



1000W Intelligent Single Output Battery Charger

PB-1000 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 selectable on output panel (Note 5)
- Built-in battery rescue function
- Universal AC input / Full range
- Controlled by microprocessor
- 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
- 2-Bank charger
- Temperature compensation function
- FAN on/off control (depends on charging current)
- 3 years warranty

User's Manual



UL62368-1

BS EN/EN62368-1

TPTC004

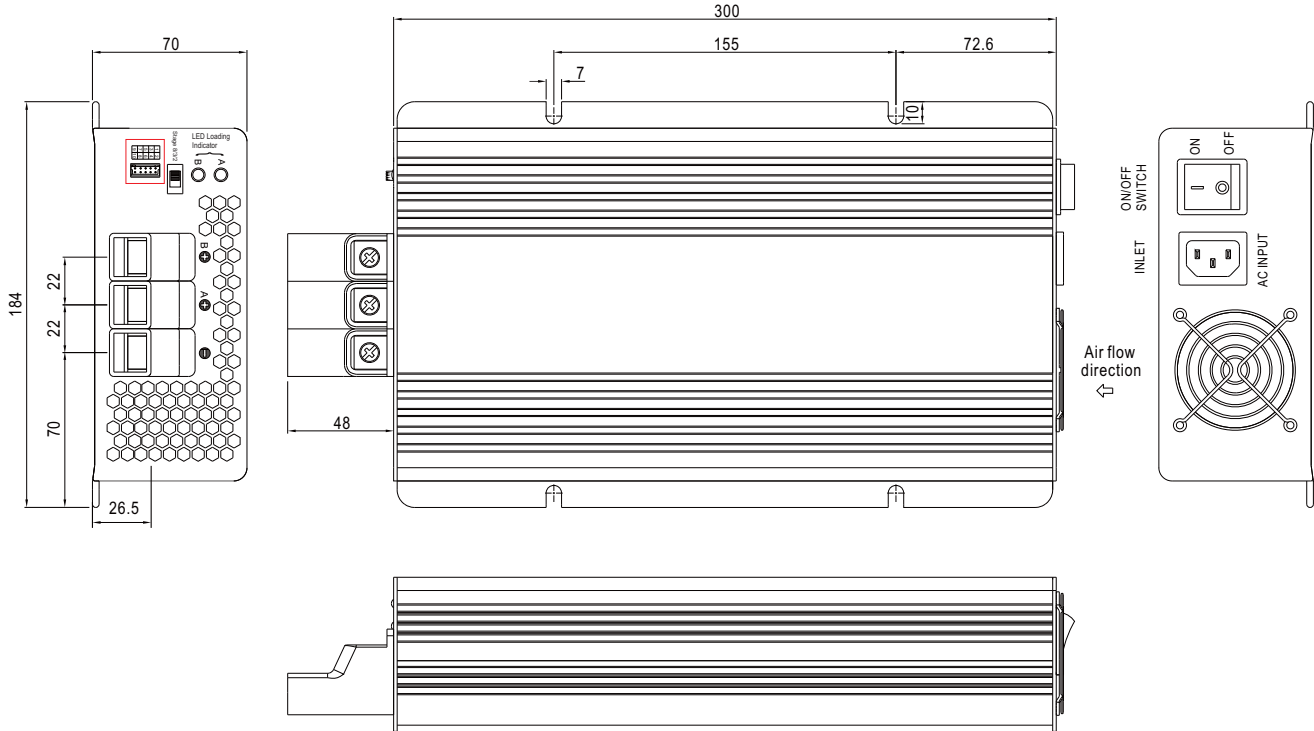
IEC62368-1

SPECIFICATION

MODEL	PB-1000-12		PB-1000-24		PB-1000-48	
OUTPUT	BOOST CHARGE VOLTAGE Vboost	14.4V		28.8V		57.6V
	FLOAT CHARGE VOLTAGE Vfloat	13.8V		27.6V		55.2V
	OUTPUT CURRENT	60A		34.7A		17.4A
	RECOMMENDED BATTERY CAPACITY(AMP HOURS)(Note 4)	200 ~ 600Ah		120 ~ 350Ah		60 ~ 175Ah
	BATTERY TYPE	Open & Sealed Lead Acid				
	LEAKAGE CURRENT FROM BATTERY (Typ.)	<1mA				
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.)	85%		88%		89%
	AC CURRENT (Typ.)	12A/115VAC 5.2A/230VAC				
	INRUSH CURRENT (Typ.)	25A/115VAC 50A/230VAC				
	LEAKAGE CURRENT	<3.5mA / 240VAC				
PROTECTION	OVER VOLTAGE	16 ~ 18V		32 ~ 35V		64.5 ~ 69.5V
		Protection type : Shut down o/p voltage, re-power on to recover				
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down				
	SHORT CIRCUIT	YES, protected by internal circuit				
	REVERSE POLARITY	YES, protected by internal circuit				
FUNCTION	REMOTE CONTROL	Open: Normal work Short: Stop Charging				
	BATTER BANKS	2 banks (A & B)				
	FAST CHARGE	2 / 3 / 8 stage selectable				
	CHARGER OK	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				
	OUTPUT OK	Relay contact rating(max.): 30V/1A resistive ; "Short" when the battery is full, "Open" when the battery is still charging				
