



PS-C480P Series With Parallel Function Specifications



PARALLEL

Features:

- High efficiency 94% and low power dissipation
- 150% peak load capability
- Built-in active PFC function, PF>0.94
- Protections: Short Circuit / Overload / Over Voltage / Over Temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- DIN rail mountable
- Current sharing up to 380W (1+7)
- 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

OUTPUT

Cat. No.

PS-C480P24

PS-C480P48

DC VOLTAGE
RATED CURRENT
CURRENT RANGE
RATED POWER
PEAK CURRENT
PEAK POWER

24V
20A
0 ~ 20A
480W
30A
720W (3 sec.)

48V
10A
0 ~ 10A
480W
15A

Ripple & NOISE (max)

100mVp-p

120mVp-p

3 seconds peak power max. and the average output power should not exceed the rate power

Ripple & noise are measured at 20MHz of bandwidth by using a 12 twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.

VOLTAGE ADJ. RANGE
VOLTAGE TOLERANCE

24 ~ 28V
±1.2%

48 ~ 55V
±1.0%

Tolerance: includes set up tolerance, line regulation and load regulation.

LINE REGULATION
LOAD REGULATION

±0.5%
±1.0%

±0.5%
±1.0%

SETUP, RISE, HOLD UP TIME

1500ms, 150ms, 14ms / 230VAC

3000ms, 150ms / 115VAC at full load

INPUT

VOLTAGE RANGE

90 ~ 264VAC 127 ~ 370VDC

Derating may be needed under low input voltages, please check the derating curve for more detail

FREQUENCY RANGE
POWER FACTOR (Typ.)
EFFICIENCY (Typ.)

47 ~ 63Hz
0.94 / 230VAC 0.99 / 115VAC at full load
94%

After 30 minutes of burn-in.

AC CURRENT (max.)
INRUSH CURRENT (Typ.)
LEAKAGE CURRENT

5A / 115VAC 2.5A / 230VAC
40A / 115VAC 80A / 230VAC
≤ 0.6 mA / 240VAC

PROTECTION

OVERLOAD

Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery
≥ 150% rated power, constant current limiting with auto-recovery within 2 seconds and shut down o/p voltage after 2 seconds

OVER VOLTAGE

29 ~ 33V

56 ~ 65V

OVER TEMPERATURE

Protection type: Shut down o/p voltage with auto-recovery on re-power on to recovery

105°C ± 5°C (TSW: detect on heat sink of power switch)

Protection type: Shut down o/p voltage, re-power automatically after temperature goes down

CURRENT SHARING

Please see function diagram

DC OK RELAY CONTACT RATINGS (max.)

60VDC / 0.3A; 30VDC / 1A; 30VAC / 0.5A resistive load

ENVIRONMENT

WORKING TEMP.

-25 ~ +70°C (Refer to output load derating curve)

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.

WORKING HUMIDITY
STORAGE TEMP., HUMIDITY
TEMP. COEFFICIENT
VIBRATION
MOUNTING

20 ~ 95% RH non-condensing

-40 ~ +85°C, 10 ~ 95% RH

±0.03% / °C (0 ~ 50°C)

10 ~ 500Hz, 2G 10min./1cycle, 60 min. each long X,Y, Z axes

Compliance to IEC60068-2-6

SAFETY & EMC

SAFETY STANDARDS

UL508

EN60950-1 compliant

WITHSTAND VOLTAGE
ISOLATION RESISTANCE
EMI CONDUCTION & RADIATION
HARMONIC CURRENT
EMS IMMUNITY

I/P-O/P: 3KVAC I/P-FG: 1.5KVAC O/P-FG: 0.5KVAC O/P-DC OK: 0.5KVAC

I/P-O/P, I/P-FG, O/P-FG: ≥100M Ohms/500VDC (25°C; 70% RH)

Compliance to EN55022 (CISPR22) Class B

Compliance to EN61000-3-2, -3

Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204; EN55024; EN61000-6-2; (EN50082-2), EN61204-3; heavy industry level; criteria A, SEMI F47, GL approved

The power supply is considered a component which will installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

OTHERS

MTBF

112.9K hrs min. MIL-HDBK-217K (25°C)

DIMENSION

85.5x125.2x128.5mm (WxHxD)

PACKING

1.6Kg; 8pcs / 13.8Kg / 0.9CUFT

All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.

