



## BATTERY CHARGERS (IVO COMPACT SERIES)

Fully automatic switch-mode battery charger

### For professional and recreational use

Mastervolt introduces two new battery chargers: the IVO Compact 12/25-3 and 24/10-2, which are fitted in a robust corrosion proof aluminium valox enclosure. Both products are suitable for marine, mobile and industrial use! The 12/25-3 replaces the IVO Smart 12/25-2 which will be upgraded to a 12/35-2 version.

#### Principal innovations:

- The powerful microprocessor, similar to the one used in the Mass range, can be programmed to any relevant protocol, utilizing the IVO Smart Wizard software, obtainable from the Mastervolt website. All models can be adjusted for use with gel, AGM or wet batteries by means of a dipswitch. The units can also be prepared for 'forced float' operation.
- New is the 'memory function', which prevents the charger starting a new 3-stage charge cycle if the supply voltage is interrupted. As a consequence, battery gassing will be eliminated.
- The new range has become extremely compact and light weight, which makes it easier to find a space to install the charger.
- A new advanced remote panel (model remote CC, art. no. 70405030, universal for 12 or 24V DC) can be connected to a telejack communication port. The panel shows the essentials about the status of the charging process, the intensity of the charge current and availability of AC power.  
Dim. (hwxw) 52x140 mm only.



### 12/25-3: ideal for marine and mobile systems

The 12/25-3 is fitted with a temperature controlled fan and is able to charge three batteries simultaneously with a total maximum charge rate of 25 amps to two batteries. A third 3A output can be connected to the starter battery. All types of batteries can be charged: gel cells, AGM or wet batteries. Another important feature is the automatic compensation for low incoming shore power. Even at 180V AC, the charge current will be at maximum. A slight reduction will follow after connection to a 117V shore power connection. All models are equipped with a LED status indicator displaying the stage of the charge cycle: bulk-absorption-float (battery fully charged). Automatic voltage compensation and temperature compensation are standard features. An extended remote panel is optional.

### Quality guaranteed

Like all Mastervolt power electronic products the IVO Compact range is manufactured to ISO 9000-2001 standards and complies with CE, ABYC, E4 and Kema (similar to Tüv) and all relevant national standards. See our website for our complete range of products. All models are attractively packaged in a retail box with a 8-language manual, an AC cable including plug and battery

IVO Compact 12/25 and 24/10: solid aluminium profile with valox end parts. Compact and light-weighted, easy to mount and connect.

cables. Guarantee period: two years world wide warranty. A comprehensive remote panel/ battery check device is offered as a very affordable option.

- 3- STEP CHARGE TECHNOLOGY WITH MEMORY
- SUITABLE FOR ANY TYPE OF BATTERY
- 3 OUTPUTS (12V VERSION)
- EXTENDS BATTERY LIFE DRAMATICALLY
- UNITY POWER FACTOR
- AUTORANGING (WIDE INPUT VOLTAGE WINDOW, 90-255V AC)
- OPERATES SMOOTHLY WITH ANY AC GENERATOR
- FOR 12 OR 24V BATTERIES
- COMPACT, LIGHT-WEIGHT, EASY TO INSTALL

