

Digital switching



Wireless control and monitoring

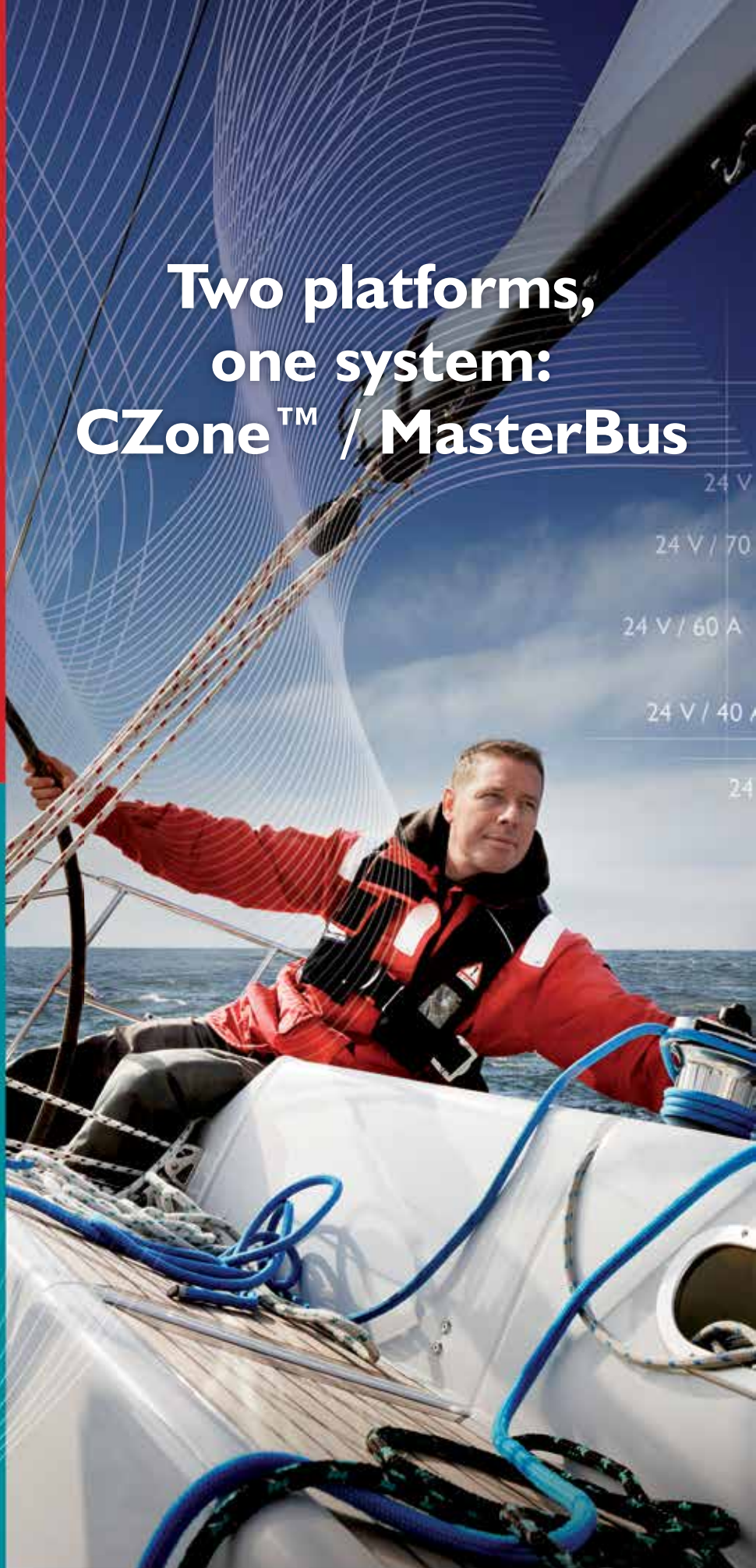
Intelligent single cable system

Modular and flexible

Easy to install and configure

Power and load management in a single bus

## Two platforms, one system: CZone™ / MasterBus



**MASTERVOLT**  
THE POWER TO BE INDEPENDENT



# Digital switching, the future is now

By de-centralising your installation, it is possible to create smarter systems with less cables and installation work. Central switchboards are replaced by de-centralised power outputs, which are controlled via a bus system. These outputs power equipment such as lights, pumps and navigation equipment. Different input modules can be connected to this bus as well. These input modules – from switches to touch screen panels – control the output modules. This allows you to control your yacht from anywhere, even from your mobile phone via text messages.

Digital switching systems give you greater flexibility and facilitate enhanced integration. Without additional components like relays, timer modules and extensive cable trees, it is possible to design a smart system. Digital switching systems result in systems that are easy to operate.

## Two platforms available: **CZone™** and **MasterBus**

The CZone digital control and monitoring system utilises the NMEA2000 architecture for its network. You can install as a standalone system or add NMEA2000 compliant components to build a fully integrated system including the latest Simrad and B&G multifunction marine displays (chartplotters, fishfinder, radar, Autopilot). Featuring a high Ingress protection level (IPX5 and higher) CZone components are ideal for harsh environment installations.

MasterBus is based on the proprietary MasterBus network, used for all Mastervolt products. This system is perfectly suited for the integration of digital switching with the power electronics from Mastervolt.

Both systems can be interconnected via the CZone MasterBus Bridge Interface.

The following pages give a more detailed description of both platforms and their components.



### **More information?**

Contact your nearest dealer,  
or see [www.mastervolt.com](http://www.mastervolt.com)  
or [www.bepmarine.com](http://www.bepmarine.com)



*New: Wireless monitoring and control of onboard systems from smart phones and tablets.*



CZone Wireless Interface,  
product code: 81-911-0090-01.

MasterBus Wireless Interface,  
product code: 81-911-0091-01.



### The ease of digital distribution

The MasterBus and CZone systems offer the everyday boat user features and automated functionality normally reserved for superyacht owners. CZone and MasterBus systems provide intelligent automation of complex onboard systems leaving you free to enjoy your boating experience.

Customisable modes of operation allow the boat to be configured to suit its use. At the push of a single button the boat's systems can be transformed from 'Dock Mode' to 'Cruise Mode', preparing her for a day at sea.

Thanks to galvanic isolation, nearly all devices can supply power to the MasterBus, ensuring a safe and stable network. The wide range of interfaces and modules allows you to connect any equipment you wish to your MasterBus system and manage, monitor or operate it locally, centrally or even from your home address.

### Professional perspective

The MasterBus and CZone systems makes life easier for designers, builders and installers of power systems with less material, less work, less fuss and an easy testing method. Moreover, the MasterBus network is available in ten languages. Both systems provide a range of displays for controlling and monitoring onboard systems such as inverters, chargers, circuits, power and tank levels. The range of displays offer a consistent, intuitive user interface.

Digital switching makes your life easier.

## New product CZone MasterBus Wireless Interface

Mastervolt has produced a wireless interface that allows any WiFi enabled portable device to tap into a boat's digital switching system for full monitoring and control of the electrical equipment via a clear and intuitive display. The interface acts as a hub for the seamless connection between the two popular DS protocols of MasterBus and CZone.

