



- 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

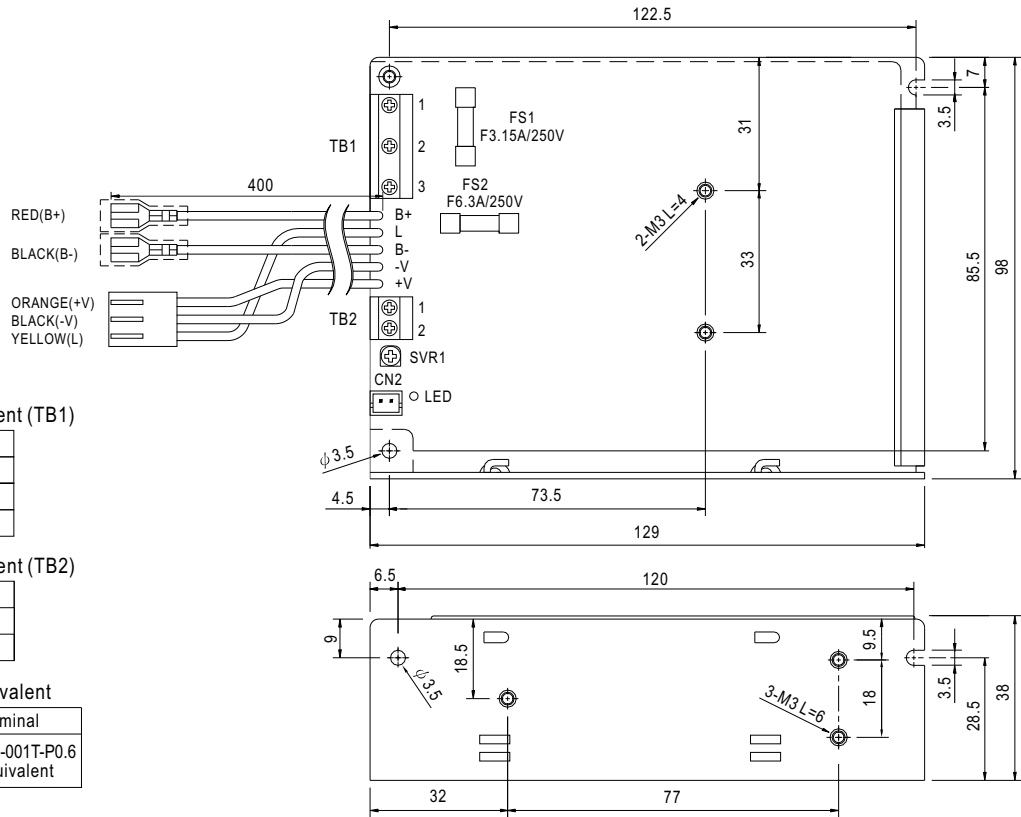


**SPECIFICATION**

MODEL	SCP-50-12	SCP-50-24	
OUTPUT	DC VOLTAGE	13.8V	27.6V
	RATED CURRENT	3.6A	1.8A
	CURRENT RANGE	0 ~ 3.6A	0 ~ 1.8A
	PEAK 5S <span style="float:right">Note.6</span>	4.3A	2.2A
	RATED POWER	49.7W	49.7W
	RIPPLE & NOISE (max.) <span style="float:right">Note.2</span>	120mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	+15,-5%	+15,-5%
	VOLTAGE TOLERANCE <span style="float:right">Note.3</span>	±2.0%	±1.0%
	LINE REGULATION <span style="float:right">Note.4</span>	±1.0%	±1.0%
	LOAD REGULATION <span style="float:right">Note.5</span>	±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.)	1.1A/115VAC	0.65A/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 <sub>o</sub> <sup>+0.7</sup> V	
PROTECTION	OVERLOAD	4.3 ~ 5.8A rated output power	2.2 ~ 2.9A rated output power
		Protection type : Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	16.6 ~ 19.3V	33.1 ~ 38.5V
		Protection type : Shut down o/p voltage, re-power on to recover	
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to output load derating curve)	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 7)	SAFETY STANDARDS	UL60950-1, CB(IEC60950-1) 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°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, EN61000-6-1, light industry level, criteria A	
OTHERS	MTBF	495.7K hrs min. MIL-HDBK-217F (25°C)	
	DIMENSION	129*98*38mm (L*W*H)	
	PACKING	0.45Kg; 30pcs/14.5Kg/0.95CUFT	
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Line regulation is measured from low line to high line at rated load.</li> <li>5. Load regulation is measured from 0% to 100% rated load.</li> <li>6. 33% Duty cycle maximum within every 15 seconds. Average output power should not exceed the rated power.</li> <li>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.</li> </ol>		

