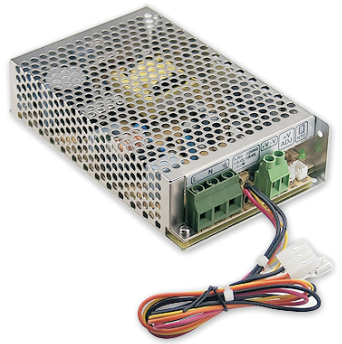
# 75W Single Output Switching Power Supply — SCP-75 series



## Features :

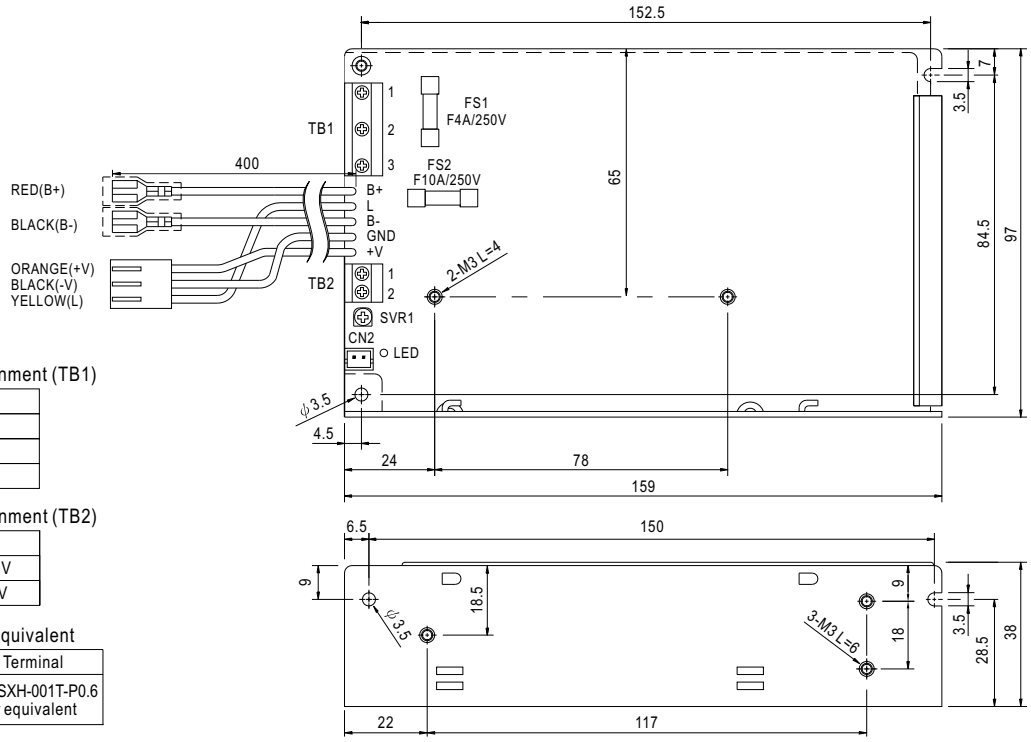
- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage / Battery polarity protections (by fuse)
- Cooling by free air convection
- LED indicator for power on
- No load power consumption <0.75W
- 100% full load burn-in test
- 2 years warranty

## SPECIFICATION

| MODEL | | SCP-75-12 | SCP-75-24 |
|---|---|---|---|
| OUTPUT | DC VOLTAGE | 13.8V | 27.6V |
| | RATED CURRENT | 5.4A | 2.7A |
| | CURRENT RANGE | 0 ~ 5.4A | 0 ~ 2.7A |
| | PEAK 5S Note.6 | 6.5A | 3.2A |
| | RATED POWER | 74.5W | 74.5W |
| | RIPPLE & NOISE (max.) Note.2 | 120mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE | +15,-5% | +15,-5% |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±1.0% |
| | LINE REGULATION Note.4 | ±1.0% | ±1.0% |
| | LOAD REGULATION Note.5 | ±2.0% | ±1.0% |
| | SETUP, RISE TIME | 500ms, 30ms/230VAC 1200ms, 30ms/115VAC at full load | |
| | HOLD UP TIME (Typ.) | 50ms/230VAC 16ms/115VAC at full load | |
| INPUT | VOLTAGE RANGE | 85 ~ 264VAC 120 ~ 370VDC | |
| | FREQUENCY RANGE | 47 ~ 63Hz | |
| | EFFICIENCY (Typ.) | 81% | 85% |
| | AC CURRENT (Typ.) | 1.5A/115VAC 0.9A/230VAC | |
| | INRUSH CURRENT (Typ.) | COLD START 45A | |
| | LEAKAGE CURRENT | <2mA / 240VAC | |
| FUNCTION | TEMP. COMPENSATION | By NTC (not provide with the power supply) | |
| | OUTPUT VOLTAGE SENSOR | L=output voltage $^{+0.7}_{0}$ V | |
| PROTECTION | OVERLOAD | 6.5 ~ 8.7A rated output power | 3.2 ~ 4.3A rated output power |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | |
| | OVER VOLTAGE | 16.6 ~ 19.3V | 33.1 ~ 38.6V |
| | | Protection type : Shut down o/p voltage, re-power on to recover | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +60℃ (Refer to output load derating curve) | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 45℃) | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | |
| SAFETY & EMC (Note 6) | SAFETY STANDARDS | UL60950-1, CB(IEC60950-1),CCC GB4943 approved | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 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, EN61000-6-1, light industry level, criteria A | |
| OTHERS | MTBF | 461.2K hrs min. MIL-HDBK-217F (25℃) | |
| | DIMENSION | 159*97*38mm (L*W*H) | |
| | PACKING | 0.5Kg; 30pcs/16Kg/1CUFT | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. Line regulation is measured from low line to high line at rated load.<br>5. Load regulation is measured from 0% to 100% rated load.<br>6. 33% Duty cycle maximum within every 15 seconds. Average output power should not exceed the rated power.<br>7. 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. | | |

