



# PSC-481 Series



## Features:

- Universal AC input (88-264V AC)
- Installed on DIN rail TS-35 / 7.5 or 15
- Built-in active PFC function, PF > 0.95
- 150% peak load capability
- Protection: SCP, OLP, OVP, OTP
- Two selectable peak load modes
- Built-in DC OK (Open Collector Signal)
- Built-in Remote ON / OFF function
- 3 years warranty
- UL 508

## OUTPUT

Cat. No.	PSC-48124	PSC-48148
DC VOLTAGE	24V	48V
RATED CURRENT	20A	10A
CURRENT RANGE	0~20A	0~10A
RATED POWER	480W	480W
PEAK CURRENT	30A	15A
PEAK POWER	720W (3sec.) Two selectable peak load modes 3 seconds or 20% duty cycle Max. The average output power should not exceed the rate power.	
RIPPLE & NOISE (max)	240mVp-p	480mVp-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	-5% ~ +5%	
VOLTAGE TOLERANCE	±1.0%	±1.0%
	Tolerance: includes set up tolerance, line regulation and load regulation.	
LINE REGULATION	±0.5%	±0.5%
LOAD REGULATION	±1.0%	±1.0%
SETUP, RISE TIME	800ms, 100ms / 230VAC / 115VAC at full load	
HOLD UP TIME (Typ.)	16ms / 230VAC; 16ms / 115VAC at full load	
VOLTAGE RANGE	88 ~ 264VAC; 124 ~ 373VDC Derating may apply in low input voltage. Please check the derating curve for more details.	
FREQUENCY RANGE	47 ~ 63Hz	
POWER FACTOR (Typ.)	0.96 / 230VAC / 115VAC at full load	
EFFICIENCY (Typ.)	93%	94%
AC CURRENT (Typ.)	5.0A / 115VAC; 2.5A / 230VAC	
INRUSH CURRENT (Typ.)	33A / 115VAC; 65A / 230VAC	
LEAKAGE CURRENT	< 1mA/ 240VAC	
OVERLOAD	Hiccup mode: when the rated output power is within 105% ~ 150% for more than 3secs. Constant current limit: > 150% rated power / short circuit Auto-recovery: If O/P drop to 40% of the rated output voltage, PSU will shut down and auto-recover 5times (If fault condition remains after 5times recovery, PSU will shut down. User must re-power on to recover)	
OVER VOLTAGE	29 ~ 33V	56 ~ 65V
	Protection type: Latch-off mode.	
OVER TEMPERATURE	95 ±5°C (TSW: detect on heatsink of power diode) Protection type: Shut down o/p voltage, recovers automatically after temperature goes down	
WORKING TEMP.	-20 ~ +70°C (Refer to output load derating curve) Installation clearance: 40mm from top, 20mm from 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	
SAFETY STANDARDS	UL 508 / EN 60950-1	
WITHSTAND VOLTAGE	I/P-O/P: 4242VDC, I/P-FG: 2121VDC, O/P-FG: 707VDC, O/P-DC OK: 707VDC	
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: >100M Ohms / 500VDC / 25°C / 70% RH	
EMI CONDUCTION & RADIATION	EN 55022 (CISPR22), EN 61000-6-3	
HARMONIC CURRENT	EN61000-3-2, -3-3	
EMS IMMUNITY	IEC 61000-4-2, 3, 4, 5, 6, 8, 11; EN 61000-6-1; EN 61204-3	
	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.	
DC OK RELAY CONTACT RATINGS (max)	60VDC / 0.3A, 30VDC / 1A, 30VAC / 0.5A resistive load	
DIMENSION	86.3x124.8x123.4 mm (WxHxD)	
PACKING	1.45kg; 8pcs / 12kg All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.	

## INPUT

## PROTECTION

## ENVIRONMENT

## SAFETY & EMC

## OTHERS



## Mechanical Drawings

Unit : mm / inch

Terminal Pin No. Assignment (TB1)

