220W Single Output Battery Charger

**GC220 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>0.90
- No load power consumption<1W
- 3 pole AC inlet IEC320-C14
- Class 1 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: TUV / UL / CB / FCC / CE
- 2 years warranty

### ORDER NO.
- GC220Axx-R7B (standard model)
- GC220Axx-AD1 (optional model)
- GC220Axx- xx=12,24,48 ; R7B,AD1 GC220Axx-xx

### OUTPUT
- Connector: 4pin power pin
- Connector: Anderson connector
- Safety: TUV / CB / FCC / CE

### SPECIFICATION

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<thead>
<tr>
<th>ORDER NO.</th>
<th>OUTPUT CONNECTOR</th>
<th>SAFETY</th>
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<tbody>
<tr>
<td>GC220Axx-</td>
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<td>TUV / CB / FCC / CE</td>
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<tr>
<td>R7B</td>
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<tr>
<td>GC220Axx-AD1</td>
<td>Anderson connector</td>
<td>UL / TUV / CB / FCC / CE</td>
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</table>

#### ORDER NO.
- GC220A12-   | GC220A24-   | GC220A48-   |
- GC220A12-   | GC220A24-   | GC220A48-   |

#### DC VOLTAGE (Typ.)
- GC220A12: 13.6V
- GC220A24: 27.2V
- GC220A48: 54.4V

#### RECOMMENDED BATTERY CAPACITY
- Note.1: 80 ~ 200Ah
- 40 ~ 125Ah
- 20 ~ 65Ah

#### CONTINUOUS OUTPUT CURRENT (Typ.)
- GC220A12: 13.5A
- GC220A24: 8A
- GC220A48: 4A

#### RATED POWER
- GC220A12: 183.6W
- GC220A24: 217.6W
- GC220A48: 217.6W

#### LED INDICATOR
- Charging(OC): RED
- Floating charging(CV): GREEN

#### VOLTAGE RANGE
- Note.4: 90 ~ 264VAC / 127 ~ 370VDC

#### FREQUENCY RANGE
- 47 ~ 63Hz

#### POWER FACTOR (Typ.)
- GC220A12: PF>0.91 / 230VAC
- GC220A24: PF>0.98 / 115VAC at full load

#### EFFICIENCY (Typ.)
- GC220A12: 89%
- GC220A24: 92.5%
- GC220A48: 93%

#### AC CURRENT
- GC220A12: 120A / 230VAC
- GC220A24: 2A / 230VAC
- GC220A48: 4A / 115VAC

#### INRUSH CURRENT (max.)
- GC220A12: 3KVAC
- GC220A24: 6KVAC
- GC220A48: 10KVAC

#### LEAKAGE CURRENT(max.)
- GC220A12: ≤0.1mA
- GC220A24: ≤0.5mA
- GC220A48: ≤0.5mA

#### OVERLOAD
- Note.5: 89 ~ 110% rated output power
- 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
- Protection type: Shut down o/p voltage, re-power on to recover

#### OVER TEMPERATURE
- 95 ℃±10℃ (TSW1) detect on heatsink of power transistor
- Protection type: Shut down o/p voltage, recovers automatically after temperature goes down

#### WORKING TEMP.
- -30 ~ +60 ℃ (Refer to "Derating Curve")

#### WORKING HUMIDITY
- 20% ~ 90% RH non-condensing

#### STORAGE TEMP., HUMIDITY
- 40 ~ +85 ℃, 10 ~ 95% RH
- ≤0.03%/℃ (0-50℃)

#### VIBRATION
- 10 ~ 500Hz, 2G, 10min./1cycle, period for 60min. each along X, Y, Z axes

#### SAFETY & EMC
- SAFETY STANDARDS: UL1012 (for GC220Axx-AD1 only), TUV EN60950-1 approved
- WITHSTAND VOLTAGE: IP-QIP: 3KVAC
- ISOLATION RESISTANCE: 1MΩ / 1000VDC / 25℃ / 70% RH
- EMC EMISSION: Compliance to EN55012 class B, FCC PART 15 class B / CISPR32 class B, EN61000-3-2,3
- EMC IMMUNITY: Compliance to EN61000-4-2,3,4,5,6,8,11, light industry level, criteria A
- OTHERS: MTBF: 2500hrs min. MIL-HDBK-217F(25℃)
- DIMENSION: 210*85*46mm (L*W*H)
- PACKING: 1.1Kg, 12pcs/14.2Kg/0.73CUFT (GC220Axx-R7B) 1.2Kg, 12pcs/15.4Kg/1CUFT (GC220Axx-AD1)
- 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.
- 2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
- 3. This is MeanWell's suggested range, please consult your battery manufacturer for their suggestions about maximum charging current limit.
- 4. Derating may be needed under low input voltage. Please check the derating curve for more details.
- 5. Constant current operation region is within 50 ~ 100% rated output voltage.
- 6. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that whole system complies with the EMC directives.
### Mechanical Specification

**Case No.961A Unit:mm**

**DC output connector (optional)**
- Housing: Anderson 1327FP (red), 1327G6FP (black)
- Contacts: Anderson 261G2 (45A) or equivalent

**Plug Assignment**

<table>
<thead>
<tr>
<th>PIN NO.</th>
<th>OUTPUT</th>
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<tr>
<td>1,4</td>
<td>+V</td>
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<tr>
<td>2,3</td>
<td>-V</td>
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**DC output connector (standard)**
- R7B (KYCON KPP-4S or equivalent)

**AC FG**
- -V connected to AC FG

**DC output connector (optional)**
- AD1 (housing: Anderson 1327FP (red), 1327G6FP (black))
- Contacts: Anderson 261G2 (45A) or equivalent

**Color of LED**
- Red (+V)
- Black (-V)

### Charging Curve

- **Stage 1**
  - Constant Current Area
- **Stage 2**
  - Constant Voltage Area

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

**Model**
- GC220A12: 60-200Ah
- GC220A24: 40-125Ah
- GC220A48: 20-65Ah

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**File Name:** GC220-SPEC 2017-06-22
Derating Curve

AMBIENT TEMPERATURE (℃)

LOAD (%)
0-30 20 10 30 40
20 40 80 60 100

INPUT VOLTAGE (VAC) 60Hz

90 100 95 120 110 160 140 200 180 240 220 264

GC220 series 220W Single Output Battery Charger

File Name: GC220-SPEC  2017-06-22
We are here for you. Addresses and Contacts.

Sales Germany & Austria

<table>
<thead>
<tr>
<th>Postcode</th>
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<th>Geometrical sensors</th>
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<td>32000 – 37999</td>
<td>Sensor elements</td>
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<td>80000 – 99999</td>
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<td>Austria</td>
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Kurt Stritzelberger

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Sales Switzerland & Liechtenstein

Basil Frei

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<tr>
<th>Postcode</th>
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<tr>
<td>3000 – 9999</td>
<td>1000 – 2999</td>
<td>Peter Felder</td>
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<th>Email</th>
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</table>

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Current sensors

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| Power supplies | |

| Linear position sensors | |

| Angle sensors | |

| Current sensors | |

| Power solutions | |

| Power supplies | |