**Mechanical Specification**

Case No. 903 Unit:mm



**Terminal Pin No. Assignment (TB1)**

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

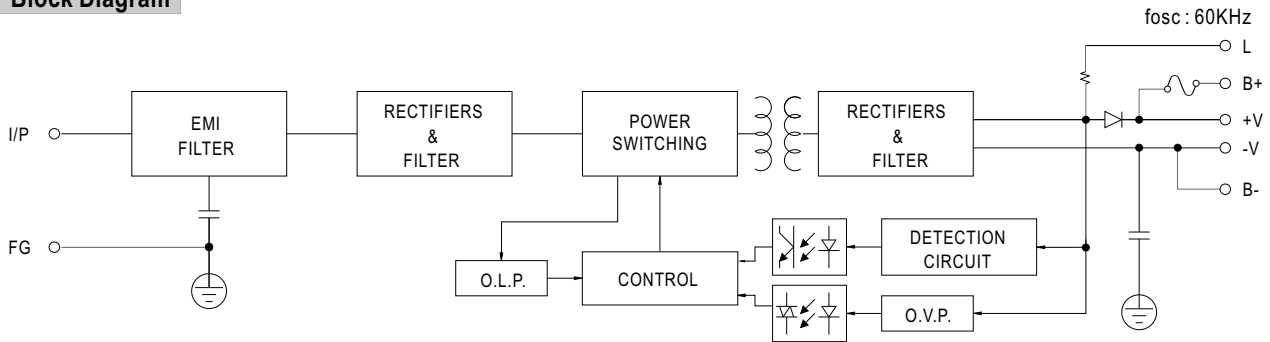
**Terminal Pin No. Assignment (TB2)**

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

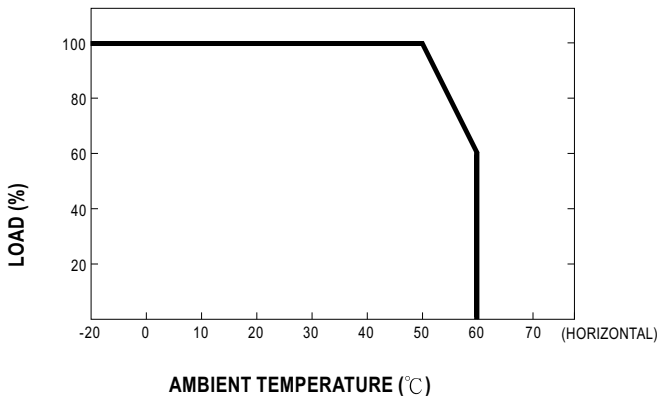
**CN2 : JST B2B-XH or equivalent**

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

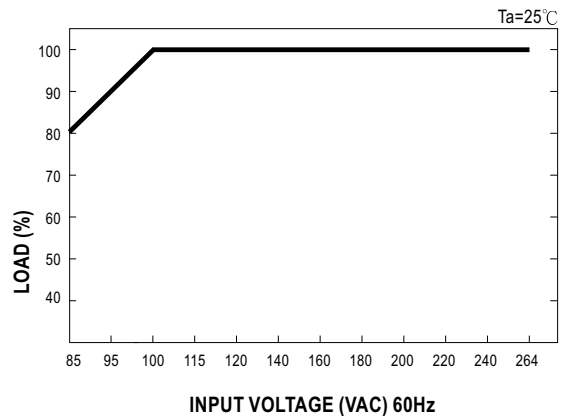
**Block Diagram**



**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 100K $\Omega$  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 $^{\circ}$ C	Ta :25 $^{\circ}$ C	Ta :50 $^{\circ}$ C
SCP-50-12	14.4 $\pm$ 0.2V	13.8 $\pm$ 0.1V	13.2 $\pm$ 0.2V
SCP-50-24	29.3 $\pm$ 0.4V	27.6 $\pm$ 0.2V	26.4 $\pm$ 0.4V

