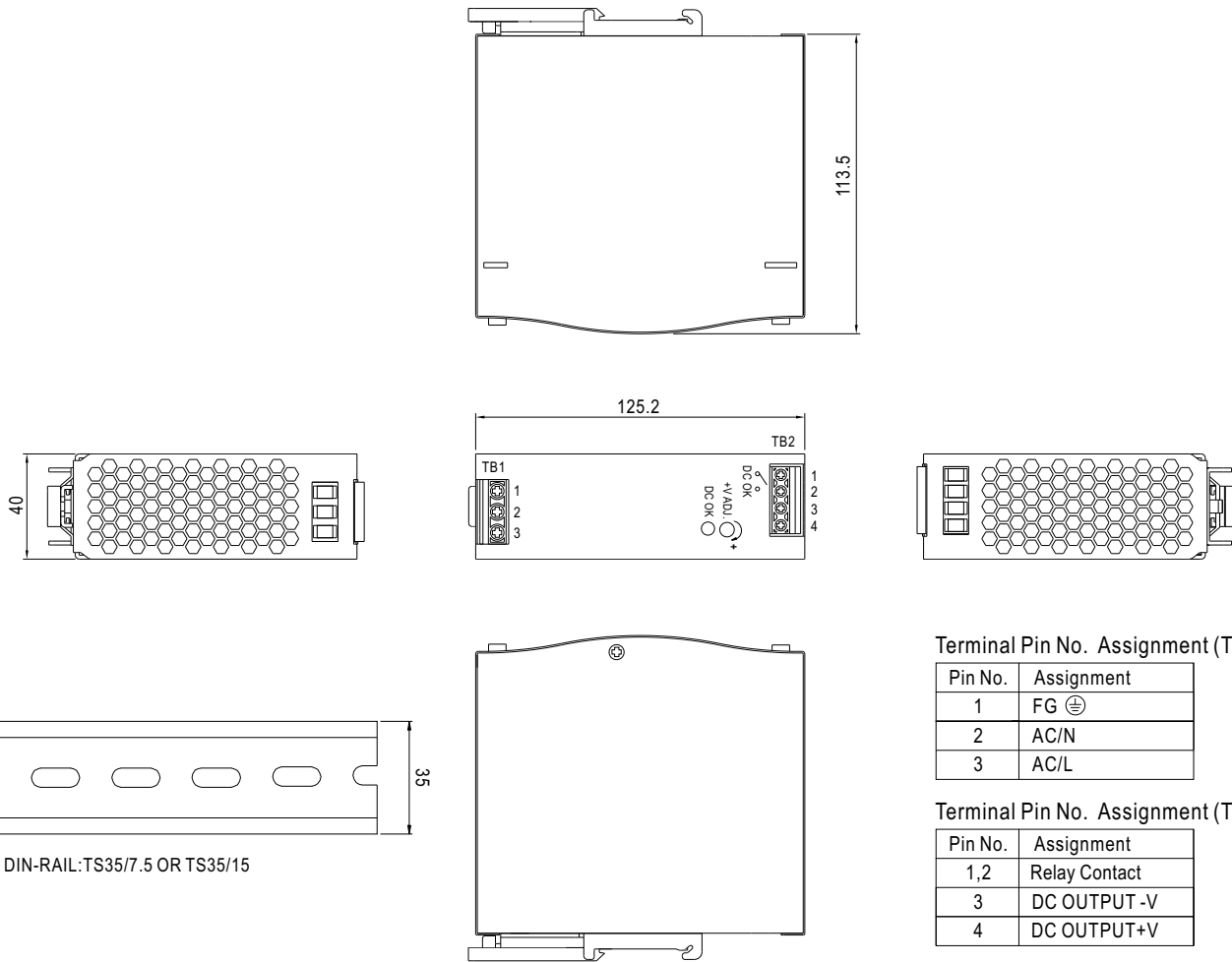
- High efficiency 91% and low power dissipation
- 150% peak load capability
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) 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-120-12	SDR-120-24	SDR-120-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	10A	5A	2.5A
	CURRENT RANGE	0 ~ 10A	0 ~ 5A	0 ~ 2.5A
	RATED POWER	120W	120W	120W
	PEAK CURRENT	15A	7.5A	3.75A
	PEAK POWER Note.6	180W (3 sec.)		
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	120mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 14V	24 ~ 28V	48 ~ 55V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±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.)	89%	91%	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	14 ~ 17V	29 ~ 33V	56 ~ 65V
	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		
ENVIRONMENT	WORKING TEMP.	-25 ~ +70°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, TUV EN60950-1 approved		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC 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 EN55022 (CISPR22) Class B, EN61000-3-2,-3		
OTHERS	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, SEMI F47, GL approved		
	MTBF	289.9Khrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	40*125.2*113.5mm (W*H*D)		
	PACKING	0.67Kg; 20pcs/14.4Kg/1.16CUFT		
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. 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. 5. 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. 6. 3 seconds max., please refer to peak loading curves. 7. Derating may be needed under low input voltage. Please check the derating curve for more details.			

