

ChargeMaster 12/25-3



Product code: 44010250

Make the most of your batteries with the ChargeMaster series, plugging in and charging anywhere in the world. Mastervolt's ChargeMaster guarantees fast and complete charging of your batteries no matter where you are. Thanks to Mastervolt's innovative 3-step+ charging process, batteries also perform better and last longer.

All ChargeMasters can be easily connected to a MasterBus network with only one cable and one connection (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6). What's more, you have the option for central, local or remote monitoring, configuration and control of your system.

Clear Display

A clearly lit display on the ChargeMaster provides all essential information: charge current, charge voltage, charge phase and battery content measurement and/or battery condition measurement as a percentage of available Ah capacity. The display also provides an indication of MasterBus communication. Three buttons adjacent to the read-out panel allow for easy operating of the entire system.

The ChargeMaster is available in various models to guarantee you the ideal battery charger for any situation and demand.

Features

- For recreational and semi-professional use.
- Suitable for any type of battery, including Lithium Ion batteries.
- 3-Step+ charging technology for fast and complete charging, also charges depleted batteries.
- Memory function prevents overcharging in case of unreliable mains.
- Safe and complete charging due to standard safety features.
- Charging capacity up to 1000 Ah battery banks.
- Easy to connect and quick to install.
- Can charge multiple battery banks simultaneously.
- Built-in system functionality (MasterBus) in combination with other Mastervolt products.
- Clear control panel (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6).
- Supplies your system without battery.

Charging your batteries with every voltage

The Mastervolt ChargeMaster supplies a maximum capacity wherever you are via auto-ranging. Auto-ranging ensures perfect fully automatic operation anywhere in the world, regardless of the available mains voltage (90-265 V AC, 50 or 60 Hz). The 3-step+ charging technology guarantees fast and complete charging, while the cos phi 1-regulation gets the most out of limited generator capacity.

Robust Connections

Solid metal-to-metal connectors equipped with strain relief prevent corrosion and overheating.

Charging multiple battery banks

The ChargeMaster series has three equal charge outputs. Those of the smaller ChargeMaster models are pre-installed with two metres of cable for a plug & play solution, while the heavier models have one full output (for example for your service battery) and two outputs of 10 A, ideal for your starter batteries.

DC Power Supply

Even if the batteries are not connected, Mastervolt ChargeMaster battery chargers can provide a constant DC output allowing you to turn on lights or keep the fridge cold.

Specifications

General specifications

Nominal output voltage	12 V
Total charge current	25 A at 13.25 V
Number of battery outlets	3
Charge current second output	25 A
Charge current third output	25 A
Battery bank size	50-250 Ah
Nominal input voltage	120/230 V (90-265 V), 50/60 Hz
AC connection	2 mtr AC cable
Power supply mode	yes
Galvanic isolation	yes
Display/read-out	LED display
Fastening	4x screw
Dimensions, hwxwx	234 x 132 x 60 mm 9.2 x 5.2 x 2.4 inch
Weight	1.8 kg 4.0 lb
Compliance	CE, ABYC A-31, SAE J1171/ISO 8846 ignition protected, RRR, RMRS
Optional	Quick Connect (OEM) version with WAGO 770-113 connector and 25 cm cable, product code 44010252

Technical specifications

Charge characteristic	IUoUo, automatic 3-step+ for Gel/AGM/wet/Lithium Ion
Charge voltage Bulk	14.4 V
Charge voltage Absorption	14.25 V
Absorption time	4 hours
Charge voltage Float (wet batteries)	13.25 V
Charge voltage Float (Gel/AGM batteries)	13.8 V
Temperature compensation	yes
DC voltage compensation	automatic
Power consumption (DC side)	< 2 mA
Full load consumption (230 V AC)	450 W
Current Control function	no
Power factor control	>= 0.98
Temperature range (ambient temp.)	-25 °C to 60 °C, derating < 0 °C and > 40 °C -13 to 140 °F
Cooling	vario fan
Protection degree	IP23
Protections	over temperature, over load, short circuit, high/low battery voltage
MasterBus compatible	yes

ChargeMaster 12/35-3



Product code: 44010350

Make the most of your batteries with the ChargeMaster series, plugging in and charging anywhere in the world. Mastervolt's ChargeMaster guarantees fast and complete charging of your batteries no matter where you are. Thanks to Mastervolt's innovative 3-step+ charging process, batteries also perform better and last longer.

