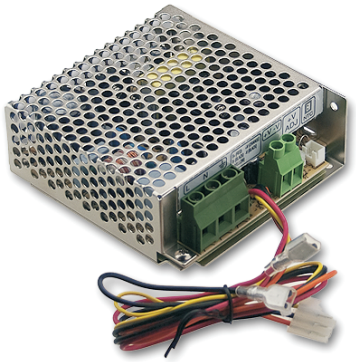
35W Single Output Switching Power Supply

SCP-35 series



■ Features :

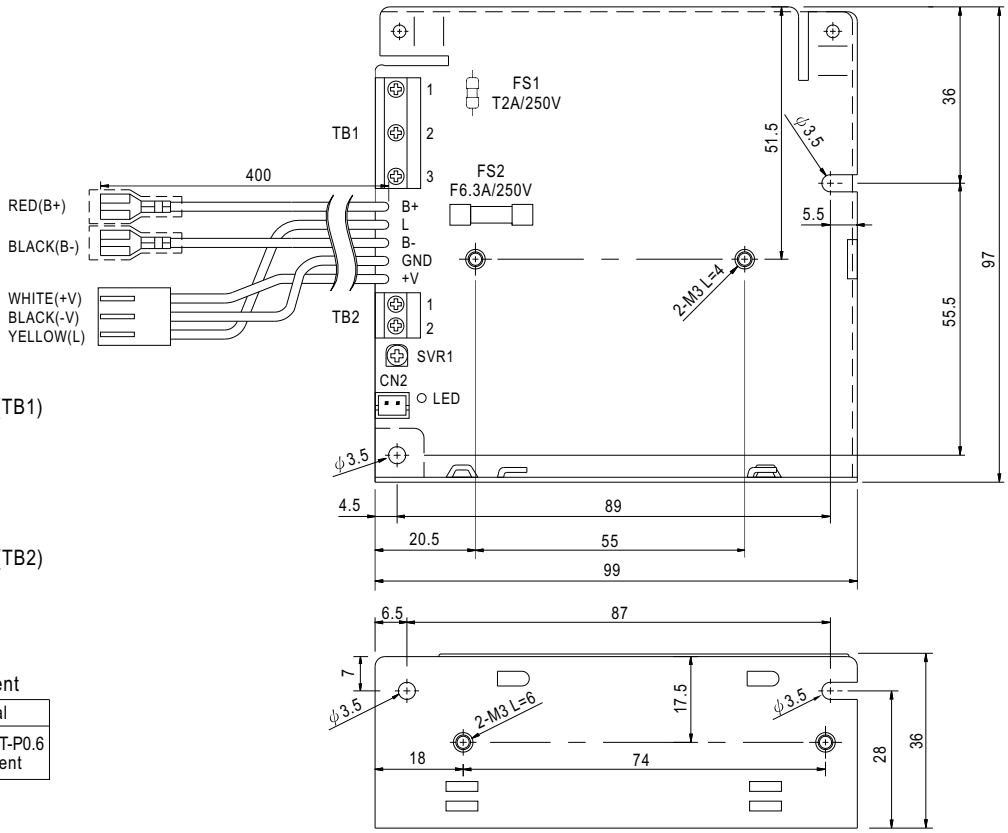
- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage / Battery polarity protections (by fuse)
- Cooling by free air convection
- LED indicator for power on
- No load power consumption <0.75W
- 100% full load burn-in test
- 2 years warranty

SPECIFICATION

MODEL		SCP-35-12	SCP-35-24
OUTPUT	DC VOLTAGE	13.8V	27.6V
	RATED CURRENT	2.6A	1.4A
	CURRENT RANGE	0 ~ 2.6A	0 ~ 1.4A
	PEAK 5S Note.6	3.1A	1.7A
	RATED POWER	35.9W	38.6W
	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.)	83%	86%
	AC CURRENT (Typ.)	0.75A/115VAC 0.5 A/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	3.1 ~ 4.2A rated output power	1.7 ~ 2.3A 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℃ (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	523.3Khrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	99*97*36mm (L*W*H)	
	PACKING	0.37Kg; 45pcs/17.7Kg/1CUFT	
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Line regulation is measured from low line to high line at rated load. 5. Load regulation is measured from 0% to 100% rated load. 6. 33% Duty cycle maximum within every 15 seconds. Average output power should not exceed the rated power. 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. 905 Unit:mm