### Features:

- User-friendly homepage to monitor and control onboard circuits.
- Integrated control and monitoring of power products including battery chargers and inverters.
- Monitor AC/DC power and batteries.
- Monitor tank levels.
- Receive visible and audible alarms.
- Connect a maximum of three devices simultaneously.
- Ability to personalise homepage to display favourite circuits, modes & monitoring.

### Hardware:

- The WiFi interface acts as the hub between MasterBus/CZone networks and local WiFi devices.
- Also available as a dedicated MasterBus unit for standalone MasterBus operation.
- Two CAN channels – bridges two separate CAN networks.
- Ethernet connection to connect to other LANs.
- USB connection for data recording and configuring system.



# The intelligent logic of digital distribution

As owners demand ever higher levels of onboard luxury and comfort, yachts and vehicles need to carry more equipment which in turn takes up more space. This makes it all the more essential to intelligently install equipment in the available space - and that is where digital distribution by Mastervolt comes in. Digital distribution requires fewer cables, takes up less space and increases luxury.



## Digital DC 10x10A

As the pinnacle of system intelligence, the Digital DC 10x10A has ten output channels of 10 A for all functions including lighting, pumps or electronics. It comes standard with intelligent alarm functions and luxury options include:

- Follow me home; light stays on for a specific time.
- Dimming of lights.
- Alarm signal for overload.
- Every output includes a hardware and software fuse.
- Fuse reset option via the MasterBus network.
- Option of higher currents – up to 100 A – with parallel switching of multiple outputs.

<b>Product code</b>	<b>77020400</b>
MasterBus powering	yes
Power consumption	<2 mA at 12 / 24 V
Protection degree	IP21
Dimensions, hwxwd	40x229x110 mm / 1.56x9x4.34 inch
Weight	750 gr / 1.7 lb
<b>DC OUTPUT</b>	
Connection	cable max. 4 mm <sup>2</sup>
Max. software fuse current	10 A per channel
Hardware fuse current	15 A per channel
<b>DC INPUT</b>	
Connections	max. 95 mm <sup>2</sup> or directly connected to MasterShunt or DC Distribution
Maximum current	100 A
Supply voltage	8-30 V DC





# MasterView control panels: Well informed and in full control!

Fast and clear information about your onboard electrical system is vital. Usually a number of multiple panels are required to read the details of an expansive electrical system, and the interpretation of these panels and how they relate to one another is left to the user. Mastervolt puts an end to this undesirable situation with its intelligent MasterView panels.



## **The smartest solution: MasterView System**

Mastervolt's intelligent MasterView System brings an end to cluttered, unclear and excessive information. The system is based on our in-house developed software combined with a user-friendly 10.4-inch colour touchscreen. The simple yet brilliant set-up of the MasterView System intelligently connects all the power sources and loads (generator, charger, bilge pump, engine, lighting, air conditioning, etc.) via the MasterBus. It provides all the information you need on your electric system in one clear overview on an organised, intuitively operated panel. The MasterView System is the next step up from simpler options such as MasterView Read-out (for load status) and MasterView Easy (status of a limited number of products) in terms of practicality and ease of operation.

## **Multifunctional touch screen remote panel: MasterView Easy**

This multifunctional display can monitor every MasterBus and CZone product. Connected to the MasterShunt it functions as a battery monitor, connected to the generator as a generator panel. These and other functions can also take place simultaneously and you can create a favourites page showing all your main information.





# Specifications MasterView panels



Remote panel for reading the charge status of your charger, including error notifications.

MasterView Read-out	
Product code	77010050
Display	7 LEDs
Dimensions, hwxw	60x65 mm / 2.4x2x6 inch
MasterBus connection	yes
Powered by	MasterBus
Power consumption	144 mW
Protection degree	IP21
Weight	70 gr / 0.15 lb

## MasterView Read-out OEM (product code: 77010030)

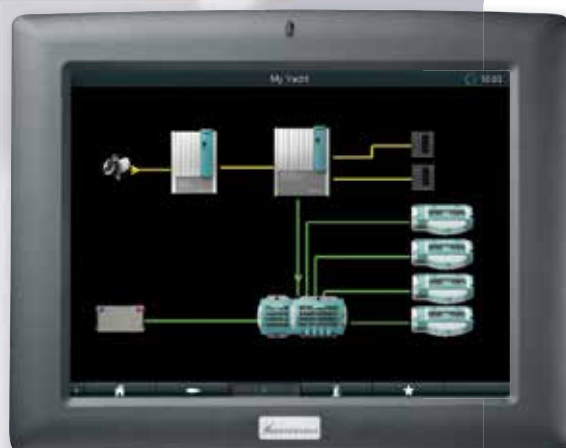
If your dashboard is full and does not offer space for a MasterView panel, this module allows you to integrate the MasterBus Read-out into your own control panel.



MasterView Easy	
Product code	77010305
Display	3.5 inch touch screen
Dimensions, hwxw	110x110 mm / 4.3x4.3 inch
MasterBus connection	yes
Powered by	MasterBus
Power consumption	160 mW
Protection degree	IP21
Weight	230 gr / 0.51 lb
Languages	ENG, NL, DE, SP, IT, FRA, FIN, SWE, DEN, NOR



MasterView System	
Product code	77010400
Display	10.4 inch colour touch screen
Dimensions, hwxw	222x276 mm / 8.7x10.8 inch
MasterBus connection	by means of System Panel Controller (delivered as standard)
Power	by means of System Panel Controller (delivered as standard)
Power consumption	28 W
Protection degree	IP64 (front)
Weight	1.4 kg / 3.1 lb
Languages	ENG, NL, DE, SP, IT, FRA, FIN, SWE, DEN, NOR



## System Panel Controller (product code: 77031900)

Connect the MasterView System or your PC with the MasterBus network. Provides the power and software license key for the MasterView System panel. Delivered as a standard with MasterView System (also separately available).





# MasterView System: Interactive touchscreen



This full colour graphical display helps installers to configure the electrical onboard system, and is extremely easy to reproduce. Configuration, monitoring and operation becomes easier, cheaper, lighter and faster. The software makes complicated electrical systems understandable for each user. Electricity has become fun to operate!

## Home screen

The home screen provides a status overview of power sources like shore connections, inverters, generators and batteries. A basic form of control is possible, for example turning on and off your inverter.

## Digital switching screen

This screen shows the layout of your yacht/vehicle, lights and selected pumps. You manage the loads by clicking the icons. The background image can be uploaded for full customisation. Alarm notifications are shown via eye-catching pop-ups.

## System overview

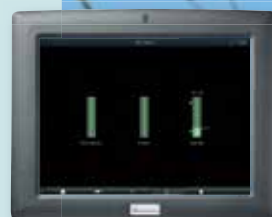
This screen gives a dynamic graphical overview of your electric system, answering any questions you have in an instant. Incorrect line voltages are shown in red, inactive circuits in grey: It couldn't be easier.

