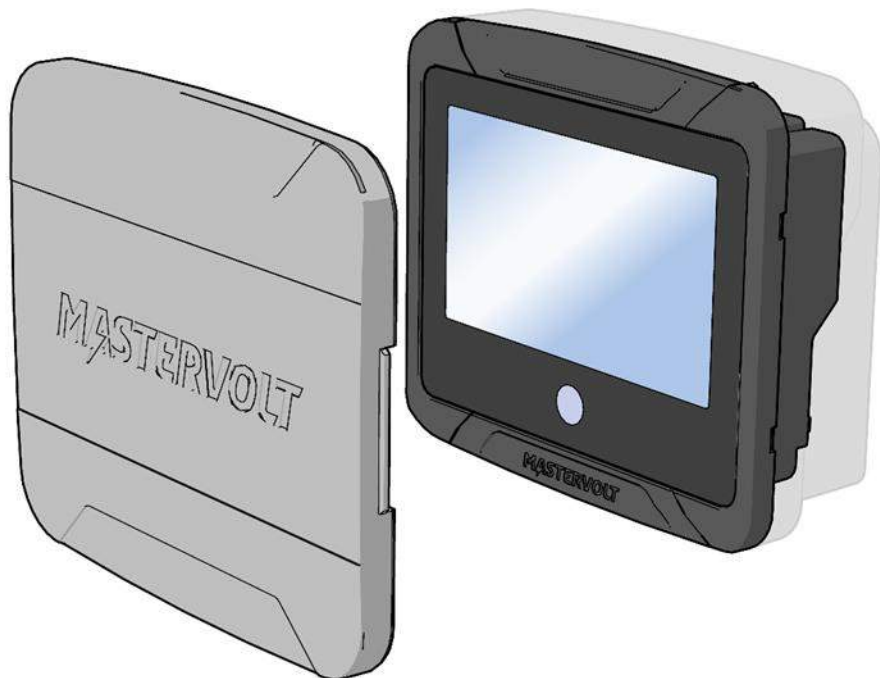


EasyView 5

MONITORING AND CONTROL PANEL
FOR THE MASTERBUS NETWORK



EN USER'S AND INSTALLATION MANUAL

10000011559/08

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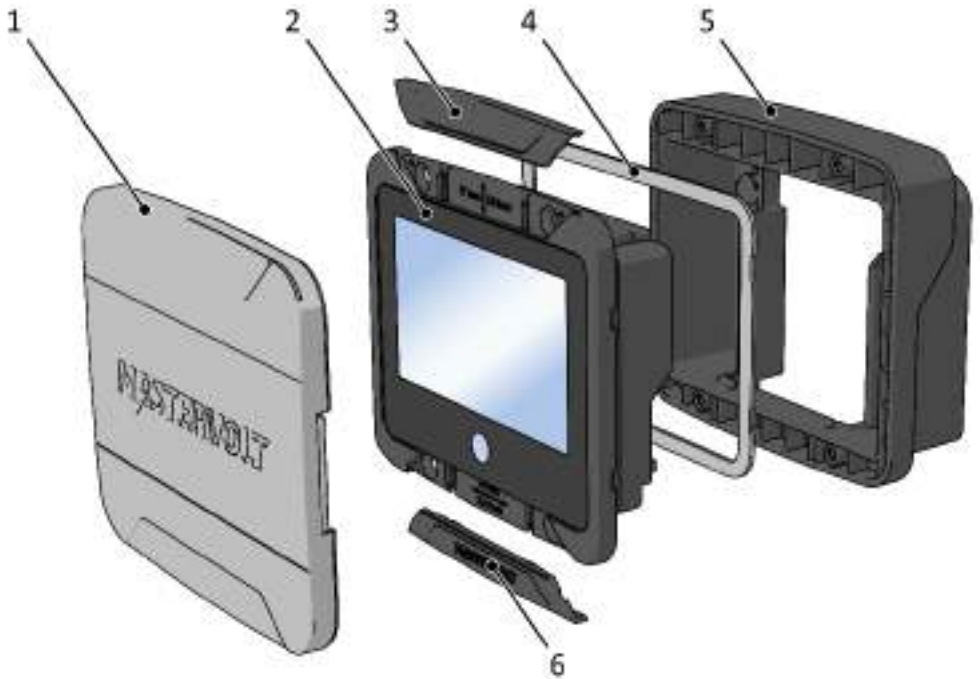
1 Product description

The Mastervolt EasyView 5 is a 4.3" touch display that allows the user to monitor, configure and operate all connected devices in a MasterBus network.