Terminal Pin No. Assignment (TB1)

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

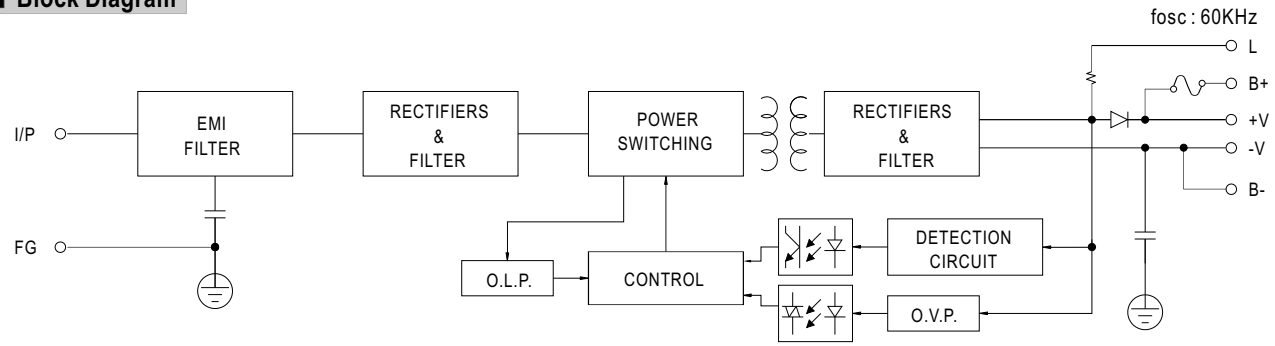
Terminal Pin No. Assignment (TB2)

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

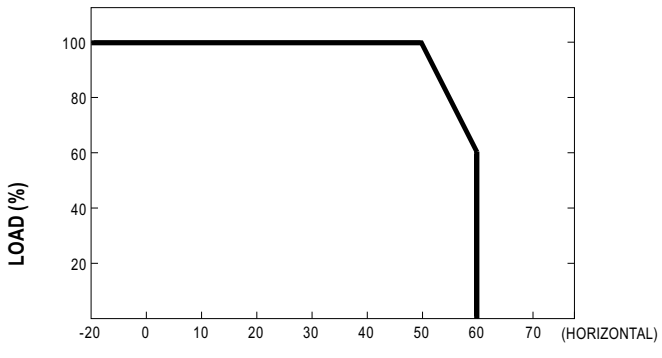
CN2 : JST B2B-XH or equivalent

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

■ Block Diagram

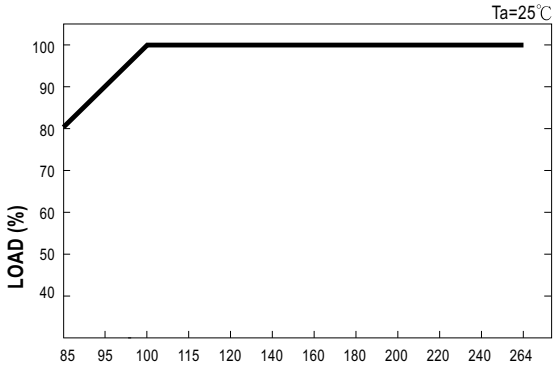


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz

■ 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.

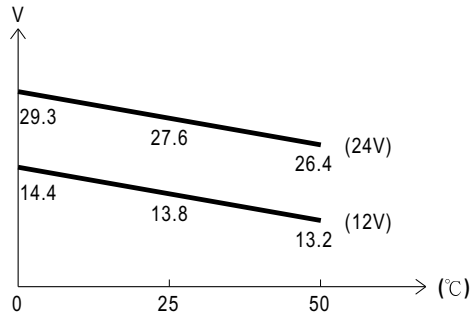
3.+V,-V

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-35-12	14.4±0.2V	13.8±0.1V	13.2±0.2V
SCP-35-24	29.3±0.4V	27.6±0.2V	26.4±0.4V



Temperature Sensor