

PS-C Series

Altech Corp.



Features:

- High efficiency up to 94% and low power dissipation
- Universal AC Input / Full Range
- 150% peak load capability
- Built-in active PFC function, $PF > 0.93$
- Protections: Short circuit / Overload / Overvoltage / Over temperature
- Cooling by free air convection
- Din rail mountable
- LED indicator for power on
- UL 508 (industrial control equipment) approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- Built-in DC OK relay contact
- 3 year warranty



Slimline
single phase

Low Profile
single phase

Industrial Metal Case
single phase

Industrial Metal Case
three phase

High Efficiency
compact housing

Accessories

120-480W Single Phase

COMPACT SIZE POWER SUPPLIES



120W Single Output DIN Rail Power Supply

Cat. No.	Output		Tol. %	Ripple & Noise	Efficiency	NOTES
	V DC	A				
PS-C12012	12V DC	10A	±1%	100 mVp-p	89%	
PS-C12024	24V DC	5A	±1%	100 mVp-p	91%	
PS-C12048	48V DC	2.5A	±1%	120 mVp-p	91%	

240W Single Output DIN Rail Power Supply

Cat. No.	Output		Tol. %	Ripple & Noise	Efficiency	NOTES
	V DC	A				
PS-C24024	24V DC	10A	±1%	100 mVp-p	94%	
PS-C24048	48V DC	5A	±1%	120 mVp-p	94%	

480W Single Output DIN Rail Power Supply

Cat. No.	Output		Tol. %	Ripple & Noise	Efficiency	NOTES
	V DC	A				
PS-C48024	24V DC	20A	±1%	100 mVp-p	94%	
PS-C48048	48V DC	10A	±1%	120 mVp-p	94%	

480W Single Output DIN Rail Power Supply

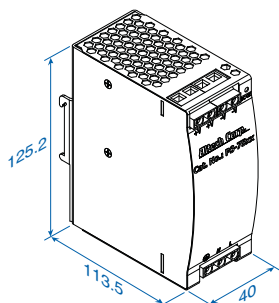
with PFC and Parallel Function (1+7)

Cat. No.	Output		Tol. %	Ripple & Noise	Efficiency	NOTES
	V DC	A				
PS-C480P24	24V DC	20A	±1%	100 mVp-p	94%	
PS-C480P48	48V DC	10A	±1%	120 mVp-p	94%	

PARALLEL

SPECIFICATIONS

PS-C120 Series



Terminal Pin. No Assign. (TB1)

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

Terminal Pin. No Assign. (TB2)

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

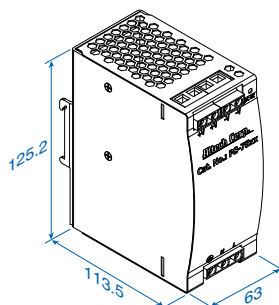
Universal Input: 88-264V AC, 124-370V DC full range,
1.4A/115V AC, 0.7A/230V AC

Connection: Input - 3 poles, Output - 4 poles screw terminal

Size (WxHxD): 40x125.2x113.5mm (1.57x4.93x4.47 inches)

Packaging: 1/box; 1.48lbs / 0.67Kg

PS-C240 Series



Terminal Pin. No Assign. (TB1)

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

Terminal Pin. No Assign. (TB2)

Pin No.	Assignment
1,2	Relay Contact
3,4	DC OUTPUT -V
5,6	DC OUTPUT +V

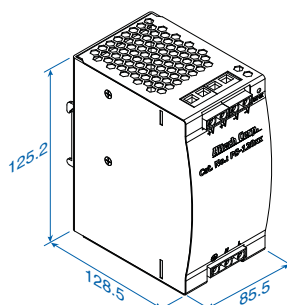
Switch select Input: 88-264V AC, 124-370V DC range,
2.6A/115V AC, 1.3A/230V AC

Connection: Input - 3 poles, Output - 6 poles screw terminal

Size (WxHxD): 63x125.2x113.5mm (2.48x4.93x4.47 inches)

Packaging: 1/box; 2.27lbs / 1.03Kg

PS-C480 Series



Terminal Pin. No Assign. (TB1)

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

Terminal Pin. No Assign. (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V
5,6	Relay Contact
7,8	NC

For Parallel Model
Terminal Pin. No Assign. (TB1)

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

For Parallel Model
Terminal Pin. No Assign. (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)*

* Only parallel function.