All ChargeMasters can be easily connected to a MasterBus network with only one cable and one connection (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6). What's more, you have the option for central, local or remote monitoring, configuration and control of your system.

Clear Display

A clearly lit display on the ChargeMaster provides all essential information: charge current, charge voltage, charge phase and battery content measurement and/or battery condition measurement as a percentage of available Ah capacity. The display also provides an indication of MasterBus communication. Three buttons adjacent to the read-out panel allow for easy operating of the entire system.

The ChargeMaster is available in various models to guarantee you the ideal battery charger for any situation and demand.

Features

- For recreational and semi-professional use.
- Suitable for any type of battery, including Lithium Ion batteries.
- 3-Step+ charging technology for fast and complete charging, also charges depleted batteries.
- Memory function prevents overcharging in case of unreliable mains.
- Safe and complete charging due to standard safety features.
- Charging capacity up to 1000 Ah battery banks.
- Easy to connect and quick to install.
- Can charge multiple battery banks simultaneously.
- Built-in system functionality (MasterBus) in combination with other Mastervolt products.
- Clear control panel (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6).
- Supplies your system without battery.

Charging your batteries with every voltage

The Mastervolt ChargeMaster supplies a maximum capacity wherever you are via auto-ranging. Auto-ranging ensures perfect fully automatic operation anywhere in the world, regardless of the available mains voltage (90-265 V AC, 50 or 60 Hz). The 3-step+ charging technology guarantees fast and complete charging, while the cos phi 1-regulation gets the most out of limited generator capacity.

Robust Connections

Solid metal-to-metal connectors equipped with strain relief prevent corrosion and overheating.

Charging multiple battery banks

The ChargeMaster series has three equal charge outputs. Those of the smaller ChargeMaster models are pre-installed with two metres of cable for a plug & play solution, while the heavier models have one full output (for example for your service battery) and two outputs of 10 A, ideal for your starter batteries.

DC Power Supply

Even if the batteries are not connected, Mastervolt ChargeMaster battery chargers can provide a constant DC output allowing you to turn on lights or keep the fridge cold.

Specifications

General specifications

Nominal output voltage	12 V
Total charge current	35 A at 14.4 V
Number of battery outlets	3
Charge current second output	35 A
Charge current third output	35 A
Battery bank size	70-350 Ah
Nominal input voltage	120/230 V (90-265 V), 50/60 Hz
AC connection	connector strips
Power supply mode	yes
Galvanic isolation	yes
Display/read-out	LED display
Fastening	mounting bracket (included) or 4x screw mounting
Dimensions, hwxwx	291 x 210 x 131 mm 11.5 x 8.3 x 5.2 inch
Weight	4 kg 8.8 lb
Compliance	CE, ABYC A-31, SAE J1171/ISO 8846 ignition protected, RMRS, RRR
Optional	Quick Connect (OEM) version with WAGO 770-113 connector and 25 cm cable, product code 44010352

Technical specifications

Charge characteristic	IUoUo, automatic 3-step+ for Gel/AGM/wet/Lithium Ion
Charge voltage Bulk	14.4 V
Charge voltage Absorption	14.25 V
Absorption time	4 hours
Charge voltage Float (wet batteries)	13.25 V
Charge voltage Float (Gel/AGM batteries)	13.8 V
Temperature compensation	yes
DC voltage compensation	automatic
Power consumption (DC side)	< 5 mA
Full load consumption (230 V AC)	575 W
Current Control function	yes, through MasterBus
Power factor control	>= 0.98
Temperature range (ambient temp.)	-25 °C to 60 °C, derating < 0 °C and > 40 °C -13 to 140 °F
Cooling	vario fan
Protection degree	IP23
Protections	over temperature, over load, short circuit, high/low battery voltage
MasterBus compatible	yes

ChargeMaster 12/50-3



Product code: 44010500

Make the most of your batteries with the ChargeMaster series, plugging in and charging anywhere in the world. Mastervolt's ChargeMaster guarantees fast and complete charging of your batteries no matter where you are. Thanks to Mastervolt's innovative 3-step+ charging process, batteries also perform better and last longer.