# TECHNICAL SPECIFICATIONS

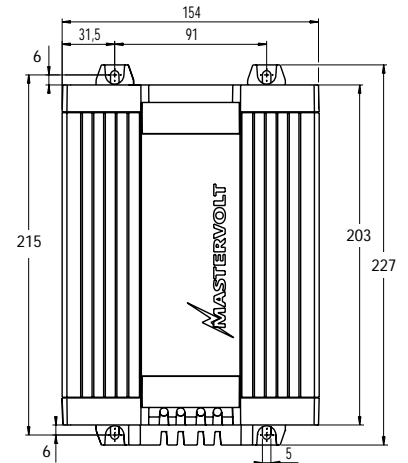
Model	IVO Compact 12/25-3	IVO Compact 24/10-2
Article number	43012500	43021000
Charge current (total) at 230VAC	25A	10A
Number of outlets	two equal outlets + one 3A slave	one outlet + one 3A slave
Charge characteristic	IUoUo / 3-stage / automatical / DIN 41772	
Charge voltage Absorption (25°C)	14.25V	28.5V
Charge voltage Float / wet (25°C)	13.25V	26.5V
Charge voltage Float / gel (25°C)	13.8V	27.6V
Input voltage range AC	180-250V AC (90-140V AC)	180-250V AC (90-140V AC)
Max. absorption time, reduced output	6 hours (adjustable)	6 hours (adjustable)
Frequency	50/60Hz	50/60Hz
Full load consumption (230V AC)	419VA	336VA
Power factor / cos phi	0.99	0.99
DC consumption with connected battery	<10mA	<5mA
Automatic voltage compensation	auto sense	auto sense
Temperature compensation	30mV/°C	60mV/°C
Temperature range	0°C to +60°C, fully safeguarded against overheating and short circuiting	
Cooling	variofan	variofan
Harmonised standards	<ul style="list-style-type: none"> <li>• generic emission and disturbances standard: EN 55014-1:1993</li> <li>• generic harmonic current emissions: EN61000-3-3:1995</li> <li>• generic &amp; safety accreditations immunity standard: EN 55014-2:1997</li> <li>• electrostatic discharge: EN 61000-4-2:1995</li> <li>• electrical fast transients: EN 61000-4-4:1995</li> <li>• surge transient: EN61000-4-5:1995</li> <li>• conducted radio frequency disturbances: EN61000-4-6:1996</li> <li>• voltage dips: EN 61000-4-11:1994</li> </ul>	
Battery capacity (recommendation)	50-450 Ah	50-300 Ah
Suitable as power supply without battery	yes	yes
Dimensions, hxxwxd. in mm / inch	228x153x82 / 9x6x3.2	228x153x82 / 9x6x3.2
Protection degree	IP21	IP21
AC cable 1.5 meter / 5 ft (included)	3x 0.75 mm <sup>2</sup> / AWG 18	3x 0.75 mm <sup>2</sup> / AWG 18
DC cable 1.5 meter / 5 ft (included)	6 mm <sup>2</sup> / AWG 9	4 mm <sup>2</sup> / AWG 9
Weight	1.8 kg / 4 lbs	1.8 kg / 4 lbs

## Optional:

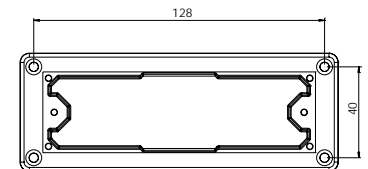
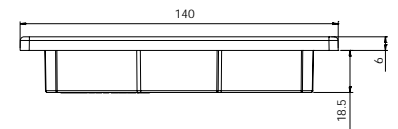
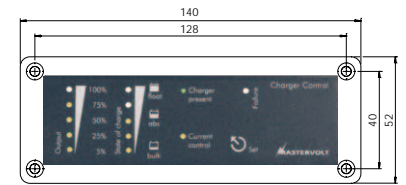
Advanced remote panel, remote CC (art. no. 70405030), offering charge status information, charge current, charge voltage and system failure.

