



## PSC-241 Series



### Features:

- Universal AC input (88-264V AC)
- High efficiency 92% and low power dissipation
- Installed on DIN rail TS-35 / 7.5 or 15
- Built-in active PFC function, PF > 0.95
- 150% peak load capability
- 100% full load burn-in test
- Protection: SCP, OLP, OVP, OTP
- Two selectable peak load modes
- Built-in DC OK Relay contact
- Built-in Remote ON / OFF function
- 3 years warranty
- UL 508

### OUTPUT

### INPUT

### PROTECTION

### ENVIRONMENT

### SAFETY & EMC

### OTHERS

| Cat. No.                          | PSC-24124   | PSC-24148 |
|-----------------------------------|---|-----------|
| DC VOLTAGE                        | 24V   | 48V       |
| RATED CURRENT                     | 10A   | 5A        |
| CURRENT RANGE                     | 0~10A   | 0~5A      |
| RATED POWER                       | 240W  | 240W      |
| PEAK CURRENT                      | 15A   | 7.5A      |
| PEAK POWER                        | 360W (3sec.) Two selectable peak load modes<br>3 seconds or 20% duty cycle Max. The average output power should not exceed the rate power.  |           |
| RIPPLE & NOISE (max)              | 150mVp-p<br>Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µF & 47µF parallel capacitor.   | 300mVp-p  |
| VOLTAGE ADJ. RANGE                | -2% ~ +8%   | -2% ~ +8% |
| VOLTAGE TOLERANCE                 | ±1.0%<br>Tolerance: includes set up tolerance, line regulation and load regulation.   | ±1.0%     |
| LINE REGULATION                   | ±0.5%   | ±0.5%     |
| LOAD REGULATION                   | ±1.0%   | ±1.0%     |
| SETUP, RISE TIME                  | 700ms, 30ms / 230VAC / 115VAC at full load  |           |
| HOLD UP TIME (Typ.)               | 20ms / 230VAC; 20ms / 115VAC at full load   |           |
| VOLTAGE RANGE                     | 88 ~ 264VAC; 124 ~ 373VDC<br>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; 0.96 / 115VAC at full load   |           |
| EFFICIENCY (Typ.)                 | 91%   | 92%       |
| AC CURRENT (Typ.)                 | 2.6A / 115VAC; 1.3A / 230VAC  |           |
| INRUSH CURRENT (Typ.)             | 33A / 115VAC; 65A / 230VAC  |           |
| LEAKAGE CURRENT                   | <1mA/ 240VAC  |           |
| OVERLOAD                          | >150% rated power or short circuit is constant current limiting.<br>if o/p drop to 40% rating output voltage then shutdown and auto-recover 5 time, if fault condition not remove in this 5 time, the system will be shutdown and re-power on to recover.                           |           |
| OVER VOLTAGE                      | 28 ~ 33V<br>Protection type: Shut down O/P voltage with auto-recovery   | 56 ~ 65V  |
| OVER TEMPERATURE                  | 95 ±5°C (TSW: detect on heatsink of power diode)<br>Protection type: Shut down o/p voltage, recovers automatically after temperature goes down  |           |
| WORKING TEMP.                     | -25 ~ +70°C (Refer to output load derating curve)<br>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   |           |
| SAFETY STANDARDS                  | UL508, TUV EN60950-1  |           |
| WITHSTAND VOLTAGE                 | I/P-O/P: 4242VDC I/P-FG2121VDC O/P-F/G: 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        | EN55022:2006 Class B  |           |
| HARMONIC CURRENT                  | EN61000-3-2: 2006 Class A, ENG1000-3-3: 1995+A1: 2001+A2: 2005  |           |
| EMS IMMUNITY                      | EN61204-3: 2000, EN55024: 1998+A1: 2001+A2: 2003 light industry level, criteria A<br>The power supply is considered a component which will installed into a final equipment. The final equipment must be re-confirmed that is still meets EMC directives.                           |           |
| DC OK RELAY CONTACT RATINGS (max) | 60VDC / 0.3A, 30VDC / 1A, 30VAC / 0.5A resistive load   |           |
| MTBF                              | 57K HRS (MIL-HDBK-217F)   |           |
| DIMENSION                         | 65.8x125.2x117.7 mm (WxHxD)   |           |
| PACKING                           | 0.9kg; 12pcs / 12.8kg   |           |
| COOLING                           | Free air convection<br>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.   |           |

# PSC-241 Series



## Mechanical Drawings

Unit : mm / inch

Terminal Pin No. Assignment (TB1)