All ChargeMasters can be easily connected to a MasterBus network with only one cable and one connection (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6). What's more, you have the option for central, local or remote monitoring, configuration and control of your system.

Clear Display

A clearly lit display on the ChargeMaster provides all essential information: charge current, charge voltage, charge phase and battery content measurement and/or battery condition measurement as a percentage of available Ah capacity. The display also provides an indication of MasterBus communication. Three buttons adjacent to the read-out panel allow for easy operating of the entire system.

The ChargeMaster is available in various models to guarantee you the ideal battery charger for any situation and demand.

Features

- For recreational and semi-professional use.
- Suitable for any type of battery, including Lithium Ion batteries.
- 3-Step+ charging technology for fast and complete charging, also charges depleted batteries.
- Memory function prevents overcharging in case of unreliable mains.
- Safe and complete charging due to standard safety features.
- Charging capacity up to 1000 Ah battery banks.
- Easy to connect and quick to install.
- Can charge multiple battery banks simultaneously.
- Built-in system functionality (MasterBus) in combination with other Mastervolt products.
- Clear control panel (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6).
- Supplies your system without battery.

Charging your batteries with every voltage

The Mastervolt ChargeMaster supplies a maximum capacity wherever you are via auto-ranging. Auto-ranging ensures perfect fully automatic operation anywhere in the world, regardless of the available mains voltage (90-265 V AC, 50 or 60 Hz). The 3-step+ charging technology guarantees fast and complete charging, while the cos phi 1-regulation gets the most out of limited generator capacity.

Robust Connections

Solid metal-to-metal connectors equipped with strain relief prevent corrosion and overheating.

Charging multiple battery banks

The ChargeMaster series has three equal charge outputs. Those of the smaller ChargeMaster models are pre-installed with two metres of cable for a plug & play solution, while the heavier models have one full output (for example for your service battery) and two outputs of 10 A, ideal for your starter batteries.

DC Power Supply

Even if the batteries are not connected, Mastervolt ChargeMaster battery chargers can provide a constant DC output allowing you to turn on lights or keep the fridge cold.

Specifications

General specifications

Nominal output voltage	12 V
Total charge current	50 A at 14.4 V
Number of battery outlets	3
Charge current second output	50 A
Charge current third output	50 A
Battery bank size	100-500 Ah
Nominal input voltage	120/230 V (90-265 V), 50/60 Hz
AC connection	connector strips
Power supply mode	yes
Galvanic isolation	yes
Display/read-out	LED display
Fastening	mounting bracket (included) or 4x screw
Dimensions, hxxwx	291 x 210 x 131 mm 11.5 x 8.3 x 5.2 inch
Weight	4 kg 8.8 lb
Compliance	CE, ABYC A-31, SAE J1171/ISO 8846 ignition protected, RMRS, RRR

Technical specifications

Charge characteristic	IUoUo, automatic 3-step+ for gel/AGM/wet/Lithium Ion
Charge voltage Bulk	14.4 V
Charge voltage Absorption	14.25 V
Absorption time	4 hours
Charge voltage Float (wet batteries)	13.25 V
Charge voltage Float (Gel/AGM batteries)	13.8 V
Temperature compensation	yes
DC voltage compensation	automatic
Power consumption (DC side)	< 5 mA
Full load consumption (230 V AC)	825 W
Current Control function	yes, through MasterBus
Power factor control	>= 0.98
Temperature range (ambient temp.)	-25 °C to 60 °C, derating < 0 °C and > 40 °C -13 to 140 °F
Cooling	vario fan
Protection degree	IP23
Protections	over temperature, over load, short circuit, high/low battery voltage
MasterBus compatible	yes

ChargeMaster 24/20-3



Product code: 44020200

Make the most of your batteries with the ChargeMaster series, plugging in and charging anywhere in the world. Mastervolt's ChargeMaster guarantees fast and complete charging of your batteries no matter where you are. Thanks to Mastervolt's innovative 3-step+ charging process, batteries also perform better and last longer.

All ChargeMasters can be easily connected to a MasterBus network with only one cable and one connection (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6). What's more, you have the option for central, local or remote monitoring, configuration and control of your system.