	TEMPERATURE COMPENSATION	By NTC, compensate both banks at the same time				
ENVIRONMENT	WORKING TEMP.	-20 ~ +60℃ (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing				
	TEMP. COEFFICIENT	±0.05%/℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 3)	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, 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℃ / 70% RH				
	EMC EMISSION	Compliance to BS EN/EN55032 (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				
OTHERS	MTBF	127.4K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	300*184*70mm(L*W*H)				
	PACKING	3.5Kg; 4pcs/15Kg/1.83CUFT				
NOTE	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℃ 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℃/1000m with fanless models and of 5℃/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

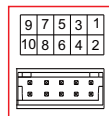
Case No. 804B Unit:mm



※ LED Loading Indicator Status Table

Color	Status	Steady	Flashing
Red	Abnormal status		
Orange			
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

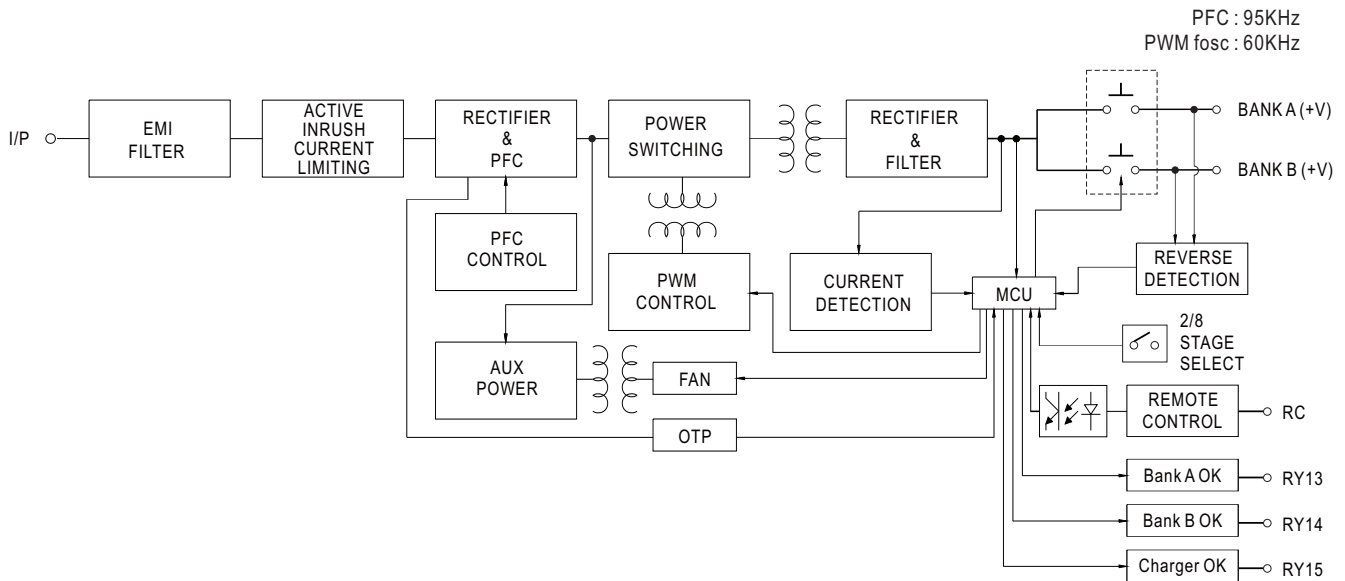
Pin No.	Function	Description
1,2	RY13	RY13 : Battery Bank A OK relay. Relay contact rating(max.) : 30V/1A resistive. ; "Short" when the battery A is full, "Open" when the battery A is still charging.
3,4	RY14	RY14 : Battery Bank B OK relay. Relay contact rating(max.) : 30V/1A resistive. ; "Short" when the battery B is full, "Open" when the battery B 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 Temperature sensor comes along with the charger can be connected to the unit to allow temperature compensation of the charging voltage.
8	NTC(5K Ω) RTH	If the temperature sensor is not used, the charger still works normally.
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



