230W Single Output Battery Charger

PB-230 series



■ Features :

- Charger for lead-acid batteries (flooded,Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese) (Note.1)
- 3 stage charging characteristic
- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protection: Short circuit / Overload / Over voltage / Over temperature
- Built-in cooling Fan ON-OFF control
- Built-in remote ON-OFF control
- 2 color LED loading indicator
- Low cost, high reliability
- 2 years warranty

(for PB-230-xxAD1 only)

ORDER NO.	OUTPUT CONNECTOR	SAFETY
PB-230-xx (standard model)	4pin power din	
PB-230-xxAD1 (optional model)	Anderson connector	UL / EAC
PB-230-xx☐ xx=12,24,48 ; ☐ =Blank, AD1		

SPECIFICATION

MODEL		PB-230-12☐	PB-230-24☐	PB-230-48☐
OUTPUT	BOOST CHARGE VOLTAGE	14.4V	28.8V	57.6V
	FLOAT CHARGE VOLTAGE	13.6V	27.2V	54.4V
	RECOMMENDED BATTERY CAPACITY(AMP HOURS)(Note 5)	50 ~ 160Ah	24 ~ 80Ah	12 ~ 40Ah
	BATTERY TYPE	Open & Sealed Lead Acid		
	OUTPUT CURRENT	16A	8A	4A
INPUT	VOLTAGE RANGE	90 ~ 264VAC 127 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF>0.95/230VAC PF>0.98/115VAC at full load		
	EFFICIENCY (Typ.)	81.5%	85.5%	86%
	AC CURRENT (Typ.)	3A/115VAC 1.5A/230VAC		
	INRUSH CURRENT (Typ.)	COLD START 50A		
	LEAKAGE CURRENT	<3.5mA / 240VAC		
PROTECTION	OVERLOAD	90 ~ 110% rated output current		
		Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	16 ~ 18V	31 ~ 35V	59 ~ 64V
		Protection type : Shut down o/p voltage, re-power on to recover		
	OVER TEMPERATURE	Protection type : Automatically derate charge current until zero		
FUNCTION	REMOTE CONTROL (CN105)	Open: Normal work Short: Stop Charging		
	FAN CONTROL	RTH3≧50℃ Fan ON, ≦45℃ Fan OFF (Typ.)		
	TEMPERATURE SENSE	By NTC		
ENVIRONMENT	WORKING TEMP.	-20 ~ +50℃ (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL1012, EAC TP TC 004(for PB-230-xxAD1 only), PSE J60950-1 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℃/ 70% RH		
	EMC EMISSION	Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A, EAC TP TC 020		
OTHERS	MTBF	244.5Khrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	190*96*49mm(L*W*H)		
	PACKING	1.21Kg; 12pcs/15.5Kg/1.29CUFT		
CONNECTOR	PLUG	See page 2 ; Other type available by customer requested		
	CABLE	See page 2 ; Other type available by customer requested		