## Tank level screen

Stop guessing and know immediately the contents of up to 20 tanks. You can also install your own warning signals for full or (nearly) empty tanks. All you need to do is connect the MasterBus Tank Level Interface to the network.

## Favourites screen

The favourites screen can be custom designed to meet your specific needs for information and control. Any information that is available on the MasterBus network is displayed clearly and logically. Information can be displayed in various ways on multiple pages, for example, one overview page, one or two breaker pages, an engine information page and a NMEA2000 information page.





# Operate & control your

Mastervolt offers a wide range of interfaces to increase the versatility of your MasterBus network. Connect multiple components to distribute information to your MasterBus products or connect products that require information from the MasterBus network, such as a NMEA2000 or Modbus network, and vice versa. All interfaces can be installed in various ways, from DIN rails to surface mounting. Available in ten languages: English, Dutch, German, French, Spanish, Italian, Norwegian, Swedish, Finnish and Danish.



Product code: 7703100.

## MasterBus USB Interface

The MasterBus USB Interface enables you to read and configure the MasterBus network via your PC.



Product code: 77030450.

## MasterBus Serial Interface

The MasterBus Serial Interface connects conventional Mastervolt products to the MasterBus. Data becomes permanently available to allow configuration, operation and monitoring via MasterView panels.



Product code: 77030800.

## MasterBus Modbus Interface

The MasterBus Modbus interface can provide all information from the 'closed' MasterBus network for other monitoring and operating systems by means of the Modbus protocol.



Product code: 77031000.

## GPRS Module

Communicate with your system via mobile phone, monitoring current information or operating the system by remote control via a text message or easy shortcuts.



Product code: 77030700.

## MasterBus Inverter Interface

The MasterBus Inverter Interface integrates the Mass Sine inverter in a MasterBus network and allows it to be operated and monitored via MasterView or PC.



Product code: 77031300.

## Switch Input 3 PCB

Switch Input 3 makes Carling switches suitable for MasterBus and helps you by easily linking various functions to the switch.



Product code: 77030475.

## MasterBus Combi Interface

This interface integrates a Mastervolt Mass Combi in a MasterBus network and allows it to be operated or monitored via a MasterView panel or PC.



Product code: 77031400.

## Switch Input 4 PCB

Switch Input 4 has LED indication for extra information. For example: The LED will blink when a connected lamp fails.



Product code: 77031100.

## MasterBus Repeater

Double the maximum length of your MasterBus network.



Product code: 77031900.

## System Panel Controller

Connect the MasterView System or your PC with the MasterBus network. Provides the power and software license key for the MasterView System panel.





# MasterBus network



Product code: 77031800.

## MasterBus NMEA2000 Interface

Provides the MasterBus network with NMEA2000 information, and vice versa.



Product code: 77030900.

## Digital Input

Connects up to four switches to the MasterBus network. Standard delivered with connection cables.



Product code: 77031500.

## Digital AC 1x6A

Switches all AC loads, no matter where they are. Loads up to 6 A can be directly switched, higher loads should be switched via a relay.



Product code: 77030500.

## Multipurpose Contact Output

Mastervolt's potential-free contact can be customised and programmed to give your MasterBus network unprecedented possibilities. Use it, for example, to control a ventilator or operate a generator from a different brand.



Product code: 77030300.

## MasterBus Tank Level Interface

This interface converts analogue sensor input signals to MasterBus data. Selectable input signals: 4-20 mA, 0-300  $\Omega$ , 8-70 V DC.



*Improved configuration and commissioning features.*

Product code: 80-911-0072-00.

## CZone MasterBus Bridge Interface

The CZone MasterBus Bridge Interface physically connects the MasterBus and CZone networks together enabling the two networks to communicate and act as one, providing seamless control and monitoring of devices on both networks from either MasterBus or CZone displays.

Features/functions:

- Control of Mastervolt inverters and chargers from CZone displays and switches.
- Control of MasterBus output devices (turn lights, pumps, etc. on/off).
- Control of CZone output devices (turn lights, pumps, etc. on/off) via MasterBus displays and switches.
- Display CZone acquired systems information such as tank and power levels on MasterBus displays.
- Display MasterBus acquired systems information such as tank and power levels on CZone displays.
- Transfers alarms between both systems.



**NEW**

Product code: 81-911-0091-01.

## MasterBus Wireless Interface

Wireless monitoring and control of onboard systems from smart phones and tablets.



Product code: 77031200.

## AC Power Analyser

The AC Power Analyser is a multifunctional measuring tool that provides the MasterBus with insight into AC voltage and power, frequency, Cos Phi and system capacity. The device also functions as an 'inverter control' and has a programmable potential-free contact.



# Specifications MasterBus Interfaces

Product code	MasterBus powering	Dimensions, hwxwd	Weight	Protection degree	Delivered with
77030100	yes (when the PC is switched on)	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	USB connection cable, MasterBus cable, MasterBus Terminator, user's manual
77030800	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	MasterBus cable, MasterBus Terminator, user's manual
77030700	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	Interface connection cable, MasterBus cable, MasterBus Terminator, user's manual
77030475	yes	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	Interface connection cable, MasterBus Terminator, user's manual
77031100	yes	66x78x32 mm 2.6"x3.1"x1.3"	± 90 g 0.20 lb	IP21	MasterBus cable, MasterBus Terminator, user's manual
77030450	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	Interface connection cable, MasterBus cable, MasterBus Terminator, user's manual
77031000	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	GPRS antenna, MasterBus cable, MasterBus Terminator, user's manual; SIM card not included
77031300	no	54x86x58 mm 2"x3.4"x2.3" (incl. mounting frame)	35 g 0.08 lb	IP21	MasterBus Terminator, user's manual; switches and mounting frame not included
77031400	no	56x120x65 mm 2.2"x4.7"x2.6" (incl. mounting frame)	45 g 0.1 lb	IP21	MasterBus Terminator, user's manual; switches and mounting frame not included
77031900	yes (when the PC is switched on)	91x185x33 mm 3.6"x7.3"x1.3"	± 750 g 1.65 lb	IP65	USB cable, SPC cable, MasterBus cable, MasterBus Terminator, user's manual
77031800	no	66x78x32 mm 2.6"x3.1"x1.3"	± 100 g 0.22 lb	IP21	NMEA connection cable, MasterBus cable, MasterBus Terminator, user's manual
77030900	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	cable with plug, MasterBus cable, MasterBus Terminator, user's manual
77031500	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	MasterBus cable, MasterBus Terminator, user's manual
77030500	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	MasterBus cable, MasterBus Terminator, user's manual
77030300	no	66x78x32 mm 2.6"x3.1"x1.3"	± 80 g 0.18 lb	IP21	MasterBus cable, MasterBus Terminator, user's manual
80-911-0072-00	no	69x69x50 mm 2.7"x2.7"x2"	145 g 0.32 lb	IP65	MasterBus cable adapter, MasterBus Terminator, user's manual
81-911-0091-01	no	105x190x60 mm 4.1"x7.5"x2.3"	685 g 1.51 lb	IP54	power cable, MasterBus cable adapter, WiFi antenna, MasterBus Terminator, sealing caps, user's manual
77031200	no	80x181x28 mm 3.1"x7.1"x1.1"	± 530 g 1.17 lb	IP65	MasterBus cable, MasterBus Terminator, current transformer 100:5, user's manual



## MasterShunt fuses

The robust fuse (500 A/160 V DC, 50 kA short circuit current) is suitable for high short circuit currents from the batteries. Spare fuse available separately, product code: 77049000.