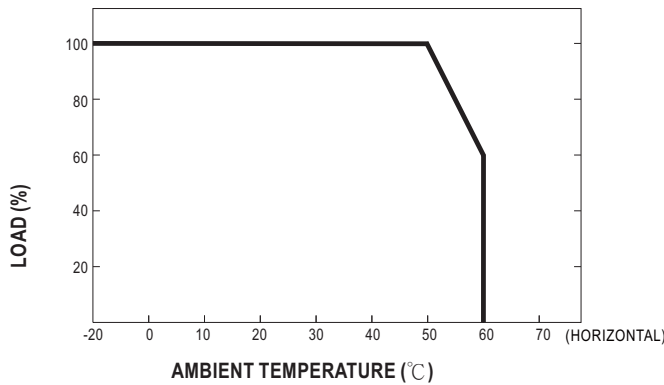
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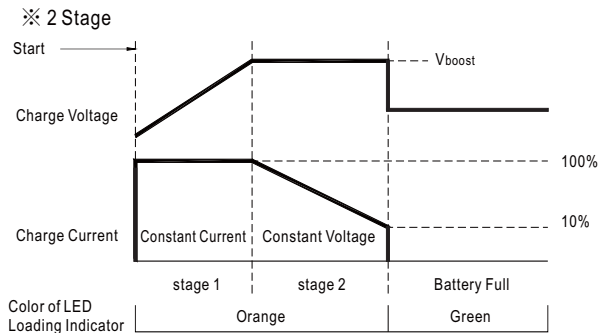
■ Block Diagram



■ Derating Curve

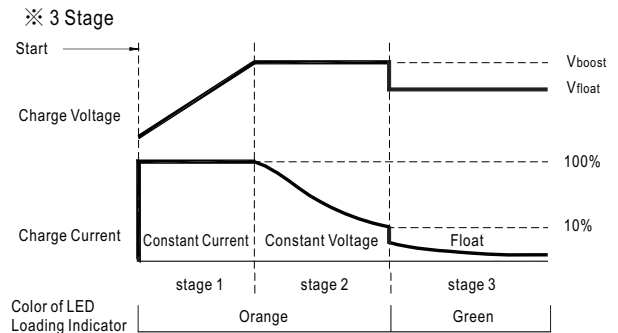


■ Charging Curve



State	PB-1000-12	PB-1000-24	PB-1000-48
Constant Current	60A	34.7A	17.4A
Vboost	14.4V	28.8V	57.6V

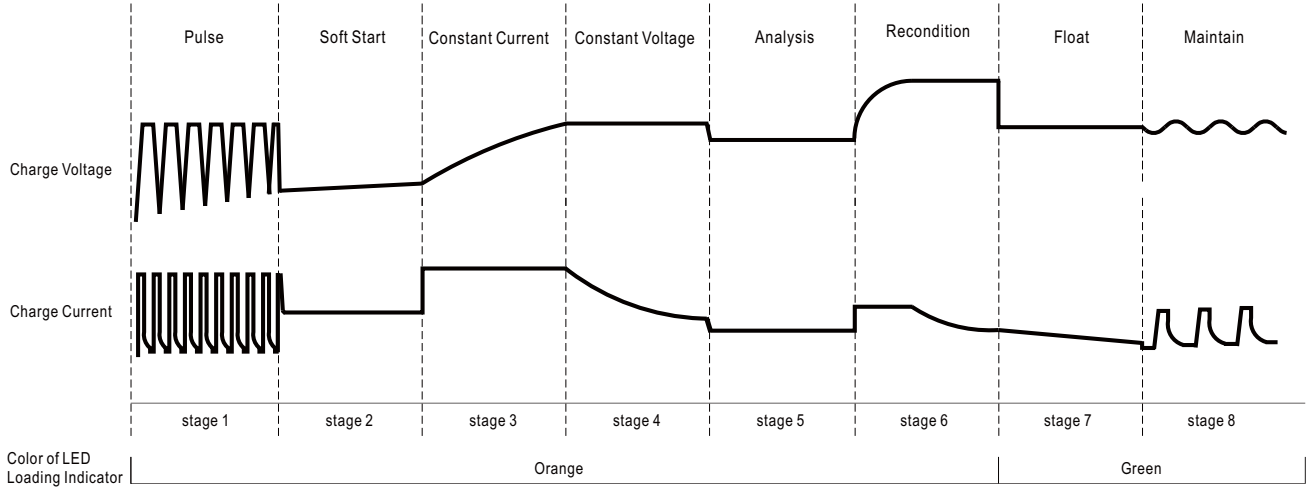
◎ Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).