## Important:

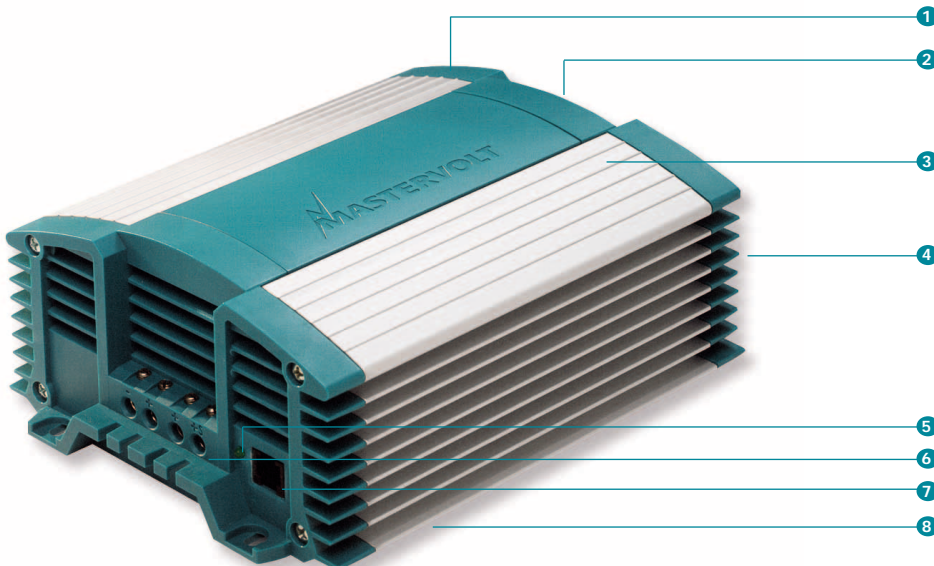
This new battery charger is almost true dual frequency and dual voltage: only 20% de-rating at 117V input.



Dimensions of the IVO Compact.

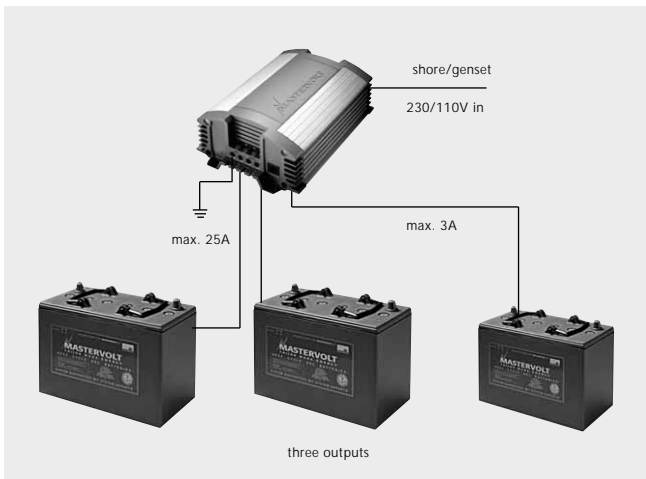


Dimensions of the optional remote panel CC and the dimensions of the housing of the remote panel.

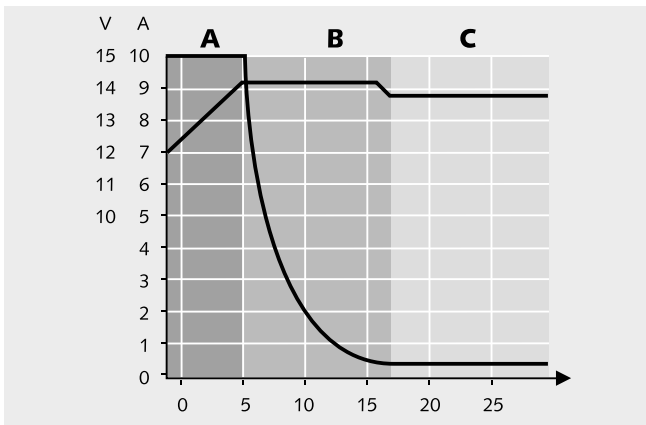


1. Valox end parts.
2. Forced ventilation, temperature controlled.
3. Solid aluminium profile.
4. AC input, cable included.
5. Status LED, read out.
6. High current terminals for 3 independent batteries.
7. Modular jack RJ12 for temperature sensor and/or remote panel.
8. Charge curve adjustment settings (inside), IU and gel/AGM/wet.