## ■ Mechanical Specification

Case No. 901 Unit:mm




Terminal Pin No. Assignment (TB1)

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

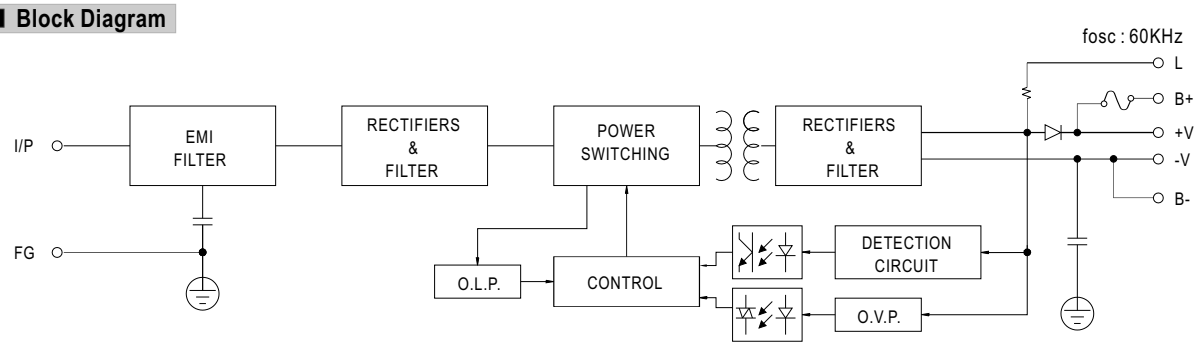
Terminal Pin No. Assignment (TB2)

| Pin No. | Assignment |
|---|---|
| 1 | DC OUTPUT +V |
| 2 | DC OUTPUT -V |

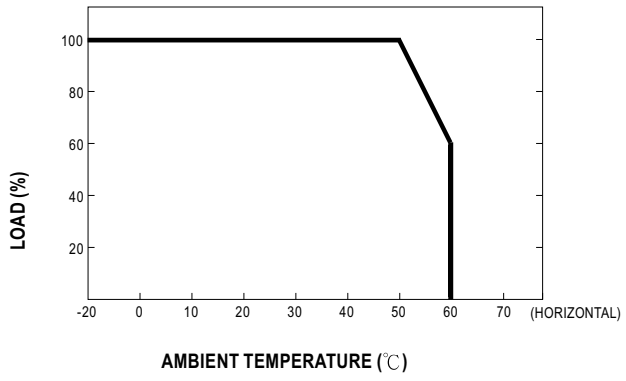
CN2 : JST B2B-XH or equivalent

| Mating Housing | Terminal |
|---|---|
| JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |

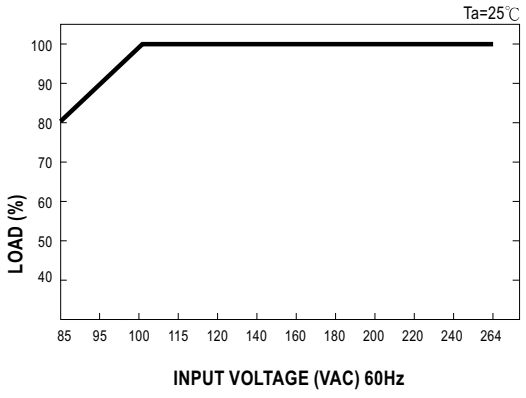
## ■ Block Diagram




## ■ Derating Curve




## ■ Output Derating VS Input Voltage



## ■ Function Description

**1.B+,B-**

Connect the battery : B+ connected to battery positive.
B- connected to battery negative.

**2.L**

Output voltage detection, detection output voltage or battery voltage ( if battery is used).
L=output voltage $^{+0.7}_{-0}$ V.

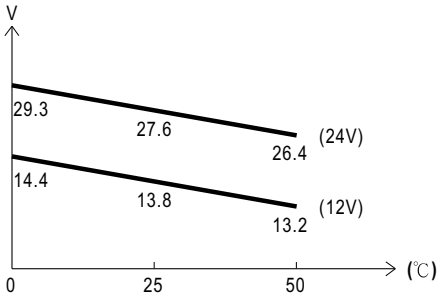
**3.+V,-V**

Output voltage. Can't connect the battery.

**4.CN2**

Temperature sensor can be connected to the unit to allow temperature compensation of the charging voltage.
If the sensor is not used, the charger still works normally.
Reference example:
Connect 100KΩ Thermistor(THINKING) on NTC. Adjust VR to cause the output voltage is normally voltage. The output voltage will change along with the temperature change.

| | Ta :0℃ | Ta :25℃ | Ta :50℃ |
|---|---|---|---|
| SCP-75-12 | 14.4±0.2V | 13.8±0.1V | 13.2±0.2V |
| SCP-75-24 | 29.3±0.4V | 27.6±0.2V | 26.4±0.4V |



Temperature Sensor