



600W Intelligent Single Output Battery Charger

PB-600 series



■ Features :

- Charger for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese) (Note.1)
- 2/3/8 stage charging (Note 5)
- Built-in battery rescue function
- Controlled by microprocessor
- Universal AC input / Full range
- Built-in active PFC function PF>0.95
- Protection: Reverse polarity / Short circuit / Over voltage / Over temperature
- 3 color LED loading indicator
- Built-in remote ON-OFF control
- Built-in temperature compensation function
- Built-in fan speed control (depends on charging current)
- 3 years warranty

User's Manual

UL1012 BS EN/EN62368-1
(for 48V only)BS EN/EN60335-1
(for 12V,24V only)

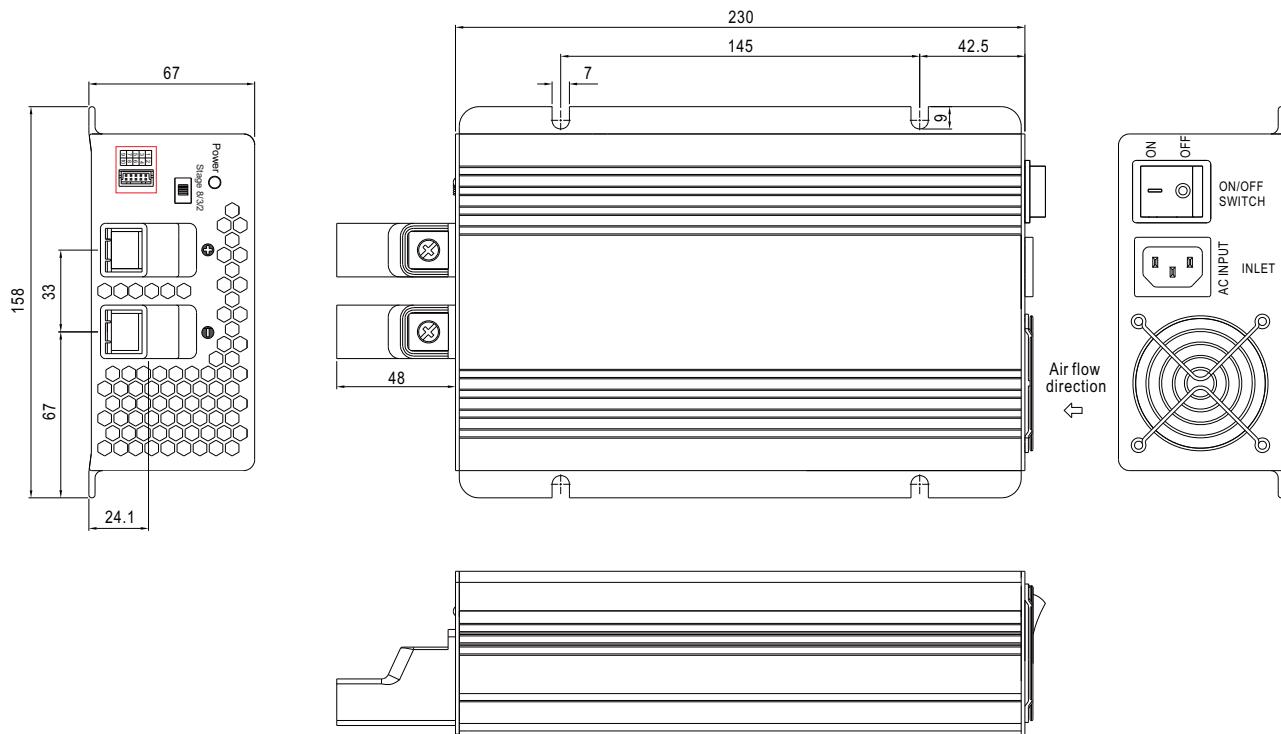
TPTC004

SPECIFICATION

MODEL	PB-600-12	PB-600-24	PB-600-48
OUTPUT	BOOST CHARGE VOLTAGE V _{boost}	14.4V	28.8V
	FLOAT CHARGE VOLTAGE V _{float}	13.8V	27.6V
	RECOMMENDED BATTERY CAPACITY(AMP HOURS)(Note 4)	135 ~ 400AH	70 ~ 210AH
	BATTERY TYPE	Open & Sealed Lead Acid	
	OUTPUT CURRENT	40A	21A
INPUT	VOLTAGE RANGE	90 ~ 264VAC	127 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	0.95/230VAC	0.98/115VAC at full load
	EFFICIENCY (Typ.)	86%	87%
	AC CURRENT (Typ.)	6.8A/115VAC	3.4A/230VAC
	INRUSH CURRENT (Typ.)	25A/115VAC	50A/230VAC
	LEAKAGE CURRENT	<3.5mA / 240VAC	
PROTECTION	OVER VOLTAGE	16 ~ 18V	32 ~ 35V
		Protection type : Shut down o/p voltage, re-power on to recover	
OVER TEMPERATURE		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
FUNCTION	REMOTE CONTROL	Open: Normal work	Short: Stop Charging
	LEAKAGE CURRENT FROM BATTERY (Typ.)	1mA	
	FAST CHARGE	2 / 3 / 8 stage selectable	
	CHARGER OK	Relay contact (RY15)	
