



Description

The Omnicharge DC battery chargers are primarily intended to charge an auxiliary or service battery from a vehicle starter battery. The input battery voltage can be above, below or equal to the output battery voltage. So the Omnicharge DC charger allows the auxiliary battery to be perfectly charged regardless of the input voltage, while being protected against damage due to peak voltages. All this cannot be offered by conventional charging relays or traditional fixed step-up / step-down converters.

The Omnicharge DC battery chargers are compatible with vehicles that are equipped with variable output smart alternators (EUR 6+). It can start to charge based on a programmable input voltage range only, or in combination with an engine run signal. There is also a separate (BMS-) control input available that enables external control for charger-on and -standby.

Best in class power density is offered by delivering a maximum of 900W from a very compact enclosure. Charge programs for most commonly used battery types are available, but these can also be customized via the Dashboard for Windows or Dashboard Mobile apps. Input start/stop voltages and delays are programmable as well, including the functionality of the status output.

All Omnicharge DC units are easy to install and come standard with a temperature sensor, cable lugs, cable grommets and clear installation and operating instructions.

Features

- Robust very compact industrial design
- Designed for continuous duty charging
- Protects the output battery
- Protects alternator when charging lithium batteries
- High efficiency
- Variable speed fan for low noise operation
- Simple intuitive LED indicators show the charger's status at a glance
- Fully programmable through QuickLink interface
- Remote on/off input (engine run)
- BMS control input
- Open collector status output
- Protected against high temperature, short circuit, high/low input voltage and reverse polarity
- Very easy installation
- Temperature sensor included
- CE certified
- 24 month warranty

Applications

- Recreational vehicles
- Marine applications
- Service vehicles
- Charge voltage drop compensation



Omnicharge DC connections side

Accessories



QuickLink to RS-232 Communication Kit
art # 5092030

Includes TBS Dashboard 2 for monitoring and programming the Omnicharge DC chargers



QuickLink to USB Communication Kit
art # 5092130

Includes TBS Dashboard 2 for monitoring and programming the Omnicharge DC chargers



QuickLink to Bluetooth Communication Kit art # 5092230

Dashboard Mobile app available in Apple App Store and Google Play



Technical specifications

Parameter	OCD 12/12-50 art # 5022400	OCD 12/24-30 art # 5022420
Nominal input voltage	12Vdc	
Input voltage range	10.0 - 16.0Vdc	
Maximum input current	65A _{dc}	
Current consumption (inactive)	< 0.25mA	
Current consumption (noload/standby)	< 35mA	< 45mA
Nominal output voltage	12Vdc	24Vdc
Output voltage range	12.0 - 16.0Vdc	24.0 - 32.0Vdc
Maximum output current ¹⁾	50A	30A
Charge characteristic	IUoUo, intelligent 3-stage, temp. compensated	
Supported battery types ²⁾	Flooded / GEL / AGM / LiFePO4	
Operating temperature range	-20°C ... +60°C	
Storage temperature range	-30°C ... +70°C	
Cooling	Variable speed fan	
Communication port	QuickLink	
Temperature sensor port	Yes (sensor included)	
Engine run / activate input port	Yes (> 2.0V = Active and < 1.0V = Inactive)	
BMS input port	Yes (> 3.0V = Standby and < 1.0V = Active, programmable polarity)	
Status output port	Yes (open drain, 32V / 150mA max, five assignable status types)	
Protections	High/low input voltage, high temperature, output short circuit and reverse battery polarity (input + output)	
Indications	Input status, output (charge-) status, error	
Battery connections	3x M6 screw terminal	
Enclosure body size (H x W x D)	70 x 128 x 170mm	
Total weight	1.2kg	
Protection class	IP21	
Standards	EMC: 2014/30/EU, Low voltage directive: 2014/35/EU, RoHS: 2011/65/EU, Automotive: EN50498 (E-Mark pending)	

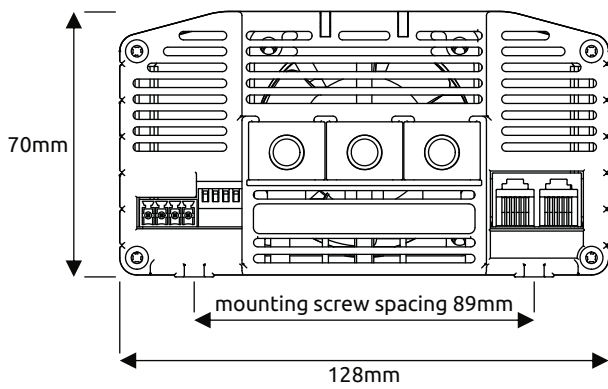
Note: the given specifications are subject to change without notice.

¹⁾ Maximum output current tolerance is +/-10%. Automatic output current derating at Tambient > 40°C.

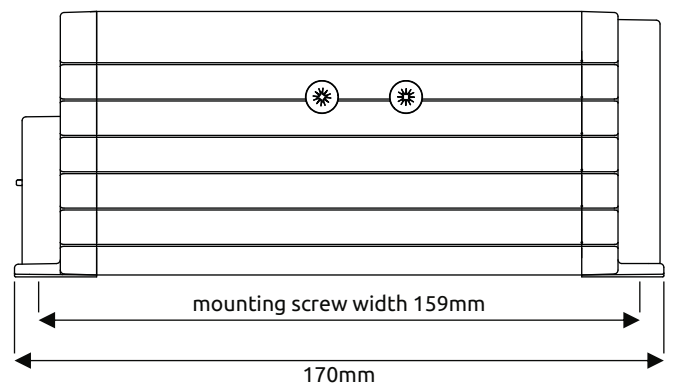
²⁾ Selectable by DIP switch. All standard charge voltages can also be modified by the TBS Dashboard application.

Dimensions

Front view



Side view



Measurement units: millimeters

Basic application diagram