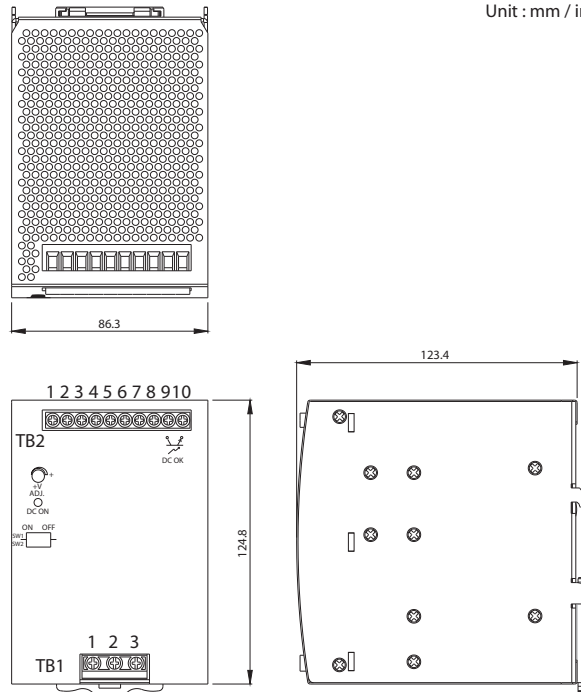
Pin NO.	Assignment
1	FG ⊕
2	AC/L
3	AC/N

Terminal Pin No. Assignment (TB2)

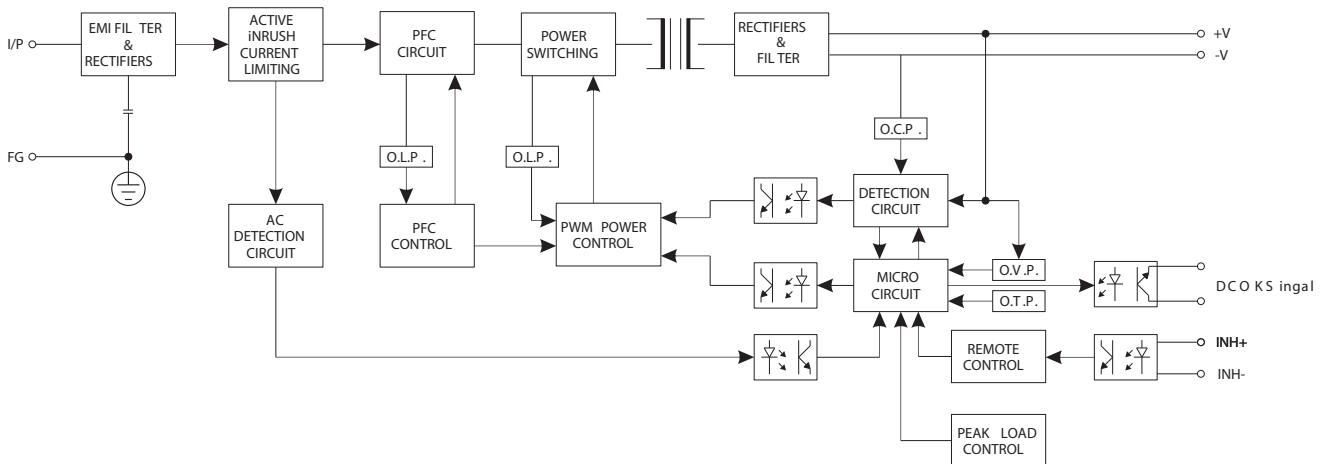
Pin NO.	Assignment
1-3	DC+
4-6	DC-
7	INH+
8	INH-
9,10	DC OK Singal

Switch No. Assignment

SW NO.	Assignment
SW1	PEAK LOAD SETTING
SW2	REMOTE ON/OFF SETTING



## Block Diagram



## DC OK Relay Contact

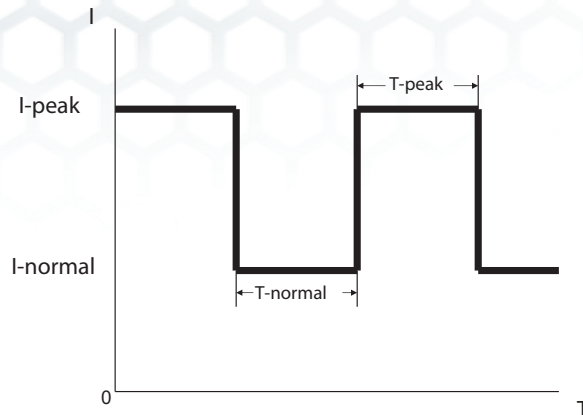
Contact Ratings(max.)	CTR : MIN. 50% at $I_f = 5mA, V_{ce} = 5V$
Isolation V oltag	Between input and output $V_{iso} = 3750V_{rms}$