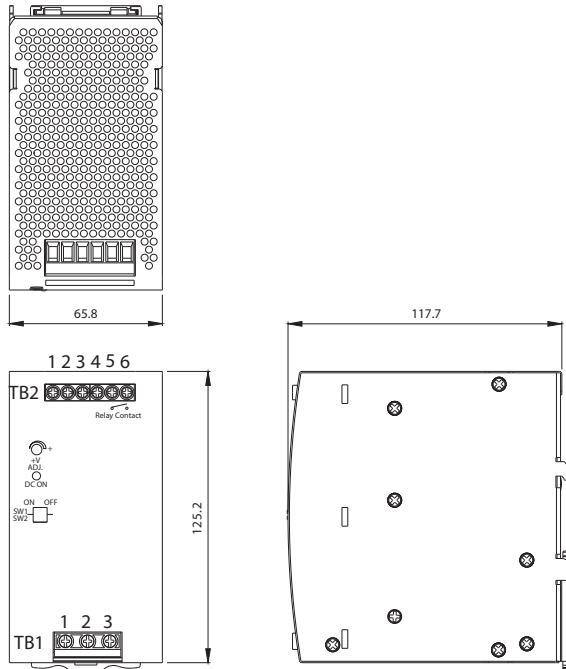
| Pin NO. | Assignment |
|---------|------------|
| 1       | FG Ⓢ       |
| 2       | AC/L       |
| 3       | AC/N       |

Terminal Pin No. Assignment (TB2)

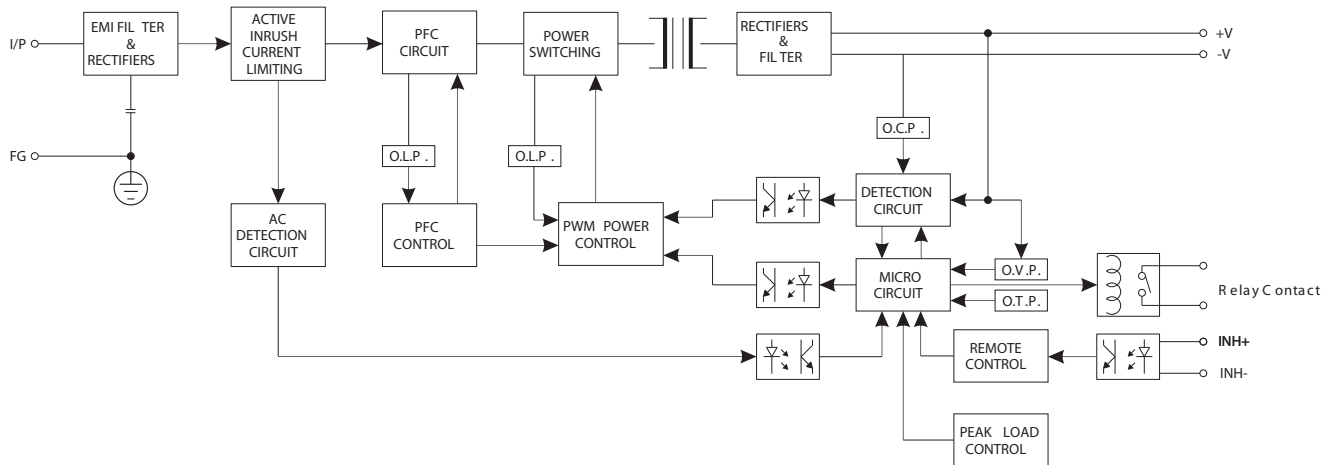
| Pin NO. | Assignment    |
|---------|---------------|
| 1       | DC+           |
| 2       | DC-           |
| 3       | INH+          |
| 4       | INH-          |
| 5,6     | Relay Contact |

Switch No. Assignment

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



## Block Diagram



## DC OK Relay Contact

|                       |  |
|-----------------------|--|
| Contact Close         | When the output voltage reaches the adjusted output voltage. |
| Contact Open          | When the output voltage drop below 45% rated output voltage. |
| Contact Ratings(max.) | 30V/1A resistive load  |