	OUTPUT OK	Relay contact (RY13)	
ENVIRONMENT	TEMPERATURE SENSE	By NTC	
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing	
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C)	
SAFETY & EMC (Note 3)	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	
	SAFETY STANDARDS	UL1012, TUV BS EN/EN60335-1, BS EN/EN60335-2-29 (except for 48V), BS EN/EN62368-1(48V only), EAC TP TC 004 approved	
	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
OTHERS	EMC EMISSION	Compliance to BS EN/EN55032 class B (CISPR32), BS EN/EN61000-3-2,-3, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024; light industry level, criteria A, EAC TP TC 020	
	MTBF	135.6K hrs min. MIL-HDBK-217F (25°C)	
NOTE	DIMENSION	230*158*67mm(L*W*H)	
	PACKING	2.2Kg; 6pcs/14.2Kg/1.76CUFT	
1. Modification for charger specification may be required for different battery specification. Please contact battery vendor and MEAN WELL for details. 2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 3. 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. 4. This is Mean Well's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation. 5. Please choose the "3 stage" selection when the charger is used to charge the batteries and power the loads in the same time. 6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx			

■ Mechanical Specification

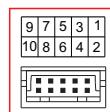
Case No.805C Unit:mm



※ LED Loading Indicator Status Table

Color	Status	Steady	Flashing
Red	Abnormal status		
Orange			Charging
Green	Full		Charging

※ Control Pin No. Assignment(CN100) : HRS DF11-10DP-2DS or equivalent

 CN100	Mating Housing	HRS DF11-10DS or equivalent
	Terminal	HRS DF11-**SC or equivalent