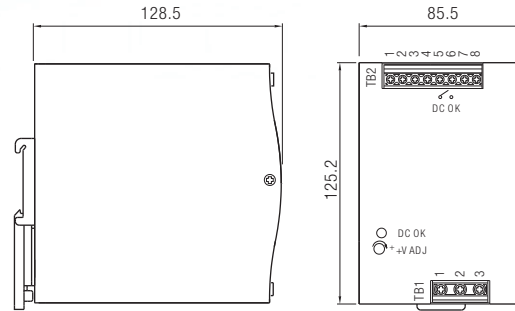
Mechanical Specification

Terminal Pin No. Assignment (TB1)

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

Terminal Pin No. Assignment (TB2)

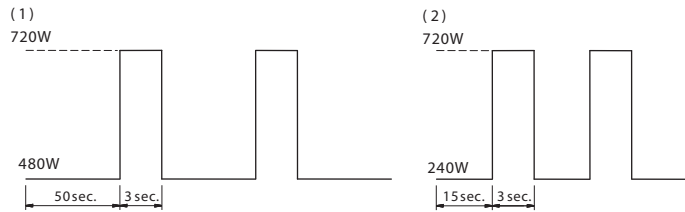
Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V
5,6	Relay Contact
7	P+ (current share)
8	P- (current share)



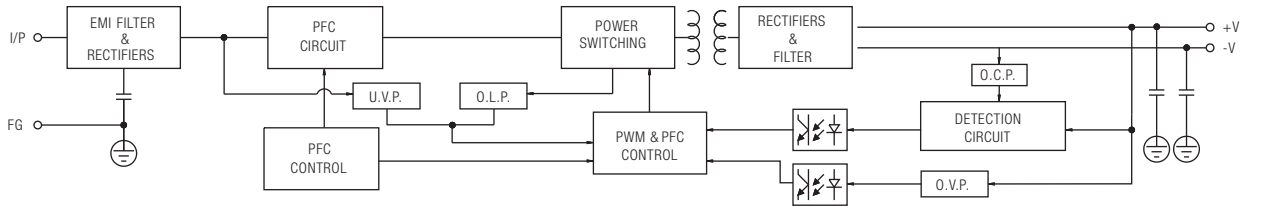
DC OK Relay Contact

Contact Close	When the output voltage reaches the adjusted output voltage.
Contact Open	When the output voltage drop below 90% output voltage.
Contact Ratings (max.)	30V/1A resistive load

Peak Loading



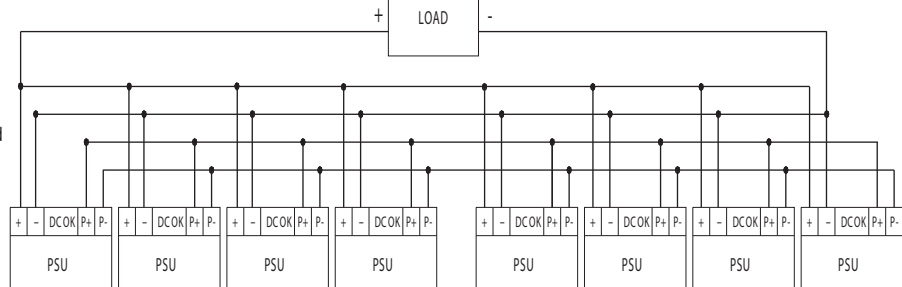
Block Diagram



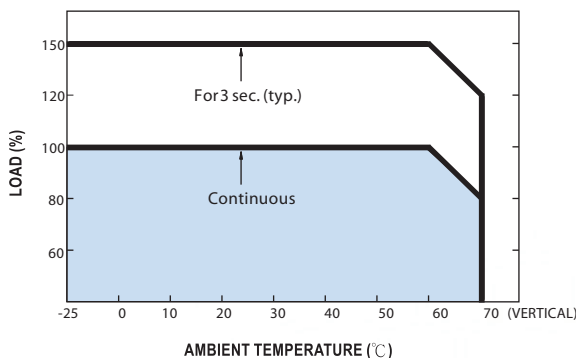
Function Diagram

1. Current sharing

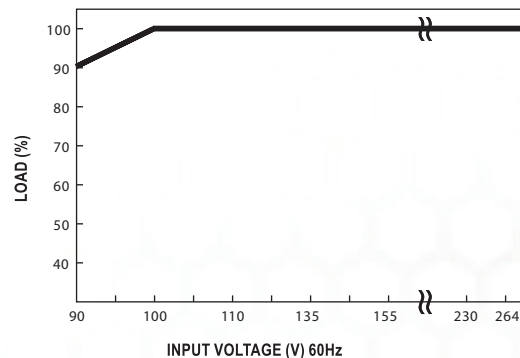
- (1) Parallel operation is available by connecting the units shown as below (P+, P- are connected mutually in parallel):
- (2) The voltage difference among each output should be minimized that less than 2% is required.
- (3) The total output current must not exceed the value determined by the following equation (Output current at parallel operation) = (The rated current per unit) x (Number of unit) x 0.9.
- (4) In parallel operation 8 units is the maximum, please consult the manufacture for other applications.
- (5) When in parallel operation, the minimum output load should be greater than 3% of total output load.
(Min. load > 3% rated current per unit x number of unit)



Derating Curve



Output Derating VS Input Voltage



Note: All dimensions are in millimeters, to convert to inches multiply by 0.03937.