## DC Distribution fuses

The DC Distribution standardly comes with four ANL fuses: 80, 80, 125 and 160 A, and a spare fuse of 125 A.

## Replacement fuses and other amps:

product code	
77049040	40 A
77049050	50 A
7049060	60 A
77049080	80 A
77049100	100 A
77049125	125 A
77049160	160 A
77049175	175 A
77049200	200 A
77049250	250 A
77049300	300 A
77049400	400 A

For more information see [www.mastervolt.com/masterbus-interfaces](http://www.mastervolt.com/masterbus-interfaces)





# Practical: MasterBus accessories

## MasterBus communication cable

Suitable for data traffic and powering peripheral equipment, this is the only cable you need for your MasterBus network. MasterBus compatible products come standard with two ports, while other equipment requires an interface. A DIY-kit is optional.



Available cable lengths:

- 0.2 m, product code: 77040020
- 0.5 m, product code: 77040050
- 1 m, product code: 77040100
- 3 m, product code: 77040300
- 6 m, product code: 77040600
- 10 m, product code: 77041000
- 15 m, product code: 77041500
- 20 m, product code: 77042000
- 25 m, product code: 77042500
- 100 m, product code: 77045000

**MasterBus Terminator,**  
product code: 77040000.



**MasterBus DIY-kit,** product code: 77050000.

Cut your own cables to length and finish, comprising:

- Professional RJ45 crimping tool.
- 50x MasterBus RJ45 connectors.
- 50x green MasterBus RJ45 protection boots.
- 100 m green MasterBus CAT5E UTP cable.

Separately available:

- 25x MasterBus RJ45 connectors, 8-pole, product code: 77040010.
- 25x green isolation caps for RJ45 connector, product code: 77040015.





# The intelligent simplicity of MasterBus

MasterBus makes life easier for designers, builders and installers of power systems. This brilliantly simple platform for communication and connections ensures that all components 'speak' the same language. One communication protocol with high-speed CANbus technology.

The optimum integration of power conversion and power storage also includes digital switching. Control your system centrally or switch on a bunk light locally, all via MasterBus. The one-bus approach even allows control from your home. MasterBus helps realise an electrical system that combines remarkably easy installation with ultimate reliability; no matter how large or complex your system.

## Fewer cables

It all starts with MasterBus, a brilliantly simple one cable system for all communication between the various products. With MasterBus you need far fewer cables and all your system components will 'speak' the same language. Reap the benefits of a single communication protocol with high-speed CANbus technology that is fast, reliable, flexible and expandable.

## Easy maintenance

Replacing a component can often lead to complex configuration problems. Not with Mastervolt: The MasterBus network 'recognises' any replacement directly and automatically asks whether you want to keep the same or change your configuration. You stay well informed and with everything under control.

For more information see [www.mastervolt.com/masterbus](http://www.mastervolt.com/masterbus)





# The basic components of a MasterBus network



## MasterShunt 500

This ultra-modern battery monitor provides detailed information on the status of your batteries, including voltage, current, remaining time and used capacity in percentages. With an intelligent connection system, the MasterShunt is easily connected to the DC distribution. The integrated system clock combined with command-based events custom automates the system to your needs. Example of system automation: The generator should start automatically when the batteries are almost depleted. The MasterShunt also provides a robust built-in main fuse that can safely interrupt short-circuit currents of 50 kA.



Product code	77020100
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Dimensions, hwxwd	150x150x65 mm / 5.9x5.9x2.5 inch
Weight	1 kg / 2.2 lb
Battery types	gel, AGM, wet, Lithium Ion, spiral
Battery voltage	12, 24 or 48 V DC
Current	300 A continuous / 500 A for 5 minutes
MasterBus powering	yes
Main fuse	500 A T-fuse (300 A continuous at 40 °C)
System functionality	alarm, timers, auto start/stop for the generator
Programmable alarms	warning low voltage, warning low state of charge, high voltage
Protection degree	IP21
Delivered with	MasterShunt, temperature sensor, MasterBus Terminator, MasterBus cable, isolation cover for DC connections

## DC Distribution 500

The DC Distribution 500 is the smallest distribution model available. It connects up to four DC devices to the DC groups, such as a battery charger, inverter, alternators and solar panels. An included plug & play cable makes connection to the MasterBus network a breeze. The MasterView panel gives all fuses logical names (referring, for instance, to the connected equipment) to ensure you receive understandable error notifications (f.ex. charger fuse defect).



Product code	77020200
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Dimensions, hwxwd	150x216x65 mm / 5.9x7.9x2.5 inch
Weight	1.2 kg / 2.6 lb
Battery voltage	12, 24 or 48 V DC
Current	300 A continuous / 500 A for 5 minutes
MasterBus powering	no
Standard fuses	80, 80, 125, 160 A - ANL-type (deviating values can be ordered separately)
Spare fuse	125 A ANL-type
Alarm	fuse monitoring
Protection degree	IP21
Delivered with	5 fuses, hex tool, MasterBus Terminator, MasterBus cable, isolation cover for DC connections







# networked monitoring system

The CZone digital control & monitoring network simplifies installation of electrical systems through the replacement of complicated, cumbersome wiring to switch and fuse panels, with state-of-the-art, robust interfaces and light NMEA2000 network cable. It also provides a sophisticated solution via the automation of complicated control and monitoring issues associated with today's onboard systems.

## Installation

Builders recognize an immediate benefit with reductions in cable usage, harness weights and installation times. The CZone system also integrates many standalone components into one intuitive system. Wiring is dramatically simplified as the CZone system is designed to remove complex switching clusters and wiring runs. Modules can easily be added into the system to best suit the OEM and end-users' needs.

## Configuration

We provide the tools to help you determine the modules needed based on your specific requirements. You can then simply program with the CZone intuitive configuration tool.

## Integration

The CZone system is NMEA2000 compliant and uses the standard Micro cables and connectors. This also allows a single network backbone to be installed for multiple systems (CZone and other NMEA2000 devices). Additionally, the CZone system can share certain monitoring functions with other NMEA2000 compliant screens.

The CZone MasterBus Bridge Interface expands the level of systems integration to a whole new level. No other company can bring digital switching, power electronics and marine navigation systems together into one interactive, seamless system.

