

# ChargeMaster Plus 24/40-3

## CZone



Product code: 44320405

## All-in-one solution for faster and safer charging

ChargeMaster Plus is the next generation of battery chargers that integrates multiple functions into one single device. Replacing auxiliary chargers, battery isolators and VSR, ChargeMaster Plus reduces system complexity and cost. Designed for versatility, it charges virtually any combination of two or three batteries in a fast and safe way and works anywhere in the world.

With the Battery's Best Friend architecture, ChargeMaster Plus is capable of charging a multitude of battery chemistries, sizes and voltages. All batteries are charged with the fast and safe 3-step+ charge method. Other unique features are:

- Revival mode: automatically revives even fully depleted batteries.
- Priority Charge: redirect available power to the lowest battery, for faster charging.
- Smart Input: charge all three batteries from one single alternator for continuous charging on the go.

## Global Charging

The ChargeMaster Plus handles worldwide AC voltages and frequencies. Resisting large voltage fluctuations and high temperatures, it keeps working in harsh environments. For marine and mobile markets, the ChargeMaster Plus is CE, ABYC, UL, SAE, CEC/DOE and RCM/C-Tick compliant.

## System Simplicity

Nowadays, equipment must be self-explaining. The ChargeMaster Plus displays the charge phase of all outputs in an understandable way. Robust and ergonomic connections save installation time. An integrated VSR eliminates the need for additional components and ensures that the alternators energy is funnelled through to the batteries.

## Powerful Communications thanks to CZone integration

In modern applications, all electrical components work together. The CAN-based MasterBus enables the ChargeMaster Plus to communicate with displays, shunts and power systems including communication standards like CZone®, NMEA 2000 and CANopen (through additional interfaces).

Models with the addition CZone do not only support MasterBus, but also support CZone and NMEA 2000 communication, without the need of additional interfaces. This ChargeMasters Plus series can be configured via MasterBus or will accept a CZone configuration file just like any other CZone device. Other communication standards like ModBus, CANopen, LinBus, etc. are supported via additional interfaces.

This wide range of communication interfaces makes the ChargeMaster Plus ideally suited for system integration. In addition, the ChargeMaster Plus can operate as a power supply for delicate communication equipment, or during the construction phase of a boat.

## Features

- Multicharger with two outputs, one in/output, DC-DC converter, current limiter and VSR.
- Combine Lithium Ion, Gel or AGM, and large or small battery banks on a single battery charger
- Charges multiple batteries while being underway.
- Extended specifications: offers 20 % more output at 14.4 V and 80 % charging power at 60 °C.
- Safe Charge: quickly recognize the State of Charge for extended battery life.
- Very wide operating range of 80-275 V AC, 35-70 Hz.
- Compact, easy to connect and quick to install.

# Specifications

## Communication & monitoring

Communication interfaces

MasterBus, CZone, NMEA

## General specifications

Nominal output voltage

24 V

Max. charge current per output

40 A

Smart In-/Output output voltage

12 or 24 V

Smart In-/Output output current

5-10 A at 12 V; 5-20 A at 24 V (adjustable)

Smart In-/Output input current

max. 20 A at 24 V

Max. AC current (230 V / 120 V)

6.8 A / 13.5 A

Total charge current

40 A at 28.8 V

Number of battery outlets

3 (max.)

Battery capacity range

160-400 Ah

Nominal input voltage

120/230 V (80-275 V) 50/60 Hz

AC connection

screw terminals, suitable up to up to 6 mm<sup>2</sup>

Power supply mode

yes

Display/read-out

LED display

Dimensions, hxxwx d

384 x 250 x 127 mm

15.1 x 9.8 x 5.0 inch

Weight

5.9 kg

13.0 lb

Approvals

CE, ABYC, UL1236, SAE J1171, ISO 8846, CEC/DOE, RCM/C-Tick

## Technical specifications

Charge characteristic

IUoUo, automatic / 3-step+ for Gel/AGM/flooded/Lithium Ion + user defined option

Temperature compensation

-60 mV/°C / -76 mV/°F; temperature sensor included

DC voltage compensation

through automatic compensation or MasterShunt

Power consumption (DC side)

< 2 mA (MasterBus off)

Current Control function

yes, through MasterBus or CZone

Power factor control

> 0.98

Temperature range (ambient temp.)

-25 °C to 80 °C, derating < 0 °C and > 40 °C

-13 to 176 °F

Cooling

vario fan

Protection degree

IP23, vertical mounting

Protections

over-temperature, overload, short circuit, high/low battery voltage, ignition protection

Charger Status Interface (alarm contact)

yes, using a Multipurpose Contact Output (code 77030500)