## SYSTEM EXAMPLES



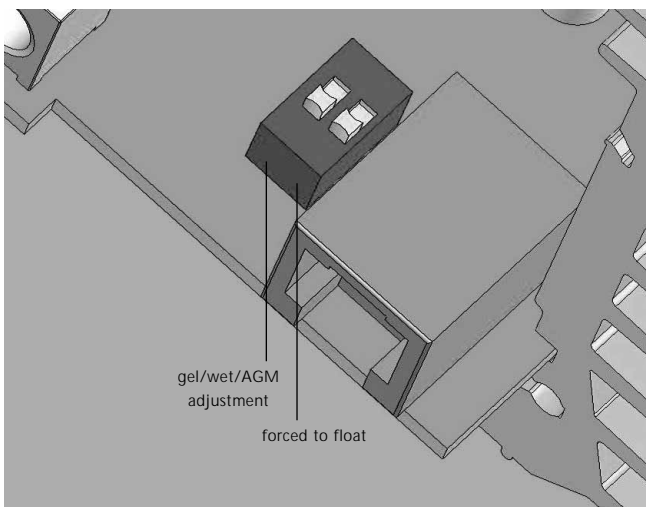
The IVO Compact 12/25 connected to three batteries: All outlets are independently voltage regulated following to the 3-step charge characteristic (shown below).



### Charge method of the IVO Compact battery charger

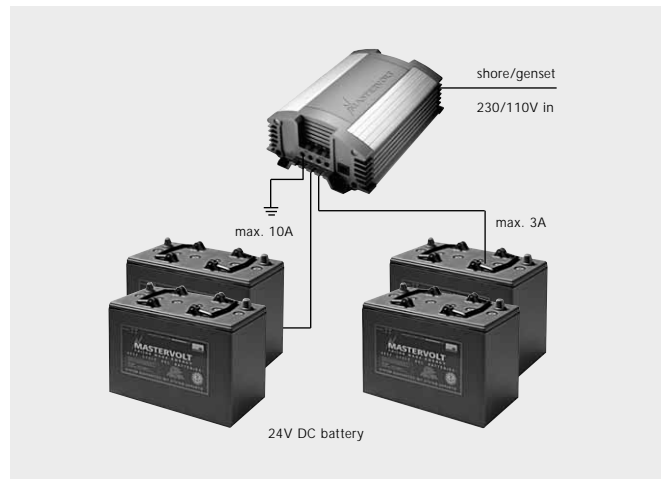
Three-stage charge curve: the only adequate way to charge a battery.

- Stage A: bulk, for quick charging from 0 to 80%.
- Stage B: absorption, the battery is charged from 80 to 100%.
- Stage C: float, battery is maintained in fully charged state.

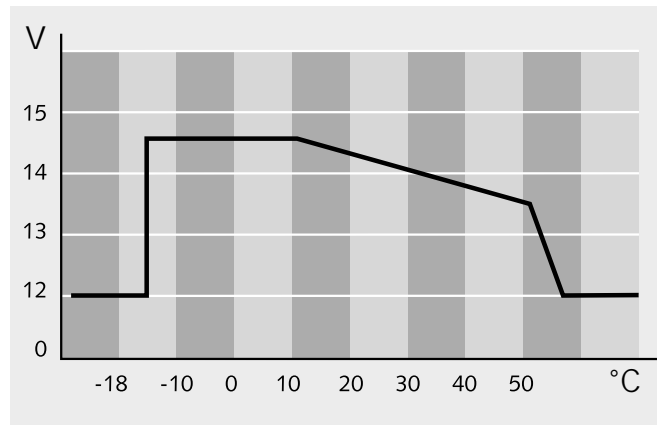


### Charge curve adjustment settings

The IVO Compact battery charger can be set for different charge curves. The unit can be set for high float mode, used for better maintenance of the gel and/or AGM batteries. The three-step charge curve IUoUo can be set into a forced to float mode (IU). This IU mode is often used in stand by applications. Acces to the dipswitch is achieved by removing the Valox end cover.



The IVO Compact 24/10 can be connected as standard to charge two sets of batteries simultaneously.