Universal Input: 90-264V AC, 127-370V DC full range,
5A/115V AC, 2.5A/230V AC

Connection: Input - 3 poles, Output - 12 poles screw terminal

Size (WxHxD): 85.5x125.2x128.5mm (3.37x4.93x5.06 inches)

Packaging: 1/box; 3.53lbs / 1.6Kg

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



PS-C120 Series Specifications



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 / Overtemperature
- Cooling by free air convection
- DIN rail mountable
- 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 year warranty

OUTPUT

Cat. No.	PS-C12012	PS-C12024	PS-C12048
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	180W (3 sec.)		
	3 seconds max., please refer to peak loading curves		
RIPPLE & NOISE (max)	100mVp-p	100mVp-p	120mVp-p
	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	12 ~ 14V	24 ~ 28V	48 ~ 55V
VOLTAGE TOLERANCE	±1.0%	±1.0%	±1.0%
	Tolerance: includes set up tolerance, line regulation and load regulation.		
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	88 ~ 264VAC	124 ~ 370VDC	
	Derating may be needed under low input voltages, please check the derating curve for more detail		
FREQUENCY RANGE	47 ~ 63Hz		
POWER FACTOR (Typ.)	0.93 / 230VAC	0.96 / 115VAC at full load	
EFFICIENCY (Typ.)	89%	91%	90.50%
AC CURRENT (Typ.)	1.4A / 115VAC	0.7A / 230VAC	
INRUSH CURRENT (Typ.)	35A / 115VAC	70A / 230VAC	
LEAKAGE CURRENT	≤ 1 mA / 240VAC		

PROTECTION

OVERLOAD	Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down overvoltage ≥ 150% rated power, constant current limiting with auto-recovery within 3 seconds and shut down overvoltage after 3 seconds		
OVERVOLTAGE	14 ~ 17V	29 ~ 33V	56 ~ 65V
	Protection type: Shut down overvoltage, re-power on to recover		
OVERTEMPERATURE	95°C ± 5°C (TSW: detect on heat sink of power switch) Protection type: Shut down overvoltage, re-power automatically after temperature goes down		
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	20 ~ 95% RH non-condensing
STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH
TEMP. COEFFICIENT	±0.03% / °C (0 ~ 50°C)
VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60 min. each long X,Y, Z axes
MOUNTING	Compliance to IEC60068-2-6

SAFETY & EMC

SAFETY STANDARDS	UL508 EN60950-1 compliant
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)
EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B
HARMONIC CURRENT	Compliance to EN61000-3-2,-3
EMS IMMUNITY	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	289.9K hrs min. MIL-HDBK-217K (25°C)
DIMENSION	40x125.2x113.5mm (WxHxD)
PACKING	0.67Kg; 20pcs / 14.4Kg / 1.16CUFT

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

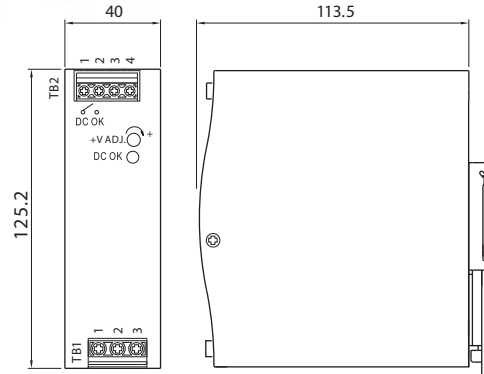
Mechanical Specification

Terminal Pin No. Assignment (TB1)

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

Terminal Pin No. Assignment (TB2)