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

8 Stage



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

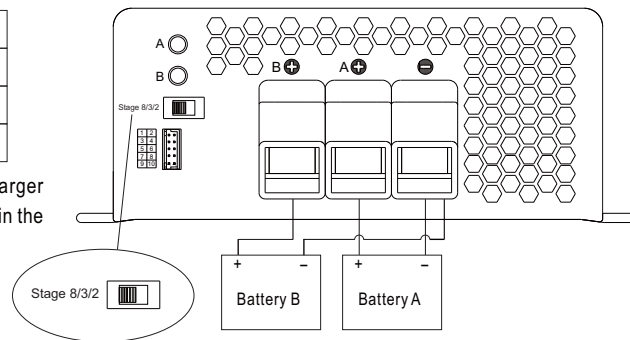
2,3, or 8 Stage Charging Select

(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

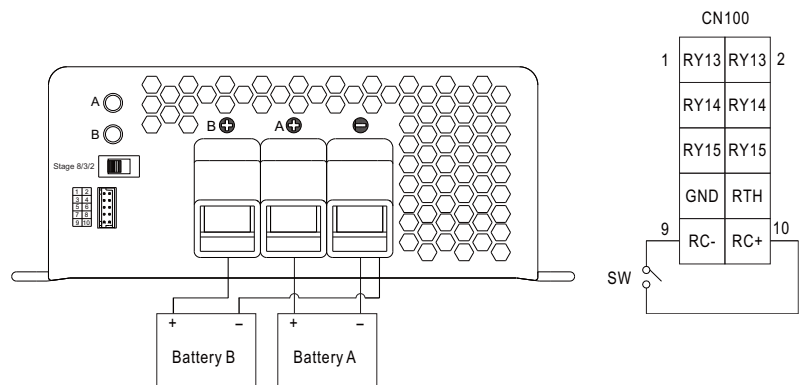
1	RY13	RY13	2
	RY14	RY14	
	RY15	RY15	
	GND	RTH	
9	RC-	RC+	10

Function Manual

1.Remote Control

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

Between RC+(pin10) and RC-(pin9)	Charger
SW Open	ON
SW Short	OFF





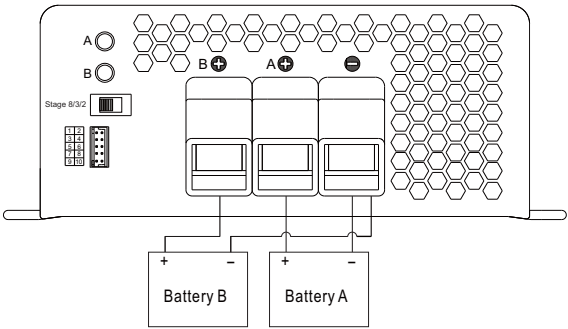
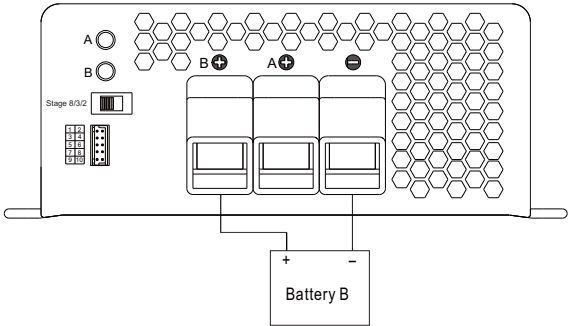
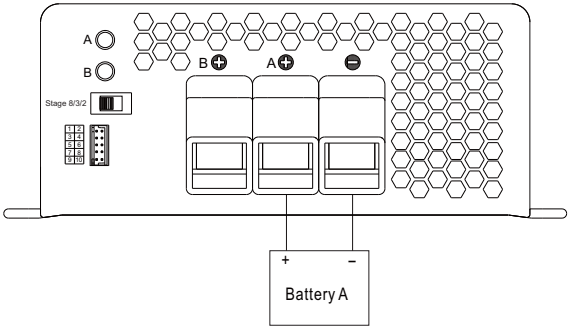
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2. Two Battery Banks (2/8 stage only)

