E-Star Power Development Co., Ltd. (E-STAR)
1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City 22069, Taiwan (R.O.C.)
Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

# 300W Battery Charger Power supply> PB-300

## Features :

- Charger for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese) (Note.1)
- 3 stage charging
- AC 115/230VAC selected by switch
- Built-in passive PFC function compliance to EN61000-3-2 Class A (option)
- Protection: Short circuit / Reverse polarity / Over voltage / Over temperature
- Cooling by free air convection
- 2 color LED loading indicator
- Low cost, High reliability
- 3 years warranty

c UL us UL62368-1 EAC TPTC004 CB (except for 48V) IEC62368-1 CE (P type only)

PB – 300 [P] – 12

P:With Passive PFC
N:Without Passive PFC

12:14.4V
24:28.8V
48:57.6V

## SPECIFICATION

| MODEL | | PB-300□-12 | PB-300□-24 | PB-300□-48 |
|---|---|---|---|---|
| OUTPUT | BOOST CHARGE VOLTAGE Vboost | 14.4V | 28.8V | 57.6V |
| | FLOAT CHARGE VOLTAGE Vfloat | 13.6V | 27.2V | 54.4V |
| | VOLTAGE ADJUSTABLE RANGE | 13 ~ 14.7V | 26 ~ 28.8V | 52 ~ 58.6V |
| | RECOMMENDED BATTERY CAPACITY(AMP HOURS) Note 6 | 60 ~ 200Ah | 30 ~ 100Ah | 15 ~ 50Ah |
| | BATTERY TYPE | Open & Sealed Lead Acid | | |
| | MAX. OUTPUT CURRENT(Typ.) Note 8 | 20.85A | 10.5A | 5.3A |
| | CONTINUOUS OUTPUT CURRENT (Typ.) Note 7 | 12.5A | 6.25A | 3.2A |
| INPUT | VOLTAGE RANGE | 90 ~ 132VAC / 180 ~ 264VAC selected by switch 127 ~ 187VDC / 254 ~ 370VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | >0.65 (with P type) at 230VAC | | |
| | EFFICIENCY (Typ.) | 85% | 86% | 88% |
| | AC CURRENT (Typ.) | 6A/115VAC 3A/230VAC | | |
| | INRUSH CURRENT (Typ.) | COLD START 60A | | |
| | LEAKAGE CURRENT | <3.5mA / 240VAC | | |
| PROTECTION | SHORT CIRCUIT | O/P Built in fuse (FS100) to protect short circuit condition, shut down o/p voltage and can not re-power on | | |
| | REVERSE POLARITY | By internal fuse | | |
| | 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 (CN5) | Open: Normal work Short: Stop Charging | | |
| ENVIRONMENT | WORKING TEMP. | -10 ~ +50℃ (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 ~ 45℃) | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | |
| SAFETY & EMC (Note 5) | SAFETY STANDARDS | IEC60335-2-29 CB approved by TUV(except for 48V), UL62368-1, CSA C22.2 No. 62368-1, 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 EN55032 (CISPR32) Class B, EN61000-3-2,-3 (only P type), 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 | 115.8Khrs min. MIL-HDBK-217F (25℃) | | |
| | DIMENSION | 253*135*48.5mm(L*W*H) | | |
| | PACKING | 1.45Kg; 6pcs/9.7Kg/1.03CUFT | | |

