Micro Power
SWITCHING MODE POWER SUPPLY
EMPOWERED TO SUCCEED
An ISO 9001:2015 Certified Company

E540805 IEC62368-1

160W SMPS CUM BATTERY CHARGER

FEATURES:

- Latest state-of- the-art current mode PWM controller and MOSFET based design.
- Power supply unit & electronics switch over unit are in the same housing.
- AC OK/ SMPS OK and Battery low floating contact for remote signaling.
- Designed for rechargeable battery module up to 42AH.
- LED indications for AC OK, DC OK and Low Battery.
- Protection: Over voltage, Overload, Short circuit.
- Soft start circuit to limit the AC inrush current.
- Reliable even at high ambient temperature.
- UL and CB certifications from UL Solutions.
- Universal AC input voltage range.

SPECIFICATION:

PRODUCT CODE		SSM16012		SSM16024	
OUTPUT	OUTPUT NUMBER	CH1: FOR LOAD	CH2: FOR BATTERY	CH1: FOR LOAD	CH2: FOR BATTERY
	DC VOLTAGE	13.8V	13.8V	27.6V	27.6V
	RATED CURRENT	7.6A	4A	3.8A	2A
	CURRENT RANGE	0 ~ 11.6A	--------	0 ~ 5.8A	--------
	RATED POWER	160W		160W	
	RIPPLE & NOISE (max.)	<120mVp-p	--------	<240mVp-p	--------
	VOLTAGE ADJ. RANGE	CH1: 12 ~ 15V		CH1: 24 ~ 29V	
	VOLTAGE TOLERANCE Note.2	< +/-1.0%	--------	< +/-1.0%	--------
	LINE REGULATION	< +/-0.5%	--------	< +/-0.5%	--------
	LOAD REGULATION	< +/-0.5%	--------	< +/-0.5%	--------
	SETUP, RISE TIME Note.3	<4000ms, 30ms/230VAC	<4000ms, 30ms/115VAC at full load		
	HOLD UP TIME (Typ.)	>40ms/230VAC	>40ms/115VAC at full load		
INPUT	VOLTAGE RANGE	100 ~ 265VAC			
	FREQUENCY RANGE	50/60Hz			
	POWER FACTOR (Typ.)	PF>/=0.95/230VAC	PF>/=0.98/115VAC at full load		
	EFFICIENCY (Typ.)	>88%		>88%	
	AC CURRENT (Typ.)	<1.8A/115VAC	<0.9A/230VAC		
	INRUSH CURRENT (Typ.)	COLD START <35A/115VAC	<70A/230VAC		
	LEAKAGE CURRENT	<1mA			
PROTECTION	OVERLOAD	105 ~ 150% rated output power			
		Protection type : Auto recovery, recovers automatically after fault condition is removed			
	OVER VOLTAGE	CH1:16 ~ 19V		CH1:29 ~ 33V	
		Protection type : Latch, re-power on to recover after fault condition is removed			
	BATTERY CUT OFF	10.5+/-0.5V		21+/-1V	
FUNCTION	AC OK/SMPS OK	NO-C PFC output, ON : AC OK/SMPS OK ; OFF : AC Fail/SMPS Fail; (Max. 240VAC/60VDC-500mA)			
	BATTERY LOW	NO-C PFC output, ON : Battery Low ; OFF : Battery OK ; (Max. 240VAC/60VDC-500mA)			
		Battery low voltage : <11V		Battery low voltage : <22V	
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	+/-0.03%/°C (0~50°C) on CH1 output			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	IEC/UL/CSA 62368-1.0			
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC			
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH			
	EMC EMISSION	Designed as per IEC/EN55032 (CISPR32) Class B, IEC/EN61000-3-2,-3			
	EMC IMMUNITY	Designed as per IEC/EN61000-4-2,3,4,5,6,8,11			
OTHERS	MTBF	257K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	60*140.5*126mm (L*W*H)			
	WEIGHT	0.8Kg			

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Tolerance : includes set up tolerance, line regulation and load regulation.
3. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.
4. The power supply is considered a component which will be installed into a final equipment. Which are basically excluded from the EMC directive. However, in order to enable to customer's end system to comply with the EMC directive. Micro Power's power supply are designed as per applicable EMC directive, but not tested. So, the final equipment must be re-confirmed that it still meets EMC directives.
5. The ambient temperature derating of 3.5°C/1000m for operating altitude higher than 2000m.
6. Recommended to connect the battery module via a switch for remote shutdown.
7. Please do not connect battery below 11.5VDC (23VDC in case of SSM16024).
8. We can also use this product as normal SMPS.