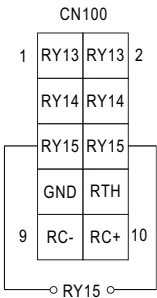
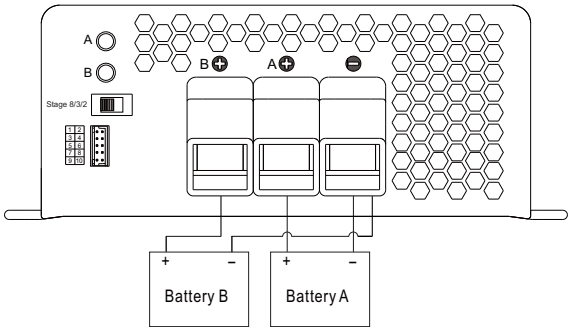
The charger may be hooked up two battery banks (A and/or B). Connect the battery bank(s) as below. If you are connecting 2 battery banks in the same time, keep in mind that they must share a common ground.

NOTE: The charger will charge bank A first then bank B if both channels are connected.



3.Charger OK Relay(RY15)

Charger	Between pin5 and pin6(RY15)
Normal work	ON (Short)
Failure or the protection function is activating	OFF (Open)



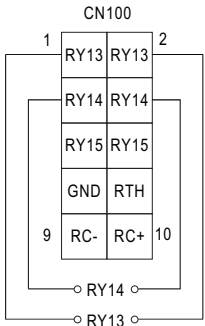
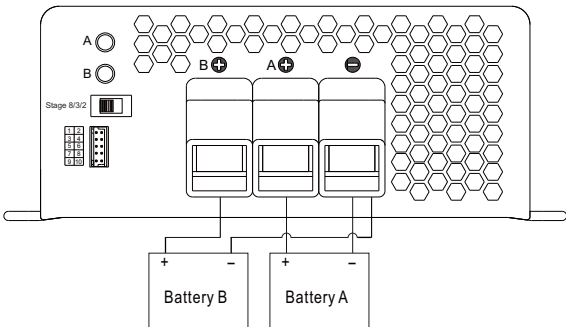
4.Output OK Relay(RY13 & RY14)

1.Bank A OK (RY13)

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

2.Bank B OK (RY14)

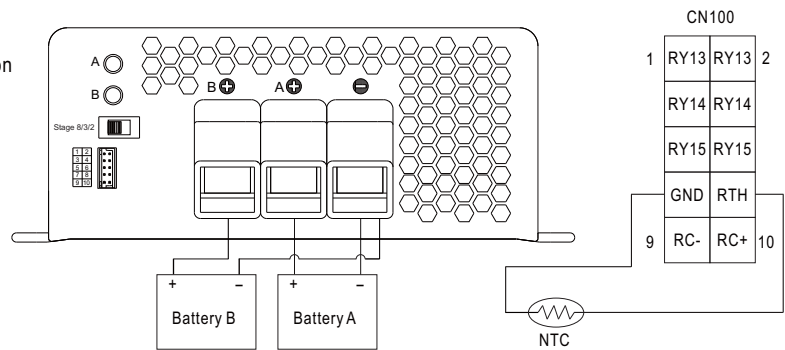
Bank B	Between pin3 and pin4(RY14)	Color of LED B
Battery B Full	ON (Short)	Green
Charging	OFF (Open)	Orange



5. 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 temperature sensor is not used, the charger still works normally.



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