

Smart Charger

Programmable 36V 150A CG5200

Century Smart Charge provides all the benefits of Century MP Access, with the added ability of fast charging. Incorporated in the Smart Charger is a unique charging algorithm to enable safe and effective fast charging, combined with high efficiency power conversion and interactive battery monitoring.

The algorithm can optimise charging on a range of battery types. This optimisation has the benefit of delivering a fully charged battery in a shorter amount of time while maximising the service life of the battery. A critical factor in fast charging is management of heat. To manage the heat generated a battery monitoring unit (BMU) is attached to the battery. The BMU actively monitors the temperature of the battery along with other key factors, and actively communicates with the charger to modify its charging to suit the circumstance.

The employment of high frequency power conversion has the effect of reducing the amount of energy consumed and providing a greater level of control of the power output. This technology also has the advantage of being lighter weight to conventional thyristor controlled chargers. Being lighter allows operators to wall mount these chargers with ease, reducing the possible risk of impact from material handling equipment and improving the use of space.

Century Smart Chargers have facilities to provide an equalise charge function. Equalise charge can be completed manually or regularly in an automatic (programmable) mode. When the battery also contains a BMU (Battery Monitoring Unit) it is possible to set the BMU to select when an equalise charge should be provided to the battery. In addition, Century Smart Chargers have facilities to control a solenoid valve connected to a water supply source. Automatic watering can take place when a Century Single Point Watering System is incorporated.



Features and Benefits

- Unique charging algorithm to provide safe and effective fastcharging capability when integrated with Century BMU.
- Battery Monitoring Unit: specifically designed to provide active control over charging parameters during charging.
- Alarm indicators: Highlights to the operator and logs issues with the charger and battery.
- High frequency power conversion with >91% efficiency in power conversion from input power to output power; the amount of energy consumed to recharge batteries is reduced.

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ELECTRICAL INPUT SPECIFICATIONS

| | |
|-----------------------|----------------------|
| VAC Input | 3P 400VAC $\pm 10\%$ |
| Input Current (Max I) | 10.6A (@ 400VAC) |
| Input Frequency | 50Hz -60Hz |
| Power Outlet Required | Clipsal 56P420 |
| Power Factor | >0.98 at rated power |
| Efficiency | >91% at 100% Load |
| Standby Consumption | <5W |

ELECTRICAL OUTPUT SPECIFICATIONS

| | |
|----------------------------|---|
| Technology | High Frequency Conversion |
| Nominal VDC (Programmable) | 24VDC; 36VDC |
| VDC Range (V/Cell) | 1.4VDC to 2.9VDC Per Cell |
| Max Current | 150A |
| Output Power (kW) | 6.5kW (2.4VDC @ 400 VAC) |
| Output Ripple (Max) | <5% RMS of Nominal DC Voltage & <10% RMS ripple current at 100% load |
| Output Accuracy Setting | VDC Output +/- 1% Current Output +/- 2% |

MECHANICAL

| | |
|---------------------------|-----------------|
| Dimensions (mm) H x W x D | 417 x 256 x 243 |
| Weight | 22kgs |

ENVIRONMENTAL

| | |
|--------------------------|-------------------------------------|
| Environmental Protection | Conformal Coating |
| Operational Temperature | (Ambient) 0°C to +40°C (Full Power) |
| Temperature Protection | Software and Hardware |
| Storage Temperature | -20°C to +70°C |
| Humidity | RH<95% non-condensing |
| Cooling | Fan Cooled - Temperature Controlled |
| IP Rating | IP20 |

STANDARDS

| | |
|-----------|--------------------------|
| Emissions | EN61000-6-3 |
| Immunity | EN61000-6-2 |
| Safety | EN60335-1 & EN60335-2-29 |

Battery Monitoring Unit

ELECTRICAL INPUT SPECIFICATIONS

| | |
|------------------------|----------------------------|
| Supply Voltage (VDC) | 10VDC to 150VDC |
| Protection | Reverse Polarity Protected |
| Current Sensor Range | +/-100mA to +/-1,500A |
| Connection Methodology | M10 Ring (Standard) |

STANDBY CONSUMPTION

| | |
|---------|------|
| 10VDC | 30mA |
| 25VDC | 13mA |
| 50VDC | 7mA |
| 75VDC | 6mA |
| >100VDC | 5mA |

DATA / COMMUNICATIONS SPECIFICATIONS

| | |
|-------------------------|--|
| Discharge/charge cycles | 2400 |
| Event/alarm log | 1700 |
| Instant log | 7300 |
| Communication | Wireless (radio network) IEEE 802.15.4, 2.4GHZ |

MECHANICAL

| | |
|-----------------|---------------|
| Dimensions (mm) | 107 x 38 x 20 |
| Weight | 150gr |

ENVIRONMENTAL

| | |
|-----------------------------------|-----------------------|
| Materials | Polyurethane and ABS |
| Operational Temperature (Ambient) | -20°C to +70°C |
| Storage Temperature | (-35°C to +70°C) |
| Humidity | RH<90% non-condensing |
| IP Rating | IP65 |

STANDARDS

| | |
|-----------|--------------|
| Emissions | EN 61000-6-3 |
| Immunity | EN 61000-6-2 |
| Safety | EN 60 204-1 |

Product Specification Disclaimer

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The portfolio within CenturyYuasa includes a wide range of stored energy products and services, as well as identifiable brands and unique technologies for automotive, materials handling and standby power applications. Directly maintaining and operating manufacturing centers in Australia and employing some 500 people, CenturyYuasa continues to be the Regions leading manufacturer of stored energy products.