## Versatility & security

The CZone system, designed for 9-32 V systems, features built-in timers, dimmers (including support for halogen lighting), alarms, voltage reducers and load shedding. With safety in mind, the CZone system features a manual bypass. Our No-Single-Failure-Point technology ensures a plug & play system that is designed to handle mishaps. If a module is damaged, the system will automatically program the replacement module when it is plugged in. This means any module can be replaced without using high tech service people. Our security features allow custom configurations that can be locked.



# LCD displays

The CZone displays are the interface between the CZone and MasterBus networks and the user. They offer full control of circuits as well as the ability to view important onboard system information, such as tank levels and power levels (for both AC and DC supplies). Audible and visual alarms with systems diagnostics are also provided. The displays are extremely intuitive to use with simple controls and a menu structure that is easy to follow. The 'modes of operation' feature allows the control of multiple circuits with a single push of a button. For instance, 'night running' mode turns pre-selected lights on to dim levels. These modes are all user configurable. The CZone displays can be used to set the CZone system parameters for initial installation and future system maintenance (DI only).



## 3.5" Display Interface:

- Display Interface, with power cable, black bezel, **product code: 80-911-0001-00.**
- Display Interface, with power cable, grey bezel, **product code: 80-911-0002-00.**
- Display Interface only, black, **product code: 80-911-0003-00.**
- Display Interface only, grey, **product code: 80-911-0004-00.**

Screen size	3.5" transfective QVGA
Protection	IpX7 water ingress
Dimensions, wxhxd	105x165x62 mm 4.13"x6.5"x2.44"
Power consumption	at 12 V: 180 mA (standby 130 mA)
Rotary knob for easy menu navigation	



8" Touch screen.

<b>Product code</b>	<b>80-911-0064-00</b>
Screen size	8.4" (SVGA)
IP Level	IP64
Dimensions, wxhxd	234x184x42 mm 9.21"x7.24"x1.65"
Brightness (cd/m <sup>2</sup> )	450
Input voltage	12 V DC
Power consumption	20 W



10" Touch screen.

<b>Product code</b>	<b>80-911-0065-00</b>
Screen size	10.4" (SVGA)
IP Level	IP64
Dimensions, wxhxd	276x227x50.7 mm 10.87"x8.93"x1.99"
Brightness (cd/m <sup>2</sup> )	400
Input voltage	12 V DC
Power consumption	25 W

## Power Control

- Turn circuits on and off including timer and light dimming control.
- Set modes of operation.

## Monitoring

### DC power meter

- Displays voltages of multiple battery banks, includes low and high voltage alarms.
- Displays charge and discharge (amps) of multiple battery banks.
- Displays battery capacity in ampere hours and % charge/discharge, includes low ampere hour alarm.
- Logging of battery minimum and maximum voltage levels.
- Logging of minimum battery capacity level.

### AC power meter

- Displays multiple line voltages (230 and 120 V), includes high and low voltage alarm.
- Displays AC line frequencies, includes high and low frequency alarm and AC power consumption in kW.
- Logging of minimum and maximum voltage and frequency levels.
- Logging of maximum AC current.

## Tank levels

- View tank level information for multiple tanks and fluid types.

## Data

- Displays standard NMEA2000 information.
- Displays temperature and pressure values.

## Alarms/diagnostics

- Logging of circuit run time and on cycles.
- CZone network status reporting.
- Presents alarms for on board faults in audible and visual form (bilge pump running, smoke alarm).



# LCD displays

The CZone displays are designed with both the manufacturer and end-user in mind. The easy-to-use display screens put the control of all components directly at your fingertips. Multiple display interfaces can be used in the same system. The scroll and click interface is simple to use in the roughest of seas or bumpiest of roads.

## Monitoring

Allows user to easily monitor AC and DC power, tanks, data, alarms, and circuit status. Presents data in analogue and digital form.

## Control

Breaks down the circuits into easy to identify groups for quick control, i.e. to turn on fresh water pump open 'pumps' group. User can open pumps group and select fresh water pump. This screen also allows the user to monitor the status of the circuit i.e. on, off, fault and current draw.

## Settings

Allows OEM or technician access to the configuration (via password) of a system. No need for computer to set or change configuration settings such as circuit labels, circuit breaker sizes, etc. (DI only).

## Modes

Ease of operation assured. With one press of the key users can turn on a group of circuits without having to scroll, search for, and turn on the individual circuits that they need for operation of their vessel/vehicle. When leaving, simply press 'systems off' to turn off all non-essential circuits. Entertainment mode allows preset activation of lounge lights, music etc... All functions can be controlled remotely.

## CZone™ Integration Partners

Simrad and B&G have added CZone control and monitoring to their award winning fully networked chartplotter/multifunction displays. View CZone monitoring data, tank levels and battery voltage alongside radar, fish finder, video and chartplotter information or navigate to the CZone page to operate any circuit from the intuitive control page.





# AC interfaces

## AC Output Interface (ACOI)

Searching for a simplified way to network, monitor and control onboard AC circuits? The AC Output Interface does it all and provides circuit protection for all onboard AC devices. It is easy-to-install, configure and operate the digital control system with pre-wired components for quick connections. But you still have a customisable solution to suit unique installation and application needs, including 'night running' or 'at anchor' as well as control at multiple locations. It has eight outputs (up to 50 A each), supports multiple pole designs and two separate buss feeds. To make it easy, status LEDs and manual bypass are located right at the enclosure.



Product code:  
80-911-0069-00.

- Eight outputs at up to 50 amps each
- Circuit status and run current displayed for each circuit
- Customisable to suit installation requirements
- Pre-wired for quick connection
- Staggered start-up of loads
- 110 V, 240 V, 110/220 V
- Supports multiple pole designs, i.e. double, triple, four pole
- Utilises standard DIN rail mounted components for circuit protection and control
- Can support two separate bus feeds i.e. 2 load groups in one box
- Delay before circuits come on to allow generators to come up to speed
- Dimensions, hwxwd: 295x458x130 mm / 11.61"x18"x5.1"  
(enclosure dimensions may change depending on installation requirements)
- Provides circuit protection and control
- Status of LEDs at enclosure
- Manual bypass at enclosure
- Provision for MCB/RCD's
- Timers
- 50 or 60 Hertz
- IPX5 enclosure



## AC Mains Interface (ACMI)

A sophisticated source selector or transfer switch, the AC Mains Interface enables the user to specify the AC power source (generator, inverter, grid power). It was developed for use with the CZone digital control system, but may also be used as a standalone device. The ACMI can be programmed to automatically change the supply source when the current rating is exceeded, and includes a manual bypass and user-friendly display screen that ensures easy current, voltage, frequency, and power monitoring. Other features include six monitored, over-current protected main power inputs of up to 100 A each, as well as two outputs, which enables two separate load groups and a parallel option for use with a single source. To simplify installation, the ACMI comes pre-wired.



Product code:  
80-911-0068-00.