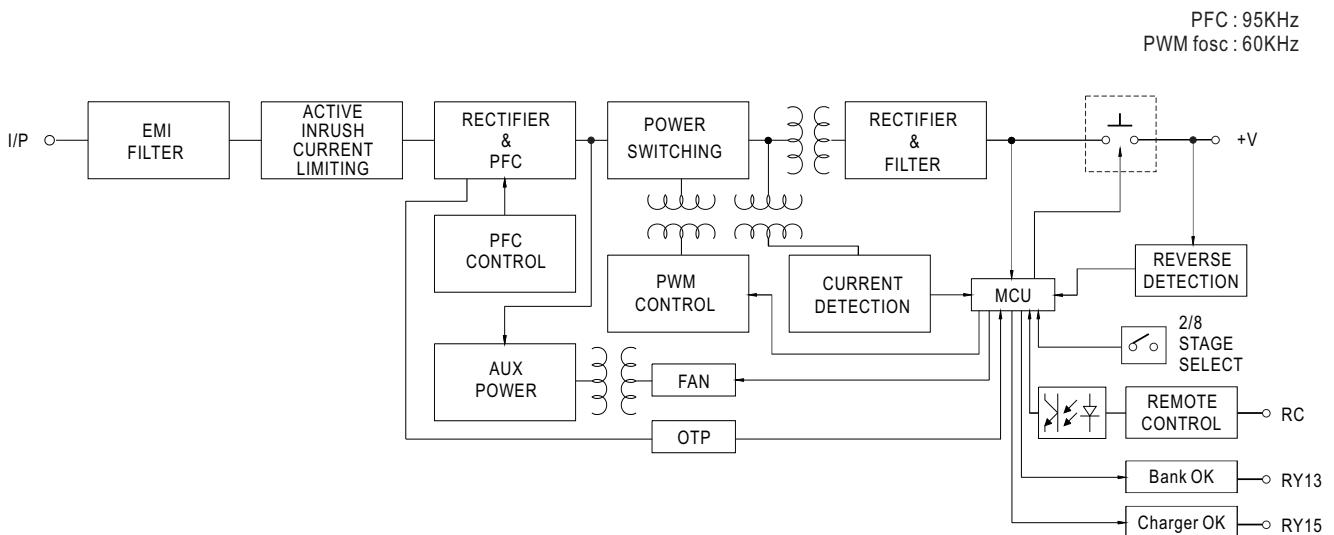
Pin No.	Function	Description
1,2	RY13	RY13 : Battery Bank OK relay. Relay contact rating(max.) : 30V/1A resistive. ; "Short" when the battery is full, "Open" when the battery is still charging.
5,6	RY15	RY15 : Charger OK relay. Relay contact rating(max.) : 30V/1A resistive. ; "Short" when the unit is working properly, "Open" when the unit is failure or the protection function is activating.
7	GND	NTC / GND : Temperature sense
8	NTC(5KΩ) RTH	Temperature sensor comes along with the charger can be connected to the unit to allow temperature compensation of the charging voltage
9,10	RC- / RC+	Remote ON/OFF function. Turn the output on and off by electrical or dry contact between pin 10 (RC+) and pin 9(RC-). "Open" : Normal work ; "Short" : Stop charging



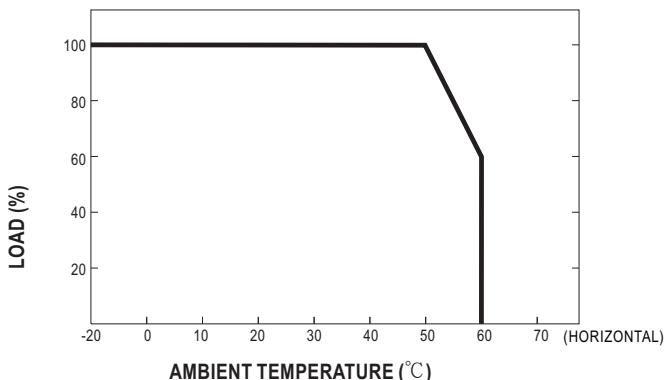
600W Intelligent Single Output Battery Charger

