# 160W Single Output Battery Charger

# GC160 series



## Features :

- Charger for lead-acid batteries (flooded,Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese) (Note.1)
- 2 stage charging characteristic
- Universal AC input / Full range
- Built-in active PFC function, PF>0.94
- No load power consumption<1W
- 3 pole AC inlet IEC320-C14
- Class I power ( with earth pin)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Fully enclosed plastic case
- 2 color LED indicator for charging status
- Approvals: UL / TUV / EAC / CB / FCC / CE / UKCA
- 2 years warranty

User's Manual

Video

## GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

( for GC160Axx-AD1 only)

BS EN/EN62368-1 TPTC004 IEC62368-1

| ORDER NO. | OUTPUT CONNECTOR | SAFETY |
|---|---|---|
| GC160Axx-R7B (standard model) | 4pin power din | TUV / CB / FCC / CE / UKCA / EAC |
| GC160Axx-AD1 (standard model) | Anderson connector | UL / TUV / CB / FCC / CE / UKCA / EAC |
| GC160Axx-□ xx=12,24,48 ; □=R7B,AD1 | | |

## SPECIFICATION

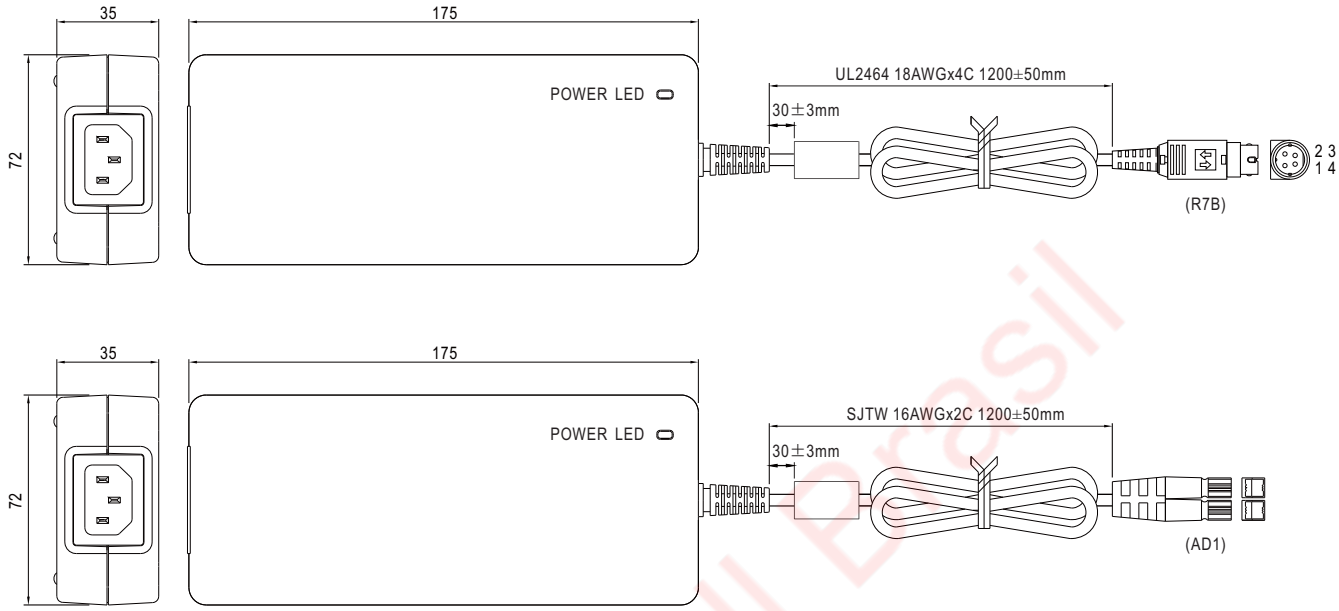
| ORDER NO. | | GC160A12-□ | GC160A24-□ | GC160A48-□ |
|---|---|---|---|---|
| OUTPUT | SAFETY MODEL NO. | GC160A12 | GC160A24 | GC160A48 |
| | DC VOLTAGE (Typ.) | 13.6V | 27.2V | 54.4V |
| | RECOMMENDED BATTERY CAPACITY Note.3 | 60 ~160Ah | 30 ~ 90Ah | 15 ~ 45Ah |
| | CONTINUOS OUTPUT CURRENT (Typ.) | 10A | 5.89A | 2.95A |
| | RATED POWER | 136W | 160.2W | 160.5W |
| | LED INDICATOR | Charging(CC) : RED Floating charging(CV) : GREEN | | |
| INPUT | VOLTAGE RANGE Note.4 | 85 ~ 264VAC 120 ~ 370VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | PF>0.94 / 230VAC PF>0.98 / 115VAC at full load | | |
| | EFFICIENCY (Typ.) | 89% | 92.5% | 94% |
| | AC CURRENT | 1.85A / 115VAC 1A / 230VAC | | |
| | INRUSH CURRENT (max.) | 120A / 230VAC | | |
| | LEAKAGE CURRENT(max.) | 0.75mA / 240VAC | | |
| PROTECTION | OVERLOAD Note.5 | 90 ~ 110% rated output power<br>Protection type : Constant current limiting recovers automatically after fault condition is removed | | |
| | SHORT CIRCUIT | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 105 ~ 135% rated output voltage<br>Protection type : Shut down o/p voltage, re-power on to recover | | |
| | OVER TEMPERATURE | 90℃ ±10℃ (RTH2) detect on inside ambient temperature<br>Protection type : Shut down o/p voltage, re-power on to recover | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70℃ (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, period for 60min. each along X, Y, Z axes | | |
| SAFETY & EMC (Note. 6) | SAFETY STANDARDS | UL1012 (for GC160Axx-AD1 only), TUV BS EN/EN62368-1, EAC TP TC 004 approved | | |
| | WITHSTAND VOLTAGE | I/P-O/P: 3KVAC | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH | | |
| | EMC EMISSION | Compliance to BS EN/EN55032 class B, BS EN/EN61000-3-2,3, FCC PART 15 / CISPR22 class B, CAN ICES-3(B)-NMB-(B), EAC TP TC 020 | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, light industry level, EAC TP TC 020 | | |
| OTHERS | MTBF | 2197.9K hrs min. Telcordia SR-332 (Bellcore) ; 274.1K hrs min. MIL-HDBK-217F (25℃) | | |
| | DIMENSION | 175*72*35mm (L*W*H) | | |
| | PACKING | 0.7Kg; 20pcs/15Kg/0.95CUFT(GC160Axx-R7B) 0.77Kg; 20pcs/16.4Kg/1.15CUFT(GC160Axx-AD1) | | |
| 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 battery vendor and MEAN WELL for details.<br>2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>3. This is MeanWell's suggested range, please consult your battery manufacturer for their suggestions about maximum charging current limitation.<br>4. Derating may be needed under low input voltage. Please check the derating curve for more details.<br>5. Constant current operation region is within 50~100% rated output voltage.<br>6. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf )<br>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).<br>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | | |