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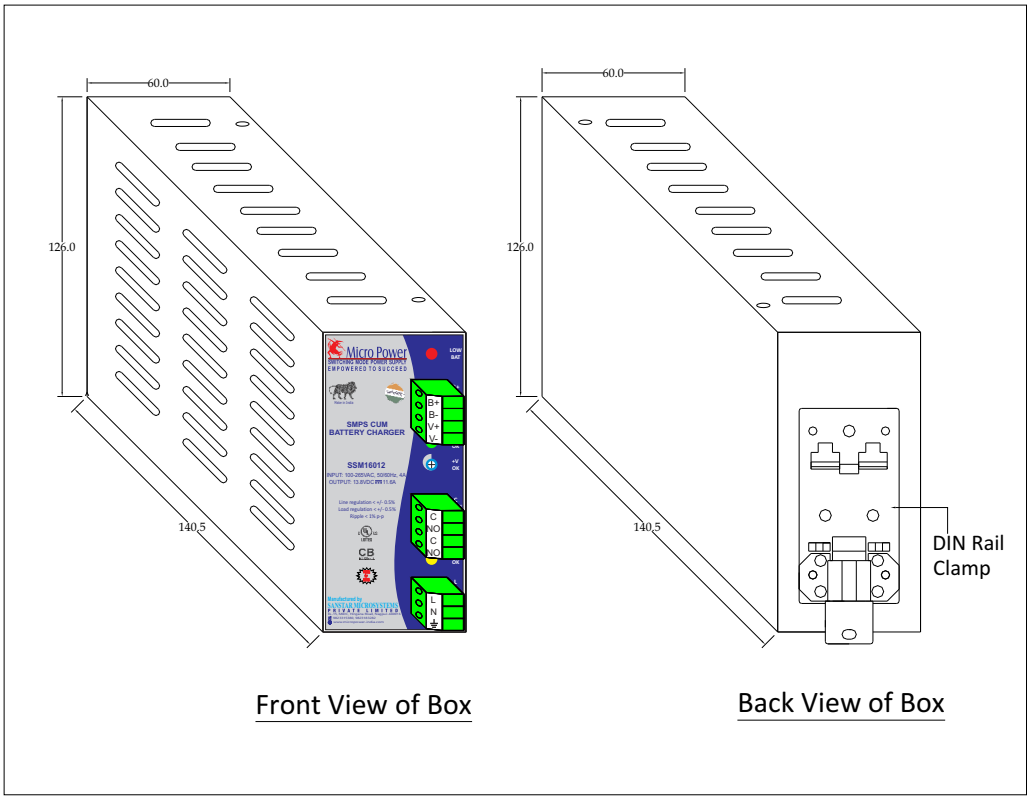
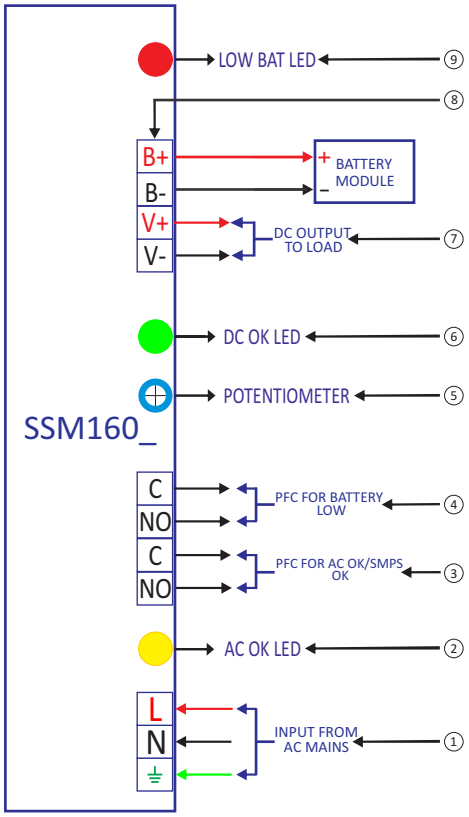
INSTALLATION POSITION:

