



ChargeMaster Plus series

All-in-one solution for faster and safer charging

ChargeMaster Plus is the next generation 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 three batteries at high speed and works anywhere in the world.

With the new 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 algorithm.

Unique features

- **Power Boost:** charge depleted battery 10 % faster.
- **Multi Voltage:** charge 12 V starter battery in a 24 V system, without additional components.
- **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 while being on the way.

Global charging

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

System simplicity

Nowadays, equipment must be self-explaining. The ChargeMaster Plus displays the charge phase of all 3 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 connections

In modern applications, all components work together. CAN-based MasterBus enables the charger to communicate with displays, shunts and power systems including communication standards like CZone®, NMEA and CANopen. The ChargeMaster Plus can operate as a power supply for delicate communication equipment, or during the construction phase of a boat.

ChargeMaster Plus simplifies charging systems. Charging faster and safer than ever, this all-in-one charging solution offers best value for money.

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 12/24 V battery banks on a single charger.
- Extra fast charging of depleted or low batteries and 120 % output at 14.4 V.
- Priority Charge: sends power to lowest battery and protects others from overcharging.
- Safe Charge: quickly recognize the state of charge for extended battery life.
- Revival mode: automatically revives depleted batteries.
- Very wide operating range of 80-275 V AC, 35-70 Hz and 80 % charging power at 60 °C.
- Compact, easy to connect and quick to install.

Specifications ChargeMaster Plus

	 12/75-3	 12/100-3	 24/40-3	 24/60-3
Product code	44310750	44311000	44320400	44320600
GENERAL SPECIFICATIONS				
Recommended battery capacity	320-800 Ah	400-1000 Ah	160-400 Ah	200-500 Ah
Number of battery outlets	2 + 1	2 + 1	2 + 1	2 + 1
Nominal input voltage	120/230 V (80-275 V) 50/60 Hz	120/230 V (80-275 V) 50/60 Hz	120/230 V (80-275 V) 50/60 Hz	120/230 V (80-275 V) 50/60 Hz
Max. AC current (230 V / 120 V)	6.5 A / 13 A	8.5 A / 17 A	6.8 A / 13.5 A	10.2 A / 20.4 A
AC connection	screw terminals suitable up to 6 mm ²	screw terminals suitable up to 6 mm ²	screw terminals suitable up to 6 mm ²	screw terminals suitable up to 6 mm ²
Power supply mode	yes	yes	yes	yes
Display/read-out	LED	LED	LED	LED
Dimensions, hxxwxd	384 x 250 x 127 x mm, 15.1 x 9.8 x 5 inch	384 x 250 x 127 x mm, 15.1 x 9.8 x 5 inch	384 x 250 x 127 x mm, 15.1 x 9.8 x 5 inch	384 x 250 x 127 x mm, 15.1 x 9.8 x 5 inch
Weight	4.9 kg, 108 lb	4.9 kg, 108 lb	4.9 kg, 108 lb	4.9 kg, 108 lb
Approvals	CE, E-mark, ABYC, UL1236, SAE J1171, CEC, RCM/C-Tick	CE, E-mark, ABYC, UL1236, SAE J1171, CEC, RCM/C-Tick	CE, E-mark, ABYC, UL1236, SAE J1171, CEC, RCM/C-Tick	CE, E-mark, ABYC, UL1236, SAE J1171, CEC, RCM/C-Tick
OUTPUT 1 & 2 SPECIFICATIONS				
Nominal output voltage (output 1&2)	12 V	12 V	24 V	24 V
Total charge current	75 A at 14.4 V	100 A at 14.4 V	40 A at 28.8 V	60 A at 28.8 V
Power boost at 25 °C	84 A < 13 V	110 A < 13 V	45 A < 26 V	65 A < 26 V
Charge current per outlet	automatic current sharing up to full output	automatic current sharing up to full output	automatic current sharing up to full output	automatic current sharing up to full output
SMART INPUT SPECIFICATIONS				
Input voltage	12 V	12 V	24 V	24 V
Input current	40 A	40 A	20 A	20 A
OUTPUT 3 SPECIFICATIONS				
Output voltage	12 V	12 V	24 V / 12 V	24 V / 12 V
Output current	full output or current limited	full output or current limited	full output or current limited	full output or current limited
Output current (current limited)	5-40 A at 12 V	5-40 A at 12 V	5-20 A at 24 V 10 A at 12 V	5-20 A at 24 V 10 A at 12 V
TECHNICAL SPECIFICATIONS				
Charge characteristic	IUoUO, automatic 3-step+	IUoUO, automatic 3-step+	IUoUO, automatic 3-step+	IUoUO, automatic 3-step+
Battery chemistry	AGM, gel, Lithium Ion, traction, spiral	AGM, gel, Lithium Ion, traction, spiral	AGM, gel, Lithium Ion, traction, spiral	AGM, gel, Lithium Ion, traction, spiral
Temperature compensation	-30 mV/°C (-17 mV/°F), temp. sensor included	-30 mV/°C (-17 mV/°F), temp. sensor included	-30 mV/°C (-17 mV/°F), temp. sensor included	-30 mV/°C (-17 mV/°F), temp. sensor included
Voltage compensation	automatic	automatic	automatic	automatic
DC idle consumption	< 2 mA (MasterBus off)	< 2 mA (MasterBus off)	< 2 mA (MasterBus off)	< 2 mA (MasterBus off)
Current control function	yes, through MasterBus	yes, through MasterBus	yes, through MasterBus	yes, through MasterBus
Power factor control	yes, > 0.98	yes, > 0.98	yes, > 0.98	yes, > 0.98
Temperature range	-25 °C to 80 °C (-13 °F to 176 °F), derating > 40 °C (104 °F)	-25 °C to 80 °C (-13 °F to 176 °F), derating > 40 °C (104 °F)	-25 °C to 80 °C (-13 °F to 176 °F), derating > 40 °C (104 °F)	-25 °C to 80 °C (-13 °F to 176 °F), derating > 40 °C (104 °F)
Cooling	vario fan	vario fan	vario fan	vario fan
Protection degree	IP23, vertical mounting	IP23, vertical mounting	IP23, vertical mounting	IP23, vertical mounting
Protections	over-temperature, overload, short circuit, high/low battery voltage	over-temperature, overload, short circuit, high/low battery voltage	over-temperature, overload, short circuit, high/low battery voltage	over-temperature, overload, short circuit, high/low battery voltage
MasterBus compatible	yes	yes	yes	yes
Alarm contact	yes, using a Multipurpose Contact Output (product code 77030500)	yes, using a Multipurpose Contact Output (product code 77030500)	yes, using a Multipurpose Contact Output (product code 77030500)	yes, using a Multipurpose Contact Output (product code 77030500)