PB-600 series

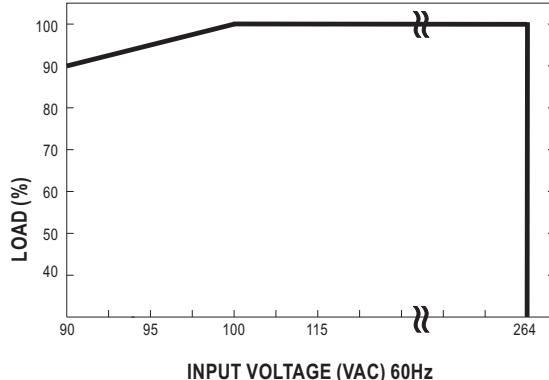
■ Block Diagram



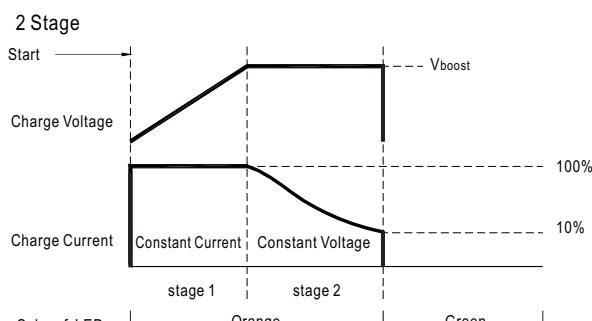
■ Derating Curve



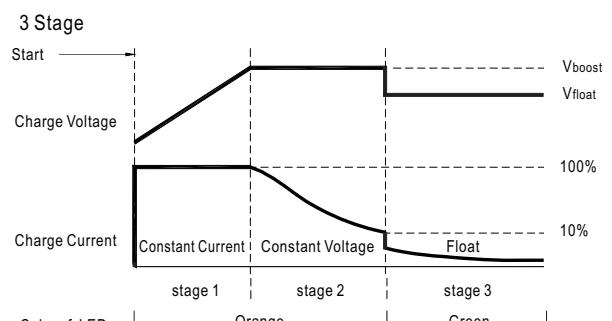
■ Static Characteristics



■ Charging Curve



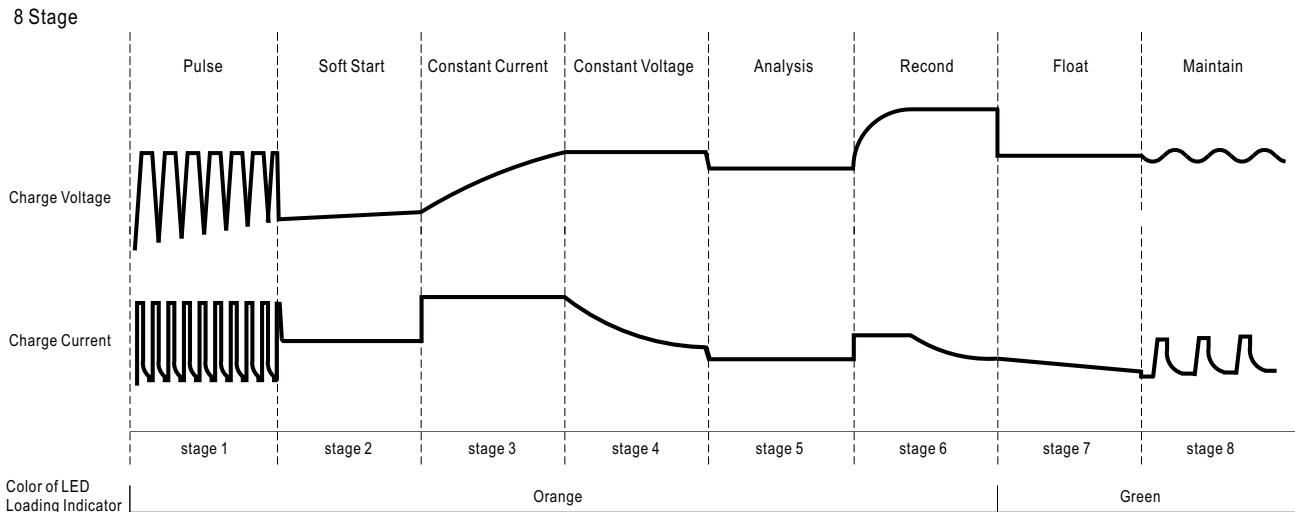
State	PB-600-12	PB-600-24	PB-600-48
Constant Current	40A	21A	10.5A
Vboost	14.4V	28.8V	57.6V



State	PB-600-12	PB-600-24	PB-600-48
Constant Current	40A	21A	10.5A
Vboost	14.4V	28.8V	57.6V
Vfloat	13.8V	27.6V	55.2V

◎ Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).

◎ Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).



- ◎ Suitable for lead-acid batteries (flooded, Gel and AGM).
- ◎ "stage 1"(Pulse) and "stage 2"(Soft Start) provide battery rescue function.

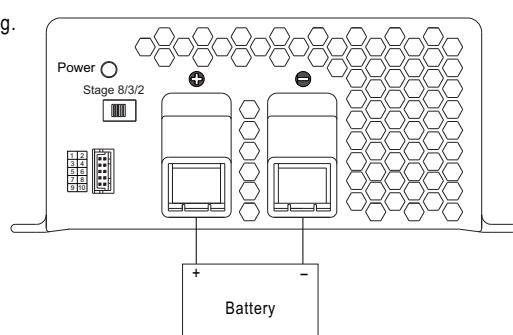
2,3, or 8 stage charging select

(1) The charger features user selectable 2, 3, or 8 stage charging.