■ Mechanical Specification

Case No.992A Unit:mm



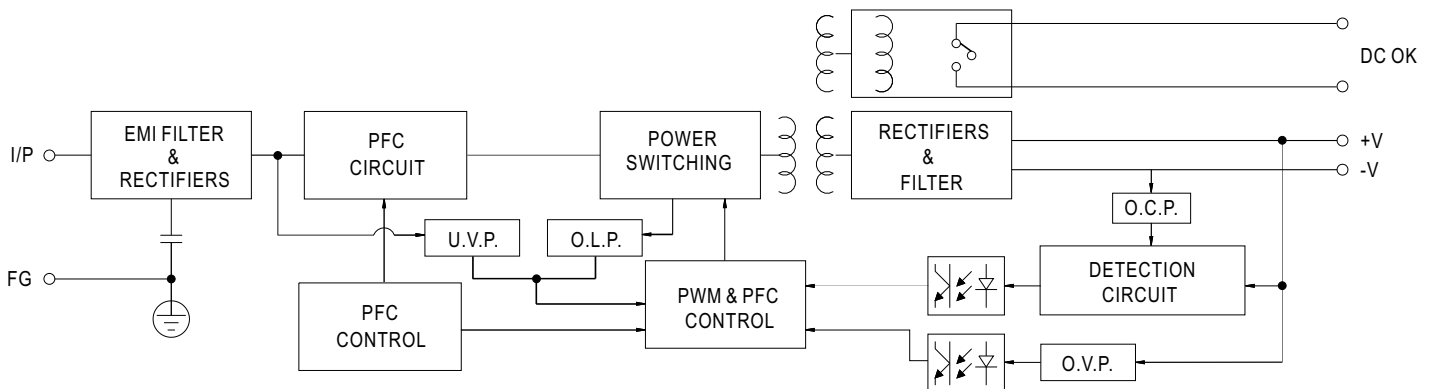
Terminal Pin No. Assignment (TB1)

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

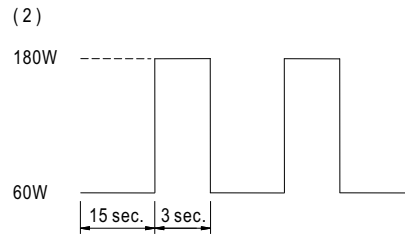
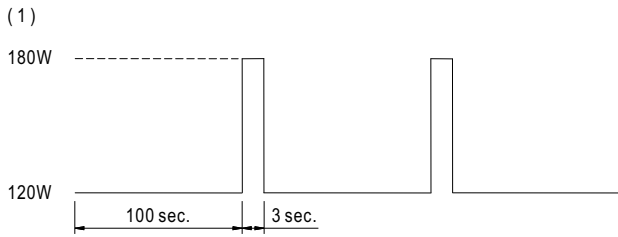
■ Block Diagram



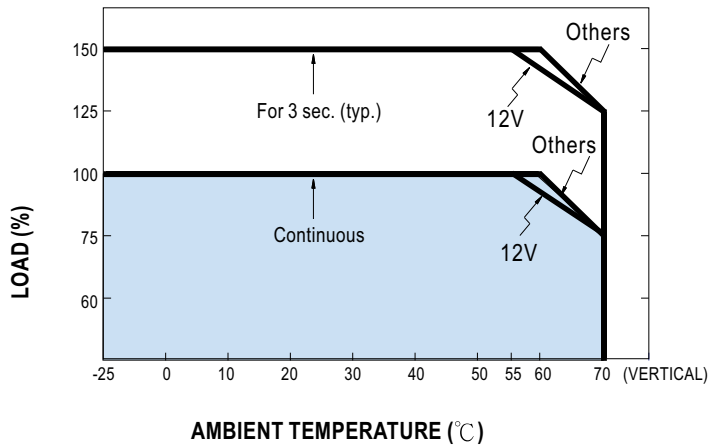
■ DC OK Relay Contact

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