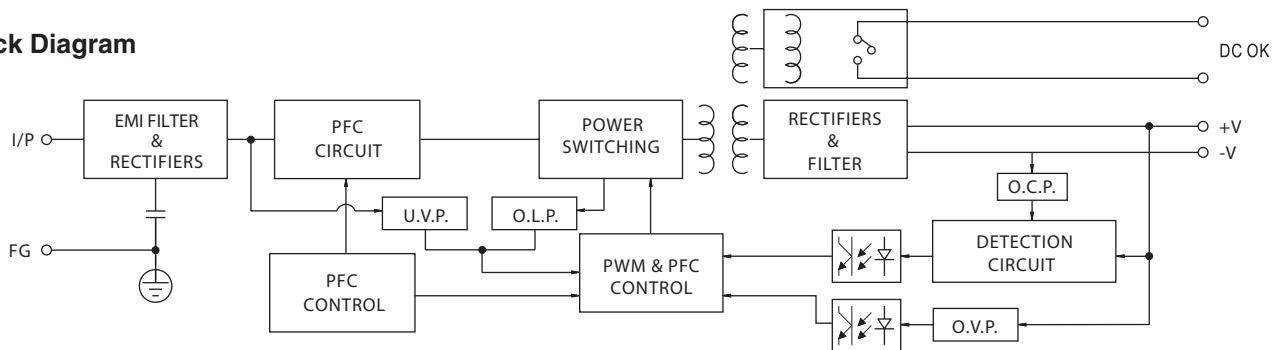
Pin No.	Assignment
1,2	Relay Contact
3	DC OUTPUT -V
4	DC OUTPUT +V



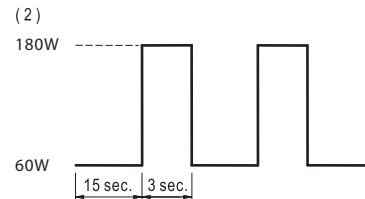
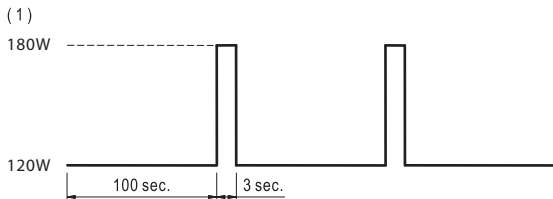
DC OK Relay Contact

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

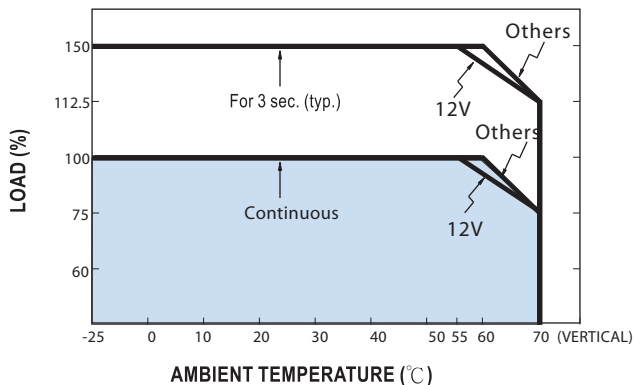
Block Diagram



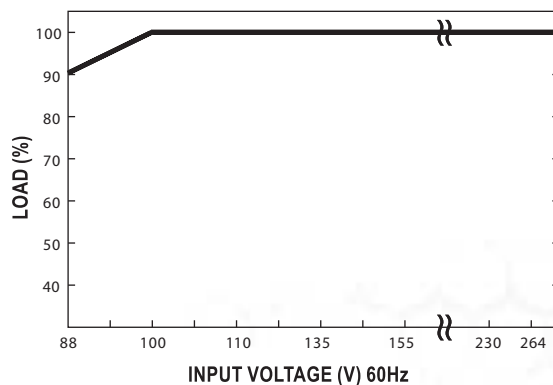
Peak Loading



Derating Curve



Output Derating VS Input Voltage



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