1.1 Specifications

Specifications	
Model	EasyView 5
Product code	77010310
Weight	0.36kg 0.79lbs
Dimensions	113 x 127 x 43 mm 4.4 x 5.0 x 1.7 in
Display size	109 mm 4.3 inch
Display languages	EN/NL/DE/ES/IT/ FR/FI/SV/NO/DA
IP degree	IP65 front IP23 back
Power supply	MasterBus / 12V/24V input
Power consumption	Sleep mode ~ 0.9W Normal mode ~ 1.6W

1.2 Parts



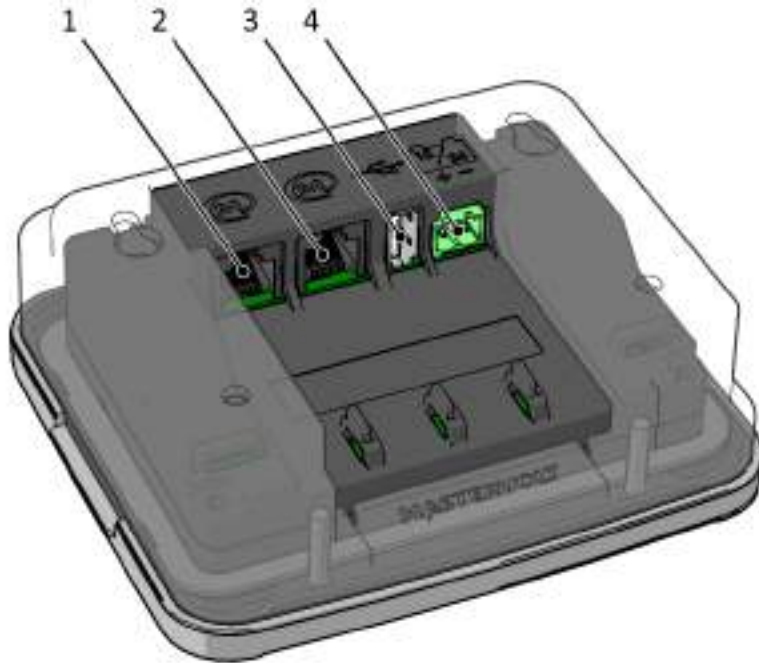
Parts

- | | |
|---|---------------|
| 1 | Front cover* |
| 2 | Display panel |
| 3 | Top cover |
| 4 | Seal** |
| 5 | Wall box |
| 6 | Bottom cover |

* Always use the front cover when the EasyView 5 display needs to be protected from damage or sunlight.

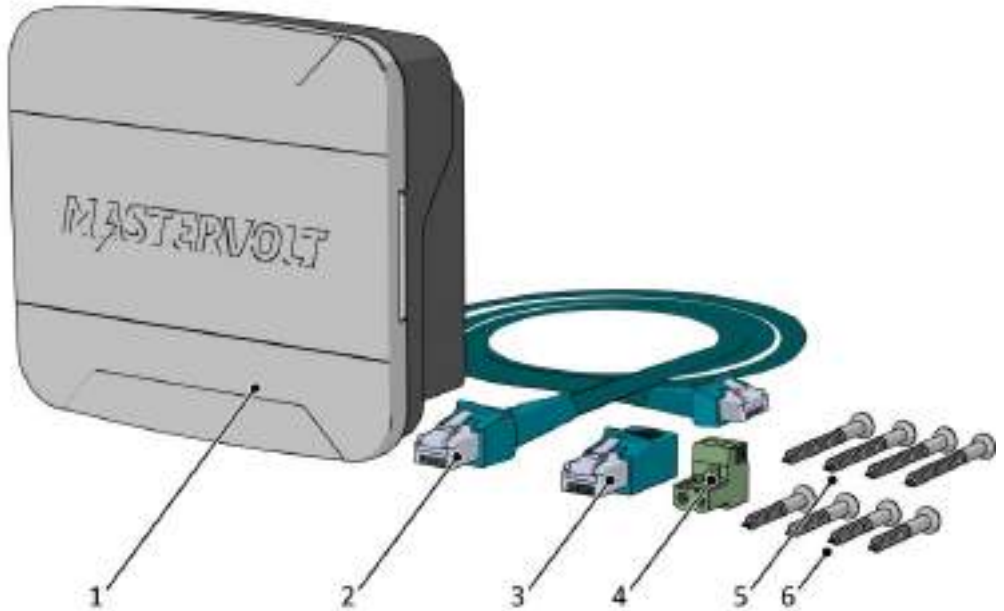
** Always use the seal when the EasyView 5 display needs to be protected from water, moist and dust.

