



## Description

The Omnicharge 12-90, 24-50, 24-80 and 48-40 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 (for interfacing to external BMS)
- 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

## Technical specifications

Parameter	OC12-90 art # 5027200	OC24-50 art # 5027220	OC24-80 art # 5027420	OC48-40 art # 5027440
Input voltage	100-260Vac / 47-63Hz / PF ≥ 0.90		180-260Vac / 47-63Hz / PF ≥ 0.90	
Full load consumption	1550VA	1700VA	2750VA	2750VA
AC input current (115V/230V)	13.5A/6.8A	15A/7.5A	-/12A	-/12A
Nominal output voltage <sup>1)</sup>	12Vdc		24Vdc	48Vdc
Total output current <sup>1) 4)</sup>	90A	50A	80A	40A
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	57.6Vdc
Float voltage <sup>2)</sup>	13.5Vdc		27.0Vdc	54.0Vdc
Equalize voltage <sup>2)</sup>	15.8Vdc		31.6Vdc	63.2Vdc
Supported Battery types <sup>2)</sup>	Flooded / GEL / AGM / LiFePO4 / Custom			
Recommended battery capacity <sup>3)</sup>	180-900Ah	100-500Ah	160-800Ah	80-400Ah
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			
Communication port	TBSLink			
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 (L x W x H)	370 x 270 x 132mm			
Total weight	6.2 kg			
Protection class	IP21 (mounted in upright position)			
Standards	CE marked meeting EMC directive 2014/30/EU and LVD 2014/35/EU complying with EN60335-1, EN60335-2-29 and RoHS 2011/65/EU			

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

- <sup>1)</sup> Maximum output current tolerance is +/-10%. Maximum setpoint voltage deviations are +/- 1%.  
 All setpoint 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

## Accessories

- Universal Remote Control with LCD
- Basic Remote Control with LEDs
- TBSLink communication kit including software



Basic Charger Remote Control, art # 5095220

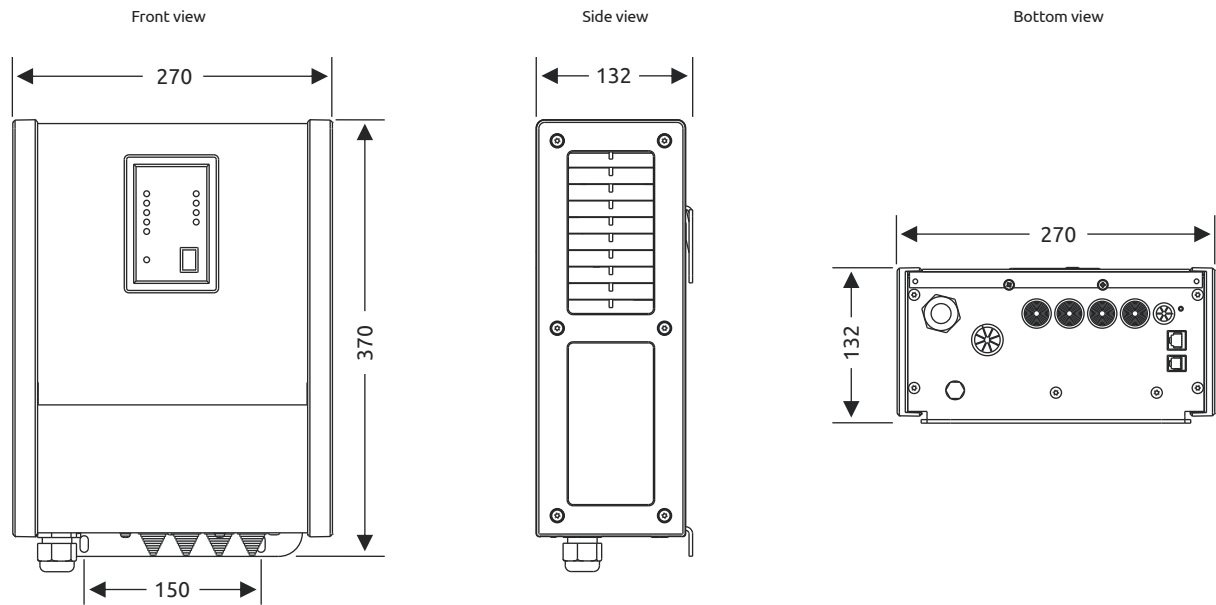


Universal Remote Control (Omnicharge), art # 5095500

TBSLink to USB Interface Kit, art # 5092120  
 (Includes TBS Dashboard for monitoring the Powersine inverters)



## Dimensions



Measurement units: millimeters

## Basic application diagram