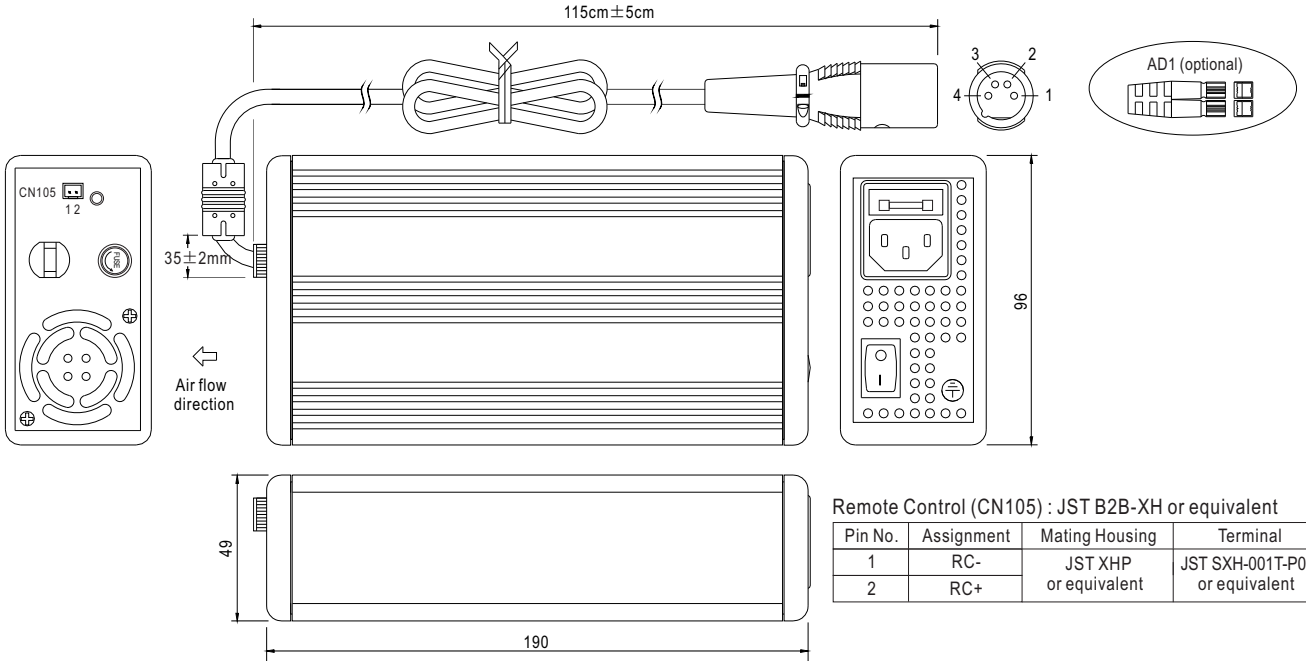
NOTE

1. Modification for charger specification may be required for different battery specification. Please contact MEAN WELL for details.
2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
4. Tolerance : includes set up tolerance, line regulation and load regulation.
5. 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.
6. This is Mean Well's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.
7. 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).

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■ Mechanical Specification

Case No.PB-230A Unit:mm



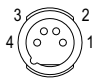
Remote Control (CN105) : JST B2B-XH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	RC-	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	RC+		

■ Plug Assignment

DC output connector (standard)

4pin XLR
UNICABLE 89M103-4P or equivalent



PIN NO.	OUTPUT
1,2	+V
3,4	-V

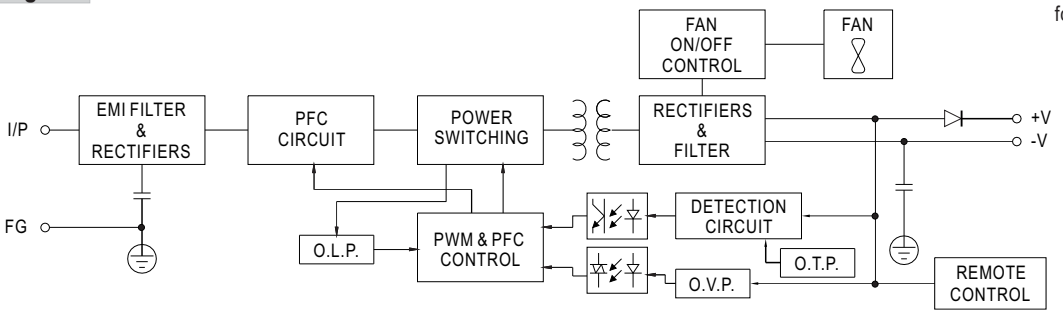
DC output connector (optional)

AD1
[housing: Anderson 1327FP(red), 1327G6FP(black)
contacts: Anderson 261G2 (45A) or equivalent]

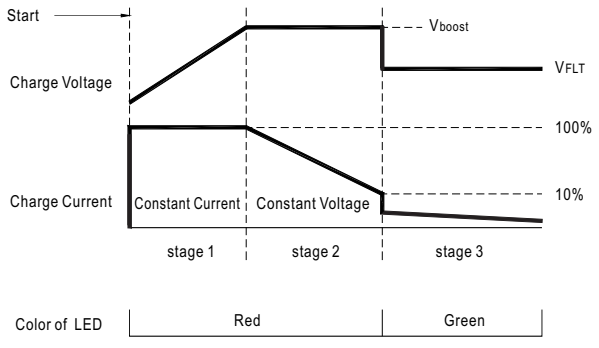
Red(+V) Black(-V)

■ Block Diagram

fosc : 90KHz

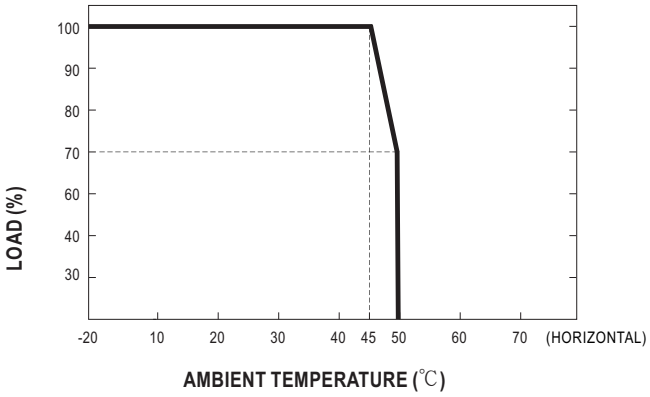


■ Charging Curve



State	PB-230-12□	PB-230-24□	PB-230-48□
Vboost	14.4V	28.8V	57.6V
VFLT	13.6V	27.2V	54.4V

■ Derating Curve



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