- Six source inputs up to 100 A (e.g. 2x grid power, 2x generator)
- Monitoring of channel status (on/off/fault)
- Provides circuit protection and control
- Manual override at enclosure and via remote panel
- Customisable to suit installation requirements
- Supports multiple pole designs, i.e. double, triple, four pole
- 110 V, 240 V, 110/220 V
- IPX5 enclosure
- Utilises standard DIN rail mounted components for circuit protection and control
- Physical and software lockouts between source controls (prevents two sources from becoming connected)
- Reverse polarity and bad power supply alarms including auto disconnect and lockouts
- Current, voltage, frequency and power monitoring incorporated (six channels)
- Two outputs (load groups), allows for two separate load groups with parallel option for use with single source
- Dimensions, hwxwd: 403x630x130 mm / 15.8"x24.8"x5.1"  
(enclosure dimensions may change depending on installation requirements)
- Auto changeover
- Provision for RCDs
- Load shedding
- Status of LEDs at enclosure
- Pre-wired for quick connection
- Timer controls
- 50 or 60 Hertz





# CZone interfaces



Product code	description
80-911-0011-00	Switch Control Interface with seal
80-911-0012-00	Switch Control Interface only

## Switch Control Interface (SCI)

The Switch Control Interface provides an interface between the CZone network and the traditional mechanical switches with which manufacturers and users are familiar. The SCI simplifies your wiring, supports your existing choice of switches, protects against failures and allows for more installation options.

- Single switch position can control multiple OI channels
- Attaches to switch panels via custom SCI cable
- Multiple SCI switches can control single OI channel
- Output for backlighting of switch labels (dimnable)
- Outputs systems on and function/fault codes to systems on LED of switches (dimnable)
- Dimensions, wxhxd: 156x100x42 mm – 6-3/32"x3-29/32"x1-5/8"
- IPX5 water ingress protection
- Programmable switch types
- 8 inputs per module (16 individual controls)
- Sequential button press functionality



Product code	description
80-911-0013-00	Signal Interface with seals,
connector	
80-911-0014-00	Signal Interface only

## Signal Interface (SI)

The Signal Interface connects the CZone system to your external sensors, alarms and switching devices. The SI allows intelligent, automated operation of circuits depending on the state of the input.

- Accepts inputs from traditional switch types being used to control outputs
- Accepts inputs from switches to trigger alarm i.e. high water float switch
- Accepts inputs from industry-standard tank senders (0-5V, 10-180 Ohm, 240-33 Ohm)
- Accepts inputs from general voltaic or resistive signals, can be used for controlling outputs or to display a physical position i.e. show a hatch is partially open
- LED status indicators for each input
- Dimensions, wxhxd: 156x100x42 mm – 6-3/32"x3-29/32"x1-5/8"
- IPX5 water ingress protection
- Outputs standard NMEA2000 sentences
- Resistive input range 0–1000 Ohms
- Voltage sensing input range 0–34 V DC



Product code	description
80-911-0005-00	Meter Interface with seal & plug
80-911-0006-00	Meter Interface only

## Meter Interface (MI)

The Meter Interface accepts inputs from external AC and DC power metering sensors such as: AC and DC voltage and amps, AC kWatts, and DC battery capacity in amp hours and % remaining. All with user definable high and low alarms.

- | AC  |                         |
|---|-------------------------|
| • 3 x AC voltage inputs (multi voltage)                                       | • 2 x AC current inputs |
| • Calculates true RMS power   |                         |
| DC  |                         |
| • 3 x DC voltage inputs (multi voltage)                                       | • 2 x DC current inputs |
| • Calculates battery capacity as ampere hours and percentage charge remaining |                         |
| • Resolution for current metering down to 0.1 A                               |                         |
| GENERAL   |                         |
| • Dimensions, wxhxd: 156x100x42 mm – 6-3/32"x3-29/32"x1-5/8"                  |                         |
| • IPX5 water ingress protection   |                         |
| • Outputs standard NMEA2000 power monitoring sentences                        |                         |

Note: High and low alarm levels can be set for all inputs.



## Output Interface (OI)

The Output Interface provides an intelligent replacement for traditional circuit breaker and fuse panels. It has six high power, robust output channels which provide the power supply, control and fusing for a circuit as well as integrating many other built in features such as timers and dimmers. Connection to the unit is simple: a large 6 way plug allows connections to cables of up to 16 mm<sup>2</sup> (6AWG) in size, or multiple smaller conductors. No need for specialized crimp terminals and expensive crimp tools to be carried for terminations to CZone, just a blade screwdriver. A protective flexible boot offers protection to the connections from harsh environment conditions.



Product code	description
80-911-0009-00	Output Interface with connector and protective boot
80-911-0010-00	Output Interface only

- 4 levels of backup fusing including manual override (as required by ABYC)
- Multiple channels can be bridged together to offer higher current switching
- Power consumption 12 V: 85 mA (standby 60 mA)
- Dimensions, wxhxd: 200x128x45 mm – 7-29/32"x5"x1-3/4"
- Small, non-metallic, easy to install case
- IPX5 water ingress protection
- 6 x 20 amps circuits
- Programmable software 'fuse' sizes

## Motor Output Interface (MOI)

The Motor Output Interface has an output pair for controlling DC motors which require a reversal of polarity to change the direction of their mechanical operation. For example, a DC motor for an electric window mechanism will move the window up or down depending on the polarity of the feed to the motor. The MOI also incorporates two standard output channels as found on the OI.



Product code	description
80-911-0007-00	Motor Output Interface with connector and protective boot
80-911-0008-00	Motor Output Interface only

- Single motor control and two normal channels per unit, 20 A per output
- Built-in circuit protection
- IPX5 water ingress protection
- Dimensions, wxhxd: 200x128x45 mm – 7-29/32"x5"x1-3/4"



- 1 Fuses for emergency circuit bypass.
- 2 Network status indicator.
- 3 NMEA2000 connector.
- 4 Connector and protective boot.



# Digital Control accessories



**Extension cable**  
NMEA2000 network.

Product code	
80-911-0026-00	.5 m / 1.6 ft
80-911-0027-00	2 m / 6.5 ft
80-911-0024-00	5 m / 16 ft
80-911-0025-00	10 m / 32 ft



**Single tee connector**  
NMEA2000 network.  
Product code: 80-911-0029-00.



**2 Way tee connector**  
NMEA2000 network.  
Product code: 80-911-0047-00



**4 Way tee connector**  
NMEA2000 network.  
Product code: 80-911-0048-00.

**Sealing caps**  
NMEA2000 network.

Male cap  
Product code: 80-911-0050-00.

Female cap  
Product code: 80-911-0051-00.



**Power cable for Display Interface**  
NMEA2000 network.  
• 2 pin, 2 m / 6.5 ft.  
Product code: 80-911-0032-00.



**Power cable**  
NMEA2000 network.  
• 1 m / 3.2 ft  
Product code: 80-911-0028-00.



**Terminating resistors**  
NMEA2000 network.  
Product code  
80-911-0030-00 female  
80-911-0031-00 male



**90° elbow connector**  
NMEA2000 network.  
Product code: 80-911-0046-00.

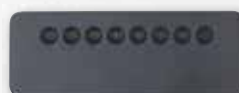


**AC transducer**  
Includes 3 voltage transformers for up to 3 voltage inputs.  
Dim.: 69x140x50 mm / .75"x5.5"x2".  
Product code: AC-VSEN-4.