Clear Display

A clearly lit display on the ChargeMaster provides all essential information: charge current, charge voltage, charge phase and battery content measurement and/or battery condition measurement as a percentage of available Ah capacity. The display also provides an indication of MasterBus communication. Three buttons adjacent to the read-out panel allow for easy operating of the entire system.

The ChargeMaster is available in various models to guarantee you the ideal battery charger for any situation and demand.

Features

- For recreational and semi-professional use.
- Suitable for any type of battery, including Lithium Ion batteries.
- 3-Step+ charging technology for fast and complete charging, also charges depleted batteries.
- Memory function prevents overcharging in case of unreliable mains.
- Safe and complete charging due to standard safety features.
- Charging capacity up to 1000 Ah battery banks.
- Easy to connect and quick to install.
- Can charge multiple battery banks simultaneously.
- Built-in system functionality (MasterBus) in combination with other Mastervolt products.
- Clear control panel (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6).
- Supplies your system without battery.

Charging your batteries with every voltage

The Mastervolt ChargeMaster supplies a maximum capacity wherever you are via auto-ranging. Auto-ranging ensures perfect fully automatic operation anywhere in the world, regardless of the available mains voltage (90-265 V AC, 50 or 60 Hz). The 3-step+ charging technology guarantees fast and complete charging, while the cos phi 1-regulation gets the most out of limited generator capacity.

Robust Connections

Solid metal-to-metal connectors equipped with strain relief prevent corrosion and overheating.

Charging multiple battery banks

The ChargeMaster series has three equal charge outputs. Those of the smaller ChargeMaster models are pre-installed with two metres of cable for a plug & play solution, while the heavier models have one full output (for example for your service battery) and two outputs of 10 A, ideal for your starter batteries.

DC Power Supply

Even if the batteries are not connected, Mastervolt ChargeMaster battery chargers can provide a constant DC output allowing you to turn on lights or keep the fridge cold.

Specifications

General specifications

Nominal output voltage	24 V
Total charge current	20 A at 28.8 V
Number of battery outlets	3
Charge current second output	20 A
Charge current third output	20 A
Battery bank size	40-200 Ah
Nominal input voltage	120/230 V (90-265 V), 50/60 Hz
AC connection	connector strips
Power supply mode	yes
Galvanic isolation	yes
Display/read-out	LED display
Fastening	mounting bracket (included) or 4x screw
Dimensions, hwxwx	291 x 210 x 131 mm 11.5 x 8.3 x 5.2 inch
Weight	4 kg 8.8 lb
Compliance	CE, ABYC A-31, SAE J1171/ISO 8846 ignition protected, RMRS, RRR
Optional	Quick Connect (OEM) version with WAGO 770-113 connector and 25 cm cable, product code 44020202

Technical specifications

Charge characteristic	IUoUo, automatic 3-step+ for gel/AGM/wet/Lithium Ion
Charge voltage Bulk	28.8 V
Charge voltage Absorption	28.5 V
Absorption time	4 hours
Charge voltage Float (wet batteries)	26.5 V
Charge voltage Float (Gel/AGM batteries)	27.6 V
Temperature compensation	yes
DC voltage compensation	automatic
Power consumption (DC side)	< 2.5 mA
Full load consumption (230 V AC)	660 W
Current Control function	yes, through MasterBus
Power factor control	>= 0.98
Temperature range (ambient temp.)	-25 °C to 60 °C, derating < 0 °C and > 40 °C -13 to 140 °F
Cooling	vario fan
Protection degree	IP23
Protections	over temperature, over load, short circuit, high/low battery voltage
MasterBus compatible	yes

ChargeMaster 24/30-3



Product code: 44020300

Make the most of your batteries with the ChargeMaster series, plugging in and charging anywhere in the world. Mastervolt's ChargeMaster guarantees fast and complete charging of your batteries no matter where you are. Thanks to Mastervolt's innovative 3-step+ charging process, batteries also perform better and last longer.

All ChargeMasters can be easily connected to a MasterBus network with only one cable and one connection (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6). What's more, you have the option for central, local or remote monitoring, configuration and control of your system.

Clear Display

A clearly lit display on the ChargeMaster provides all essential information: charge current, charge voltage, charge phase and battery content measurement and/or battery condition measurement as a percentage of available Ah capacity. The display also provides an indication of MasterBus communication. Three buttons adjacent to the read-out panel allow for easy operating of the entire system.