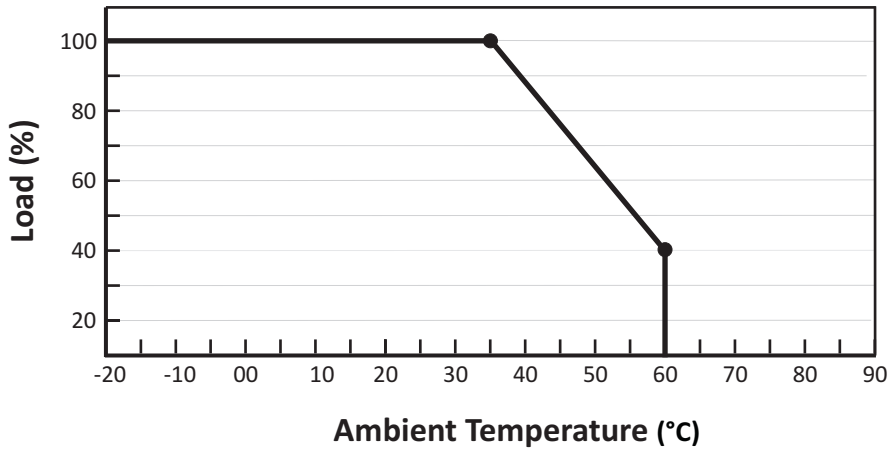


CONNECTION DIAGRAM:

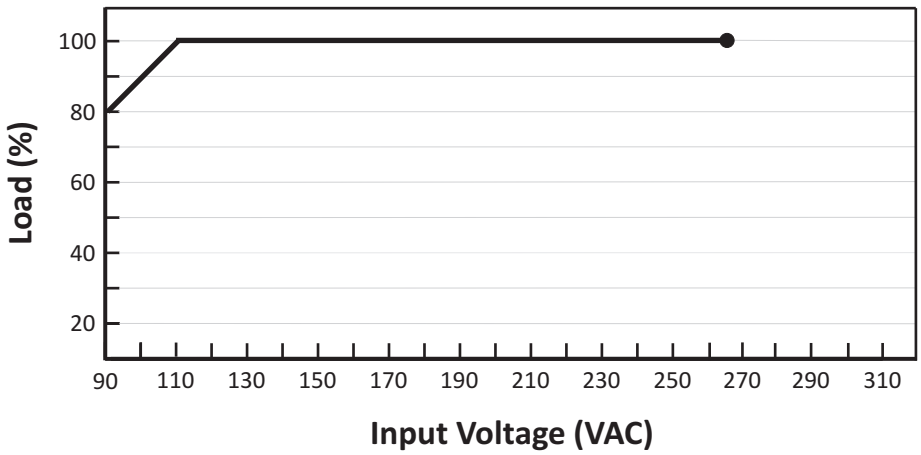


Sr. No.	Description of all the functions
1.	Connection of AC input: ⏚/N/L.
2.	AC input indication: AC OK-Yellow LED.
3.	Potential Free Contact for AC OK/SMPS OK.
4.	Potential Free Contact for Battery Low.
5.	Potentiometer, output voltage: 12-15VDC (24-29VDC in case of SSM16024).
6.	DC output indication: DC OK-Green LED.
7.	Connection of DC output: -V/+V.
8.	Connection of battery: -B/+B.
9.	Low battery indication: LOW BAT-Red LED.

DERATING CURVE:



OUTPUT DERATING VS INPUT VOLTAGE:



* For continuous improvement, specifications are subject to change without prior intimation.