



## Omnicharge

programmable automatic battery chargers

**Description** | The Omnicharge 12-90, 24-50 and 24-80 are fully programmable, automatic battery chargers designed for professional applications.

Combining the latest technologies and the best available parts with years of power electronics design expertise, the Omnicharge battery chargers will deliver long life performance even in the most demanding applications. A unique active rectifier output stage ensures unmatched efficiency figures. Combined with active PFC, the Omnicharge battery chargers are very energy efficient. This will reduce running costs and guarantees a maximum charge current per AC Watt.

Up to six charger units can be connected in parallel, allowing synchronized charging with currents up to 540A. Three separate battery banks can be charged simultaneously, thanks to the triple output design.

All Omnicharge models are equipped with advanced temperature compensated charging programs for lead acid and lithium based batteries. Besides easily selectable standard charge programs, users are also allowed to create a custom charging program using the TBS Dashboard software. The standard available TBSLink port enables connection to a number of accessories like the TBS remote controls.

All Omnicharge units are easy to install and come standard with temperature sensor and a very clear installation and operating instruction manual.

## Features

- Three full current outputs
- Robust industrial design
- Designed for continuous duty charging
- Very efficient
- Universal power factor corrected auto ranging AC input
- Parallel capability up to 6 units
- Protected against battery failure, high temperature, overload, short circuit, low input voltage and reverse polarity (fuse)
- Multistage intelligent charging programs
- Programmable charging programs up to 8 stages
- Protects the battery from being overcharged
- Variable speed fan for silent operation
- Remote on/off capability
- Alarm relay (optional Alarm Output Expander available for additional relays)
- Remote control capability via TBSLink
- Easy to access connection bay for installing AC-, DC and control wiring
- Temperature sensor included
- CE certified
- 24 month warranty

## Applications

- Recreational vehicles
- Marine applications
- Industrial systems
- Mobile entertainment systems
- Service vehicles
- Remote homes

## Accessories

- Universal Remote Control with LCD<sup>1)</sup>
- Basic Remote Control with LEDs<sup>2)</sup>
- DC cable kits
- TBSLink communication kit including software
- Alarm output expander



| Parameter                                  | OC12-90<br>(art. no. 5027200)  | OC24-50<br>(art. no. 5027220) | OC24-80<br>(art. no. 5027420) |
|--|--|-------------------------------|-------------------------------|
| AC input voltage                           | 100-260Vac / 47-63Hz / PF <sup>3</sup> 0.90  |                               | 180-260Vac                    |
| Full load power consumption                | 1550VA   | 1700VA                        | 2750VA                        |
| AC input current (115V/230V)               | 13.5A/6.8A   | 15A/7.5A                      | -/12A                         |
| Total DC output current <sup>1) 4)</sup>   | 90A  | 50A                           | 80A                           |
| Nominal DC output voltage <sup>1)</sup>    | 12Vdc  | 24Vdc                         |                               |
| Number of full current outputs             | 3 (internally isolated)  |                               |                               |
| Charge characteristic <sup>2)</sup>        | IUoUoP, intelligent 4-stage, temperature compensated   |                               |                               |
| Absorption voltage <sup>2)</sup>           | 14.4Vdc  | 28.8Vdc                       |                               |
| Float voltage <sup>2)</sup>                | 13.5Vdc  | 27.0Vdc                       |                               |
| Equalize voltage <sup>2)</sup>             | 15.5Vdc  | 31.0Vdc                       |                               |
| Supported Battery types <sup>2)</sup>      | Flooded / GEL / AGM / LiFePO4 / Custom   |                               |                               |
| Recommended battery capacity <sup>3)</sup> | 180-900Ah  | 100-500Ah                     | 160-800Ah                     |
| DC current draw (charger off)              | < 0.1mA  |                               |                               |
| Operating temp. range <sup>4)</sup>        | -10°C ... +55°C (humidity max. 90% non condensing)   |                               |                               |
| Storage temp. range                        | -20°C ... +70°C (humidity max. 90% non condensing)   |                               |                               |
| Cooling                                    | Variable speed fan controlled by temperature and load  |                               |                               |
| TBSLink enabled                            | Yes  |                               |                               |
| Protected against                          | Low AC voltage, output short circuit, high temperature, battery overcharging and reverse polarity (fuse) |                               |                               |
| Indications                                | Power on, output current bar, state of charge bar, error   |                               |                               |
| DC output connections                      | 4x M8 bolts  |                               |                               |
| AC input connections                       | Screw terminals  |                               |                               |
| Enclosure body size (H x W x D)            | 370 x 271 x 132mm  |                               |                               |
| Total weight                               | 6.5 kg   | 7.5 kg                        |                               |
| Protection class                           | IP21 (mounted in upright position)   |                               |                               |
| Standards                                  | CE marked meeting EMC directive 2004/108/EC and LVD 2006/95/EC complying with EN55014-1, EN60335-2-29    |                               |                               |

Note: the given specifications are subject to change without notice.

<sup>1)</sup> Maximum output current tolerance is +/-5%. Maximum set point voltage deviations are +/- 0.1V for 12V and +/- 0.2V for 24V models. All set point voltages are temperature compensated when battery temperature sensor is connected.

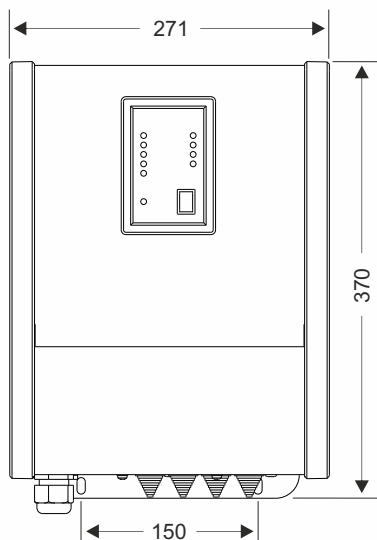
<sup>2)</sup> Value is programmable

<sup>3)</sup> Always consult battery manufacturers specifications for maximum allowable charge current

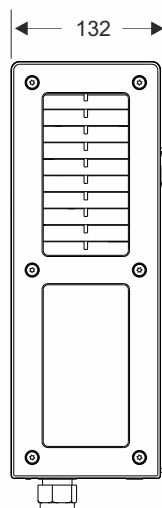
<sup>4)</sup> At higher ambient temperatures (>40°C), maximum output current may be reduced automatically

## Dimensions

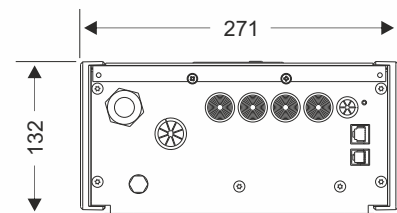
Front view



Side view



Bottom view



measurement units : millimeters