Slimline  
single phase

Low Profile  
single phase

Industrial Metal Case  
single phase

Industrial Metal Case  
three phase

High Efficiency  
compact housing

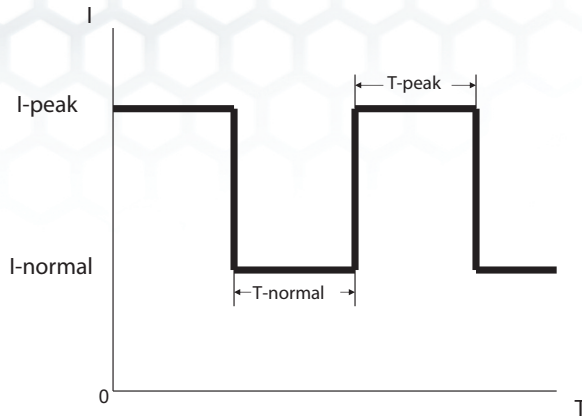
Accessories



# PSC-241 Series

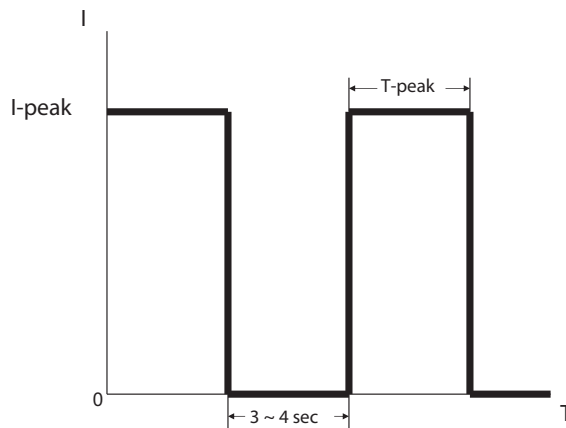


## Peak Load SW1 ON (Mode1) Default setting



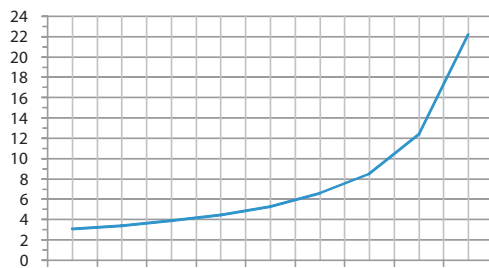
T-peak presents while the unit is working within 110%~150% Rating output power. See curve " B " for the variation in T-peak between output current and holdup time. If T-peak is more than the time setting in curve "B", the output current will drop to the constant current limit (I-normal) that is 105% 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)



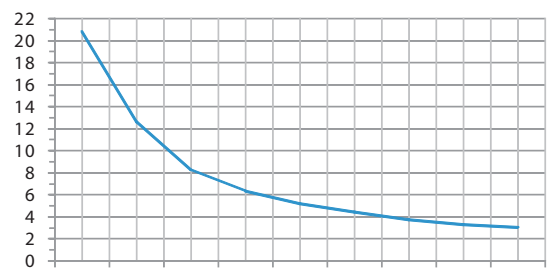
T-peak presents while the unit is working within 110%~150% Rating output power. See curve " B " for the variation in T-peak between output current and holdup time. If T-peak is more than the time setting in curve "B", the output current will be shut down for 3~4 sec, then auto-recovery.

T-normal (Sec.)



CURVE A

T-peak (Sec.)



CURVE B



# PSC-241 Series

**Altech Corp.**<sup>®</sup>

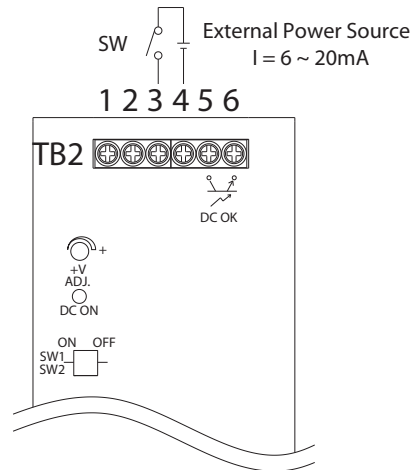


## Remote ON/OFF

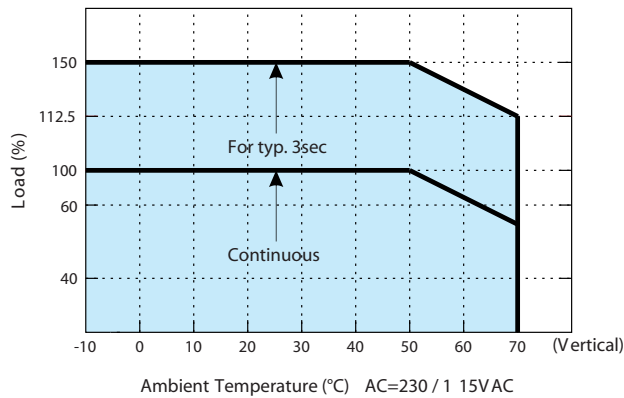
The PSU can be turned ON/OFF by using the "Remote Control" function.

| 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        |

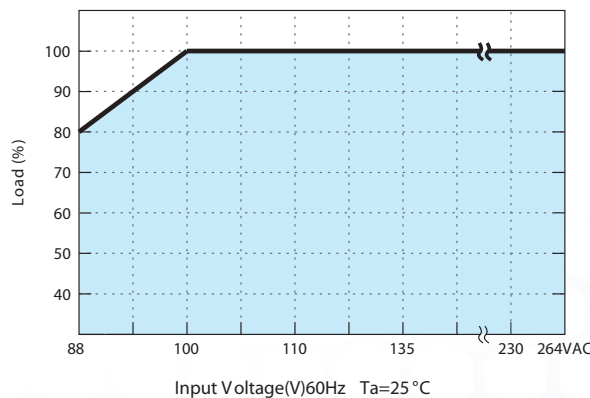
(Default setting)



## Derating Curve



## Output derating VS input voltage



Slimline  
single phase

Low Profile  
single phase

Industrial Metal Case  
single phase

Industrial Metal Case  
three phase

High Efficiency  
compact housing

Accessories

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