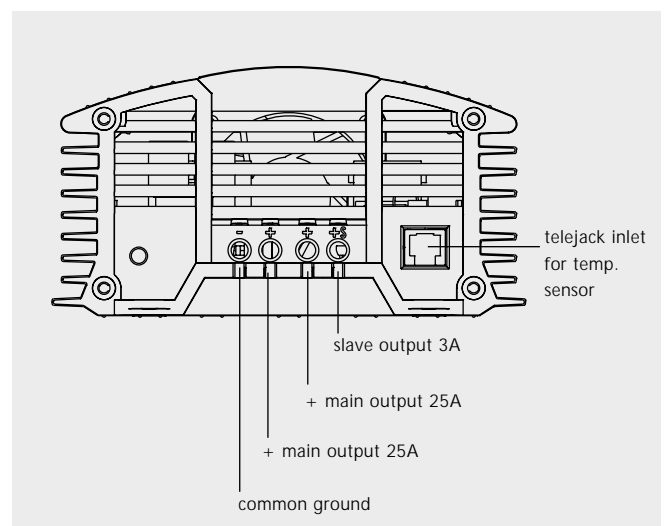


Charge curve of the IVO battery charger fitted with a temperature sensor. For 24V: double the values in the left column with factor 2.

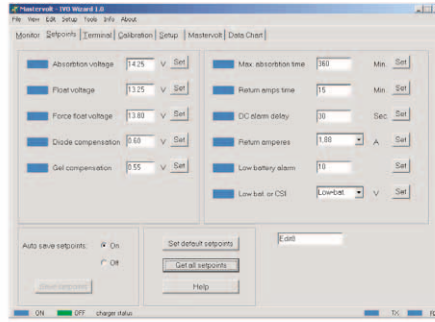
### Automatic temperature compensation for a safe charge process

Most Mastervolt battery chargers are fitted with an external temperature sensor as standard. This device has to be stuck to the largest (=service) battery. The effect is amazing: the charge voltage will be compensated in relation to the ambient temperature of the battery, ensuring a safe charge without electrolyte gassing. If the temperature exceeds 45°C, the charger will be switched automatically to a 12 or 24 V power supply.

### Front view connections



# COMMUNICATION



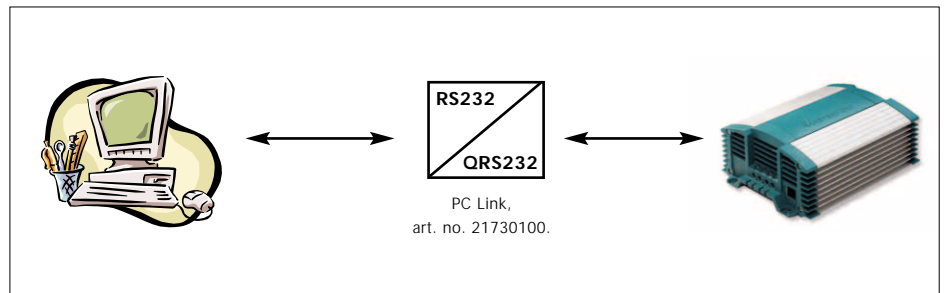
## IVO Compact Data Control

The IVO Compact battery charger is delivered with an integrated communication interface as standard. This makes the system interactive with the option of reading the most essential information using your PC or laptop. All that is required to connect the IVO Compact with your computer is a communication cable and PC Link (adapter plug). The free software is downloadable at [www.mastervolt.com](http://www.mastervolt.com).

### Setting points for specific charge protocols (only for industrial applications)

You can download the Wizard software on [www.mastervolt.com/support](http://www.mastervolt.com/support).

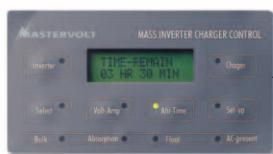
setpoints register	setpoint
• Max. bulk/abs time	360 min.
• Return amps	2/16 of I <sub>max</sub>
• Abs voltage	14.25V
• Float voltage	13.25V
• Forced to float voltage	13.80V
• Gel voltage setting	550 mV
• Diode compensation setting	600 mV
• DC alarm voltage	12.5V
• DC alarm delay	30 sec.



### Optional remotes:



Optional: remote CC panel.



Optional : Masterlink/MICC panel.