NOTE

1. Modification for charger specification may be required for different battery specification.
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. Test condition is at 25℃, charging current will change under different temperature.
8. Maximum charging current will be in the range of 90~110% rated output current.
9. 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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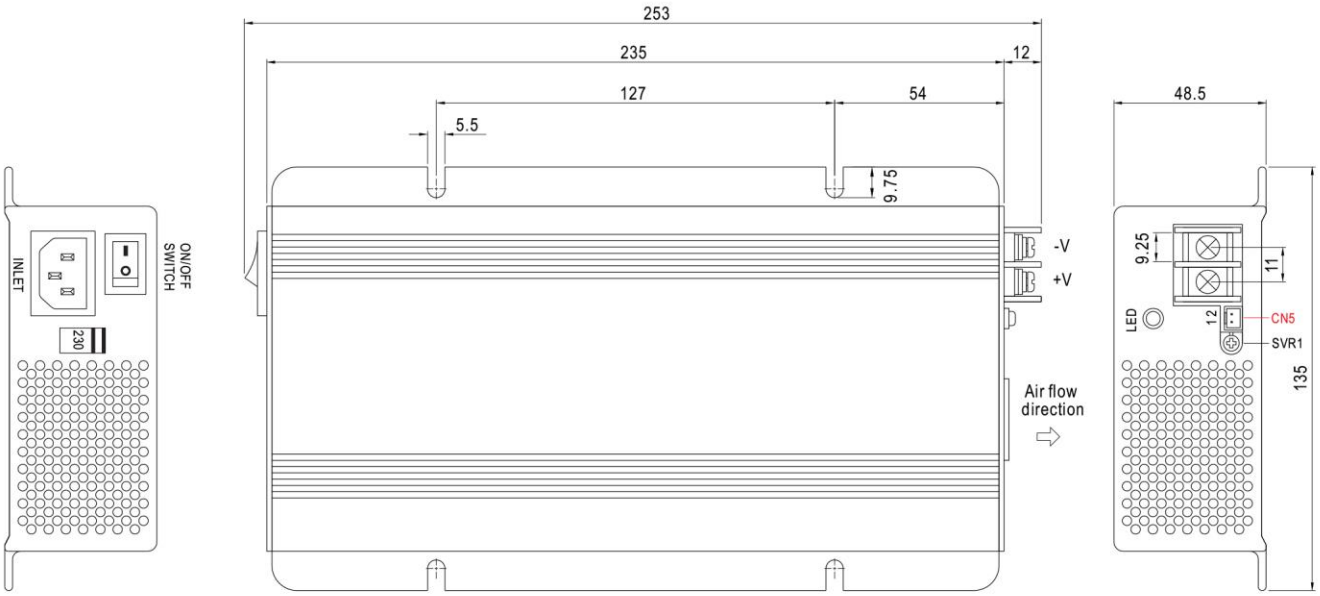
## ■ Mechanical Specification

Case No.801B Unit:mm

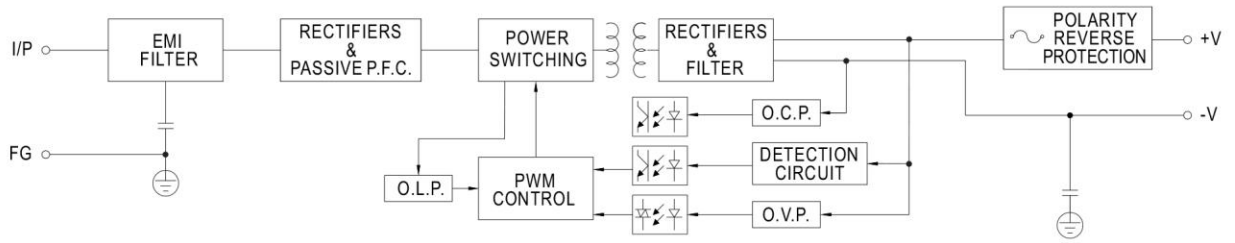



Remote Control(CN5) : JST B2B-XH or equivalent

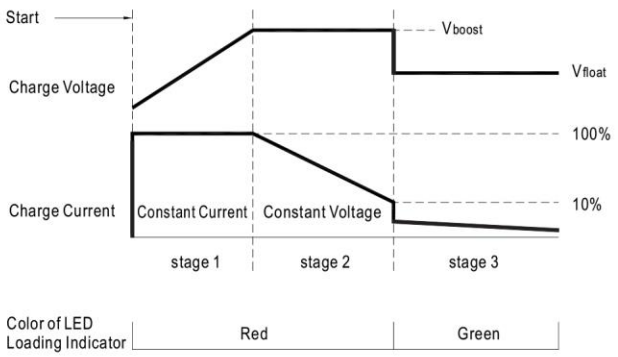
| Assignment | Mating Housing | Terminal |
|---|---|---|
| PIN1,2 Open: Normal work | JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |
| PIN1,2 Short: Stop Charging | | |

## ■ Block Diagram

fosc : 70KHz




## ■ Charging Curve




| State | PB-300-12 | PB-300-24 | PB-300-48 |
|---|---|---|---|
| Vboost | 14.4V | 28.8V | 57.6V |
| Vfloat | 13.6V | 27.2V | 54.4V |

## ■ Output Load VS Temperature