The ChargeMaster is available in various models to guarantee you the ideal battery charger for any situation and demand.

Features

- For recreational and semi-professional use.
- Suitable for any type of battery, including Lithium Ion batteries.
- 3-Step+ charging technology for fast and complete charging, also charges depleted batteries.
- Memory function prevents overcharging in case of unreliable mains.
- Safe and complete charging due to standard safety features.
- Charging capacity up to 1000 Ah battery banks.
- Easy to connect and quick to install.
- Can charge multiple battery banks simultaneously.
- Built-in system functionality (MasterBus) in combination with other Mastervolt products.
- Clear control panel (with the exception of the ChargeMaster 12/10, ChargeMaster 12/15-2 and ChargeMaster 24/6).
- Supplies your system without battery.

Charging your batteries with every voltage

The Mastervolt ChargeMaster supplies a maximum capacity wherever you are via auto-ranging. Auto-ranging ensures perfect fully automatic operation anywhere in the world, regardless of the available mains voltage (90-265 V AC, 50 or 60 Hz). The 3-step+ charging technology guarantees fast and complete charging, while the cos phi 1-regulation gets the most out of limited generator capacity.

Robust Connections

Solid metal-to-metal connectors equipped with strain relief prevent corrosion and overheating.

Charging multiple battery banks

The ChargeMaster series has three equal charge outputs. Those of the smaller ChargeMaster models are pre-installed with two metres of cable for a plug & play solution, while the heavier models have one full output (for example for your service battery) and two outputs of 10 A, ideal for your starter batteries.

DC Power Supply

Even if the batteries are not connected, Mastervolt ChargeMaster battery chargers can provide a constant DC output allowing you to turn on lights or keep the fridge cold.

Specifications

General specifications

Nominal output voltage	24 V
Total charge current	30 A at 28.8 V
Number of battery outlets	3
Charge current second output	30 A
Charge current third output	30 A
Battery bank size	60-300 Ah
Nominal input voltage	120/230 V (90-265 V), 50/60 Hz
AC connection	connector strips
Power supply mode	yes
Galvanic isolation	yes
Display/read-out	LED display
Fastening	mounting bracket (included) or 4x screw
Dimensions, hwxwx	291 x 210 x 131 mm 11.5 x 8.3 x 5.2 inch
Weight	4 kg 8.8 lb
Compliance	CE, ABYC A-31, SAE J1171/ISO 8846 ignition protected, RMRS, RRR
Optional	Quick Connect (OEM) version with WAGO 770-113 connector and 25 cm cable, product code 44020302

Technical specifications

Charge characteristic	IUoUo, automatic 3-step+ for gel/AGM/wet/Lithium Ion
Charge voltage Bulk	28.8 V
Charge voltage Absorption	28.5 V
Absorption time	4 hours
Charge voltage Float (wet batteries)	26.5 V
Charge voltage Float (Gel/AGM batteries)	27.6 V
Temperature compensation	yes
DC voltage compensation	automatic
Power consumption (DC side)	< 2.5 mA
Full load consumption (230 V AC)	925 W
Current Control function	yes, through MasterBus
Power factor control	>= 0.98
Temperature range (ambient temp.)	-25 °C to 60 °C, derating < 0 °C and > 40 °C -13 to 140 °F
Cooling	vario fan
Protection degree	IP23
Protections	over temperature, over load, short circuit, high/low battery voltage
MasterBus compatible	yes

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 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 method. Other unique features are:

- Revival mode: automatically revives even fully depleted batteries.
- Multi voltage: charge 12 V starter battery in a 24 V system, without additional components (for 24 V models only).
- 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.
- Charges Lithium Ion, Gel and AGM batteries, the 24 V models also charge large or small battery banks on a single battery charger.
- Combine Lithium Ion, Gel or AGM, and large or small battery

- 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. output current primary 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
Total charge current	40 A at 28.8 V
Max. AC current (230 V / 120 V)	6.8 A / 13.5 A
Number of battery outlets	3 (max.)
Battery bank size	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 ²
Power supply mode	yes
Galvanic isolation	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
Compliance	CE, ABYC, UL1236, SAE J1171, ISO 8846, CEC/DOE, RCM/C-Tick, RMRS, RRR

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)