## Cable glands



For SCI, silicon.  
Product code: 80-911-0035-00.



For SI, silicon.  
Product code: 80-911-0036-00.



For MI, silicon.  
Product code: 80-911-0033-00.

## Terminal blocks



SI/MI, 8-way.  
Product code: 80-911-0043-00.



OI/MOI, 6-way.  
Product code: 80-911-0041-00.



MI, 6-way.  
Product code: 80-911-0042-00.



**Seal boot**  
For OI/MOI.  
• 6-wire, blk silicon  
Product code: 80-911-0034-00.



**Through bulkhead adaptor**  
NMEA2000 network.  
Product code: 80-911-0052-00.



**Female field serviceable connector**  
NMEA2000 network.  
Product code: 80-911-0053-00.



**Male field serviceable connector**  
NMEA2000 network.  
Product code: 80-911-0054-00.



**Hole plugs**  
Product code  
80-911-0016-00 3.2 mm  
for MI and SI cable glands  
80-911-0017-00 5 mm  
for SCI cable glands



**DC current shunt**  
450A/50mV shunt  
supplied with 80-600-0021-00.  
Dim.: 83x45x44 mm / 3.25"x2.8"x2.75".  
Product code: LB-450-50.





### CZone wireless remote kit

Simple to set up, wireless remote control. Buttons are configurable for momentary on or latching control of circuits.

- 80 m (250 ft) operating range.
- Rolling code.

**Product code:** 80-911-0045-00.



### USB CAN adaptor

Connects PC to CZone network for configuration and system set up.

**Product code:** 80-911-0044-00.



### Cable assembly

SCI, to suit custom switches.

**Product code**

80-911-0018-00	.5 meter
80-911-0019-00	1 meter
80-911-0020-00	2 meter
80-911-0021-00	3 meter
80-911-0022-00	4 meter
80-911-0023-00	5 meter



### Cable assembly

SCI, to suit push buttons.

**Product code**

80-911-0085-00	.5 meter
80-911-0086-00	1 meter
80-911-0087-00	2 meter
80-911-0088-00	5 meter
80-911-0089-00	8 meter

**NEW**

### CZone Wireless Interface

Wireless monitoring and control of onboard systems from smart phones and tablets. **Product code:** 81-911-0090-01.



### Push buttons

For use with CZone systems only.

- Momentary and latched actuation options available.
- Blue and red circuit status indication LED options.
- 19 mm mounting hole.
- IP67 environmental protection.
- Stainless steel components.



**Product code**

80-911-0060-00	momentary (ON)OFF	red LED
80-911-0063-00	momentary ON/OFF	red LED
80-911-0062-00	momentary (ON)OFF	blue LED
80-911-0061-00	momentary ON/OFF	blue LED

### Custom switches

Red or blue systems in operation and backlighting LEDs.



**Product code**

80-911-0037-00	ON/OFF	red LED
80-911-0038-00	mom ON/OFF	red LED
80-911-0039-00	ON/OFF/ON	red LED
80-911-0040-00	mom ON/OFF/mom ON	red LED
80-911-0066-00	mom ON/OFF	blue LED
80-911-0071-00	mom ON/OFF/mom ON	blue LED

### Current transformer

Max. current 150 A AC.

One CT-10-3 current transformer is supplied with ACSM. A second CT must be ordered if a twin line system is in use. Supplied with 80-600-0023-00.

Dim.: 37.5x39.2x13.7 mm / 1.5"x1.55"x.55".

Hole size: 12 mm / 0.5".

**Product code:** CT-10-3.



### Heavy-duty current transformer

Max. current 150 A AC.

CT-HD is available for systems with large mains cables, too large for CT-10-3 (order separately).

Dim.: Ø 47 x 10.5 mm / 1.85 x 0.4".

Hole size: 32 mm / 1.25".

**Product code:** CT-HD.



**Improved configuration & commissioning features.**

### CZone MasterBus Bridge Interface

The CZone MasterBus Bridge Interface has been developed to connect two great systems together to bring you the best of both worlds. The bridge physically connects the MasterBus and CZone networks enabling the two networks to communicate and act as one, providing seamless control and monitoring of devices on both networks from either MasterBus or CZone displays.

**Product code:** 80-911-0072-00.



### CZone Network Bridge Interface

For isolating sections of a NMEA2000 network to decrease standby current draw. Isolation when bridging between two CAN networks, (e.g. connecting CZone to Simrad Simnet). For expansion of the NMEA2000 network when the maximum node limit for the network has been reached (node = any device connected to the NMEA2000 network). Once fitted, a further 40 nodes can be added.

**Product code:** 80-911-0057-00.



### Surge protection module

Protect your electronics from being damaged by harmful high voltage spikes. When fitted to the battery supply these modules look for sudden increases in voltage then switch into protection mode to absorb and suppress the high energy spike.