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## ■ Mechanical Specification

Case No.997A Unit:mm




## ■ Plug Assignment

DC output connector

R7B
(KYCON KPP-4S or equivalent)

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



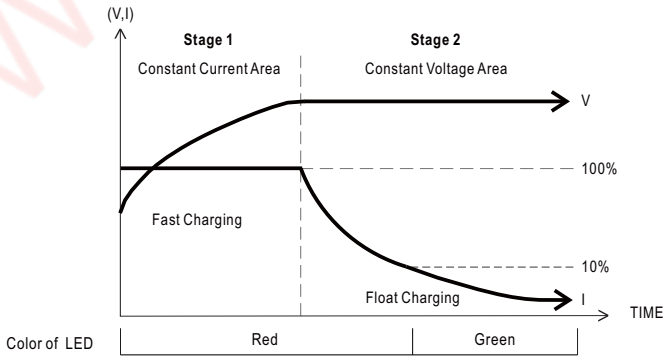

AC FG

-V connected to AC FG

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

Red(+V) Black(-V)

## ■ Charging Curve

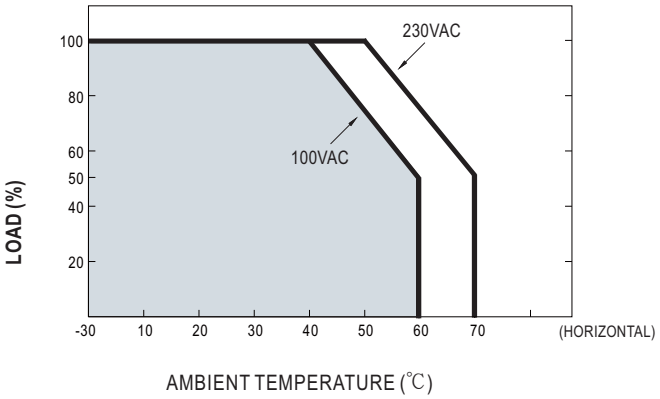



| Model | Suggested Battery capacity |
|---|---|
| GC160A12 | 60-160Ah |
| GC160A24 | 30-90Ah |
| GC160A48 | 15-45Ah |

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

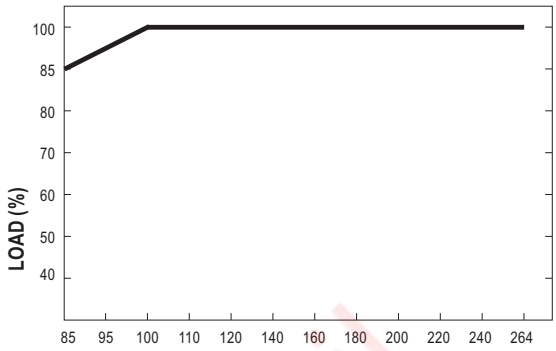
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## Derating Curve




AMBIENT TEMPERATURE (℃)

## Static Characteristics




**INPUT VOLTAGE (VAC) 60Hz**

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