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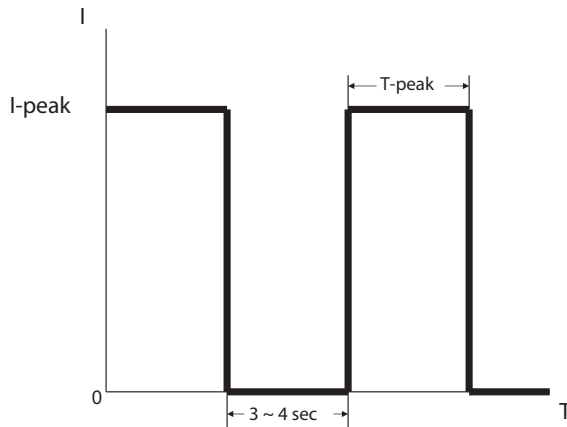


## Peak Load SW1 ON (Mode1) Default setting



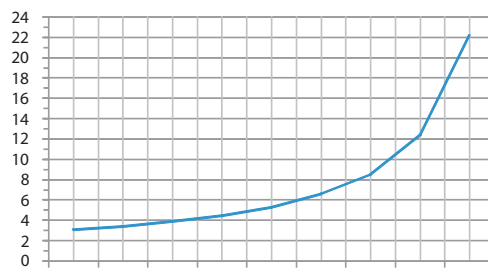
T-peak presents while the unit is working within 110%~150% Rating output power. See curve " B " for the variation in T-peak between output current and holdup time. If T-peak is more than the time setting in curve "B", the output current will drop to the constant current limit (I-normal) that is 105% rating power, meanwhile, I-normal and T-normal will be presenting. See curve "A" for the timing back to I-Peak of T-normal and this Mode can use for easy 2-stage battery charger.

## Peak Load SW2 OFF (Mode2)



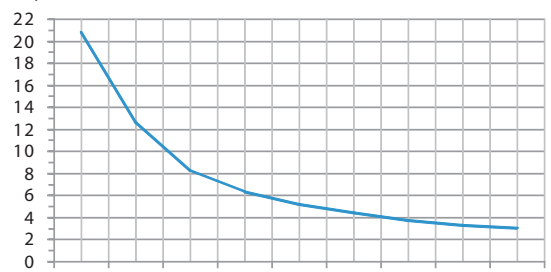
T-peak presents while the unit is working within 110%~150% Rating output power. See curve " B " for the variation in T-peak between output current and holdup time. If T-peak is more than the time setting in curve "B", the output current will be shut down for 3~4 sec, then auto-recovery.

T-normal (Sec.)



10% 20% 30% 40% 50% 60% 70% 80% 90% I-normal  
Load (%)  
CURVE A

T-peak (Sec.)



110% 115% 120% 125% 130% 135% 140% 145% 150% I-peak  
Load (%)  
CURVE B



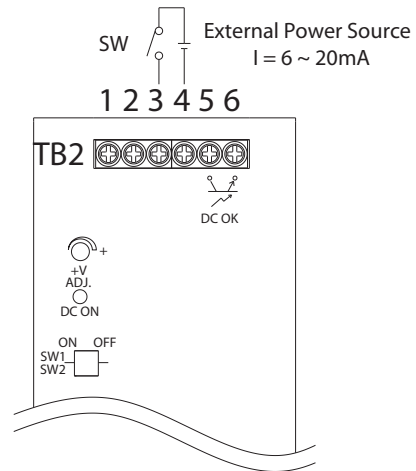


## Remote ON/OFF

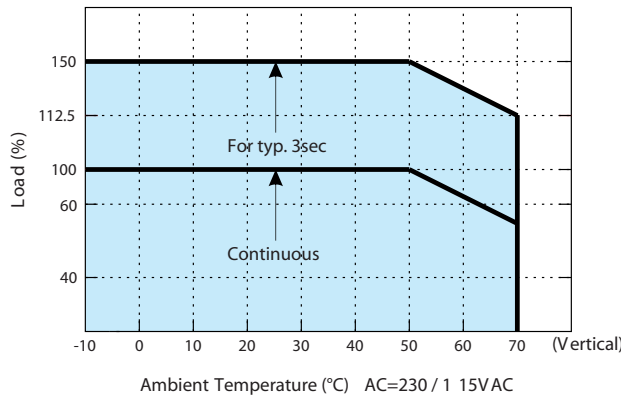
The PSU can be turned ON/OFF by using the "Remote Control" function.

SW2	INH+(3 PIN)/INH-(4 PIN)	Output Status
OFF	SW ON (>2.5V)	ENABLE
OFF	SW OFF (<0.8V)	DISABLE
ON	SW ON (>2.5V)	DISABLE
ON	SW OFF (<0.8V)	ENABLE

(Default Setting)



## Derating Curve



## Output derating VS input voltage