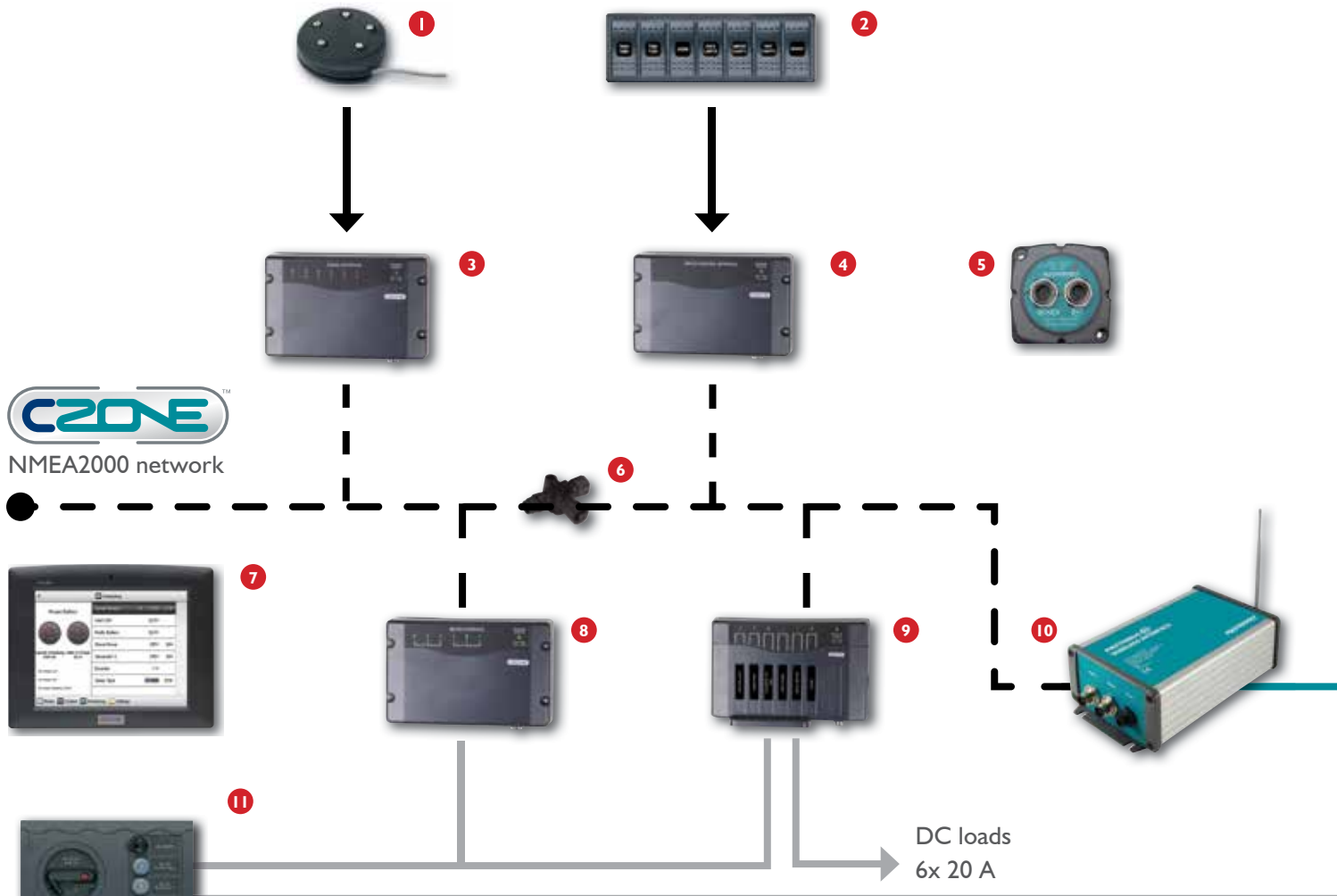
**Product code**

80-707-00004-00	12 V DC
80-707-00005-00	24 V DC





# Fully integrated

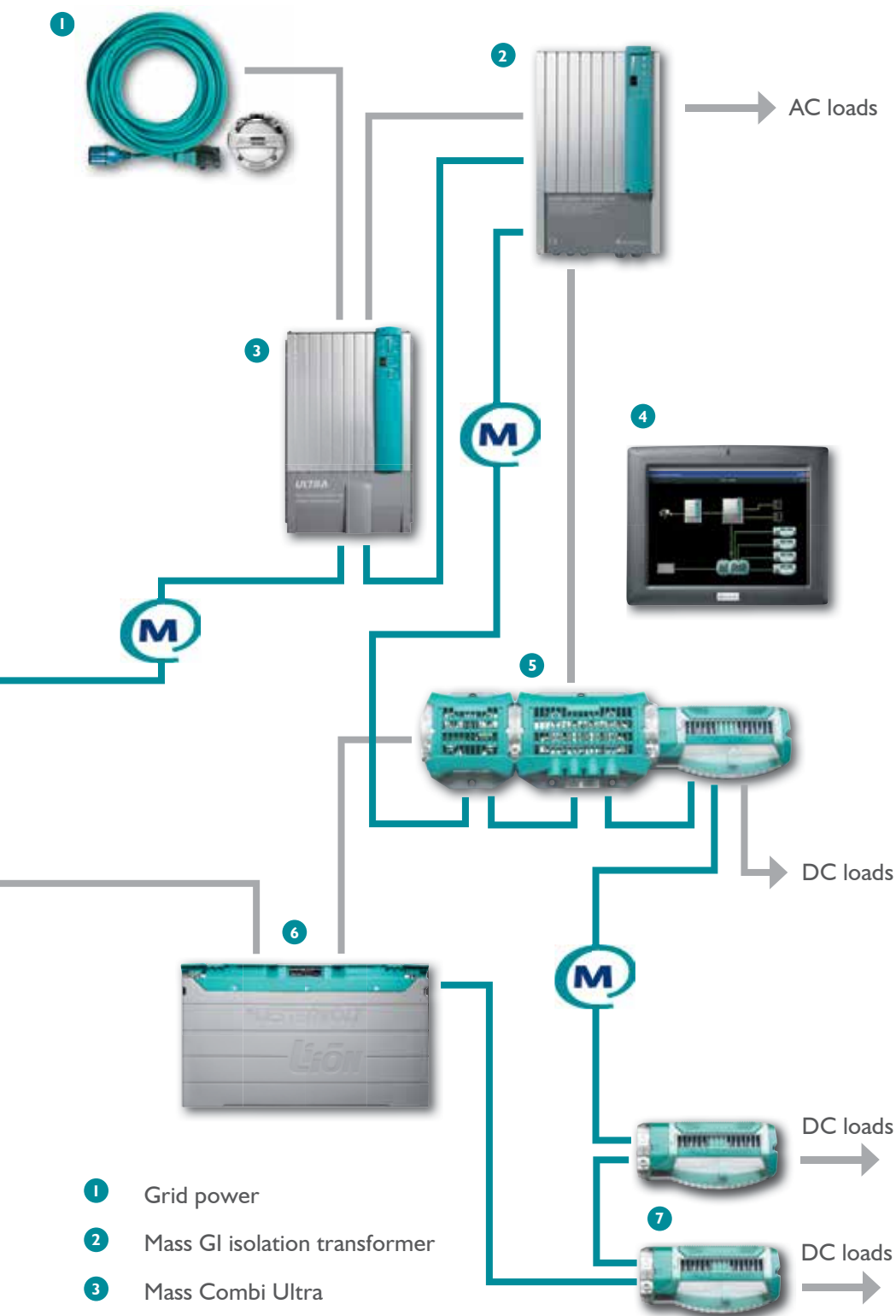


- 1 Ultrasonic tank sender
- 2 Switch cluster
- 3 Signal Interface
- 4 Switch Control Interface
- 5 CZone MasterBus Bridge Interface
- 6 NMEA T-connector
- 7 10" Touch screen
- 8 Meter Interface
- 9 Output Interface
- 10 CZone MasterBus Wireless Interface
- 11 Battery distribution panel





# MasterBus<sup>®</sup> system



- 1 Grid power
- 2 Mass GI isolation transformer
- 3 Mass Combi Ultra
- 4 MasterView System
- 5 MasterShunt, DC Distribution, Digital DC 10x10
- 6 Lithium Ion 12 V (service battery)
- 7 Digital DC 10x10

## Advantages of one system:

- Fewer cables.
- Less weight.
- Installation time savings.
- Increased flexibility in terms of design changes.
- 'Superyacht' power and load management capabilities.
- Remotely accessible.
- Easy to maintain.
- Integrated solution.
- Single button 'mode' selection.
- Redundant and safe.
- Global service network.





For more information on MasterBus, see  
[www.mastervolt.com](http://www.mastervolt.com)

For more information on CZone™, see  
[www.bepmarine.com](http://www.bepmarine.com)

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