The charging profile is selected by moving the slide switch on the back panel.

Switch	Charging mode
Right	2 stage charging
Middle	3 stage charging
Left	8 stage charging

(2) Please choose the "3 stage" selection when the charger is used to charge the batteries and power the loads in the same time.



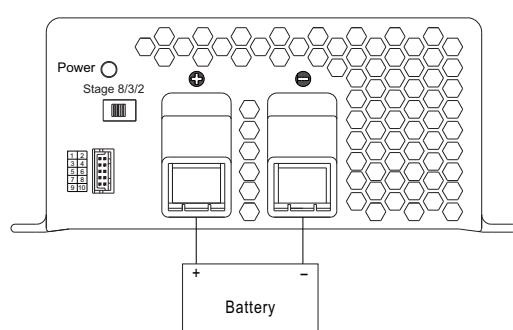
CN100	
1	RY13
2	RY13
NC	NC
RY15	RY15
GND	RTH
9	RC-
10	RC+

Function Manual

1. Remote Control

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

Between RC+(pin 10) and RC-(pin 9)	Charging
SW Open	ON
SW Short	OFF



CN100	
1	RY13
2	RY13
NC	NC
RY15	RY15
GND	RTH
9	RC-
10	RC+

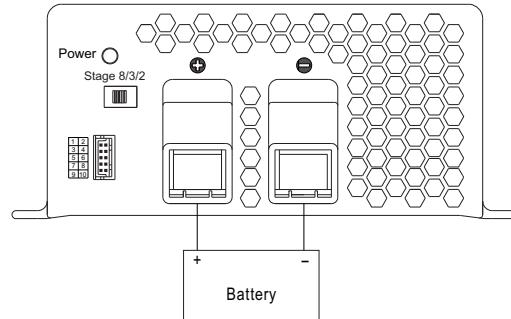


600W Intelligent Single Output Battery Charger

PB-600 series

2. Charger OK Relay(RY15)

Charger	Between pin5 and pin6(RY15)
Work normally	ON (Short)
Failure or protection function activated	OFF (Open)

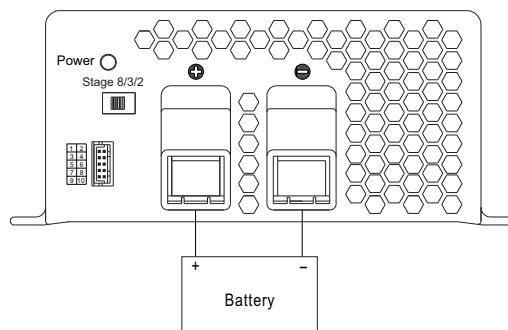


CN100	
1	RY13 RY13
NC	NC
RY15	RY15
GND	RTH
9	RC- RC+
	10
	RY15

3. Output OK Relay (RY13)

1. Bank OK (RY13)

Bank	Between pin1 and pin2(RY13)	Color of LED
Battery Full	ON (Short)	Green
Charging	OFF (Open)	Orange

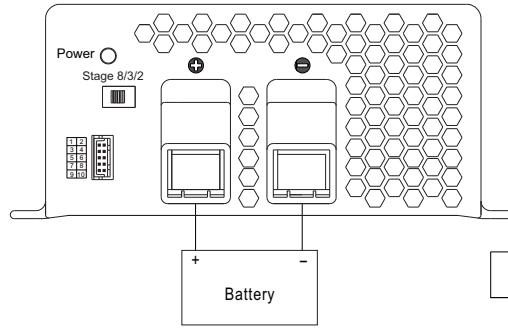


CN100	
1	RY13 RY13
NC	NC
RY15	RY15
GND	RTH
9	RC- RC+
	10
	RY13

4. Temperature compensation

Temperature sensor comes along with the charger 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.



CN100	
1	RY13 RY13
NC	NC
RY15	RY15
GND	RTH
9	RC- RC+
	10
	NTC

The temperature sensor can either be attached to the battery or placed in its surrounding environment.