1.3 Connections



Connections	
1	MasterBus port 1
2	MasterBus port 2
3	USB device port
4	Power input 12/24 V

1.4 Accessories



Accessories

- | | |
|---|-----------------------------------|
| 1 | Mastervolt EasyView 5 |
| 2 | MasterBus cable (6 meter / 20ft) |
| 3 | MasterBus terminator |
| 4 | 12/24 V connector |
| 5 | Mounting screw (4 pcs) 4x30mm PH2 |
| 6 | Mounting screw (4 pcs) 4x14mm PH2 |

2 Safety

2.1 Safety instructions



WARNING!

Read the safety instructions before connecting and using the EasyView 5.

- Use the EasyView 5 following the instructions and specifications stated in this manual.
- Only use the EasyView 5 in a technical correct condition.
- Do not connect the EasyView 5 to any other network than the MasterBus network.
- Do not work on an electrical system if it is still connected to a current source. Only allow changes in your electrical system to be carried out by qualified electricians.

2.2 Liability

Mastervolt cannot be held liable for:

- Consequential damage resulting from the use of the EasyView 5.
- Possible errors in the included manual and the consequences of these.
- Inappropriate usage that is inconsistent with the purpose of the product.

2.3 Warranty

Mastervolt assures a two year warranty on the EasyView 5 after purchase, on the condition that the product is installed and used according to the instructions in this manual.

Installation or use not according to these instructions may result in under performance, damage or failure of the product and may void this warranty. The warranty is limited to the cost of repair and/or replacement of the product. Costs for labour or shipping are not covered by this warranty.

2.4 Correct disposal of this product

(Waste Electrical & Electronic Equipment)



This product is designed and manufactured with high quality materials and components, which can be recycled and reused. When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2012/19/EU.

Please be informed about the local separate collection system for electrical and electronic products. Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences to the environment and human health.

2.5 Identification label

The identification label (see figure 1) is located at the back side of the EasyView 5. Important technical information required for service and maintenance can be derived from the identification label.



Figure 1: Identification label



Never remove the identification label!
Warranty void when label is removed!

3 MasterBus

3.1 About MasterBus



All devices that are compatible with MasterBus are marked with the MasterBus symbol.

MasterBus is a CAN based, fully decentralized data network for communication between Mastervolt devices. MasterBus is used as power management system for all connected equipment, such as the inverter, battery charger, generator and many more.

Every device that is compatible with MasterBus is equipped with two data ports. The devices are simply chained together, forming a local data network. Monitoring panels such as the EasyView 5 can be used for monitoring and control of all connected MasterBus equipment.



CAUTION: Never connect a non-MasterBus device to the MasterBus network directly! This will void warranty of all MasterBus devices connected.

3.2 Event based commands

With MasterBus a device can be programmed to initiate an action at another connected device. This is done by means of *event based commands*.

3.3 How to set up a MasterBus network

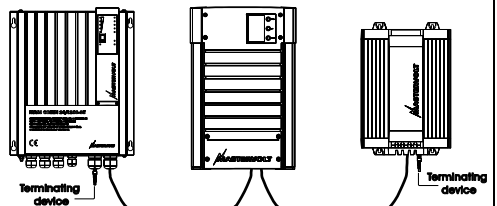
Connections between the devices are made by standard straight MasterBus cables. Mastervolt can supply these cables. These (CAT5) cables are also commonly available at computer supply stores.



Up to 63 MasterBus devices can be connected together.

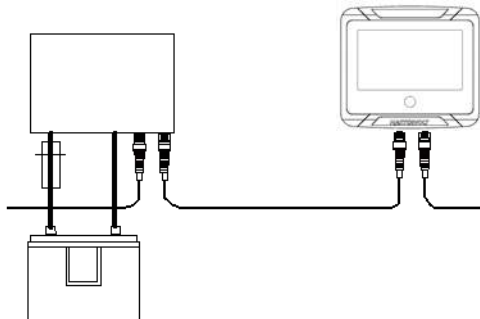
The electric power for the network comes from the connected devices.

MasterBus needs a terminating device on both ends of the network.

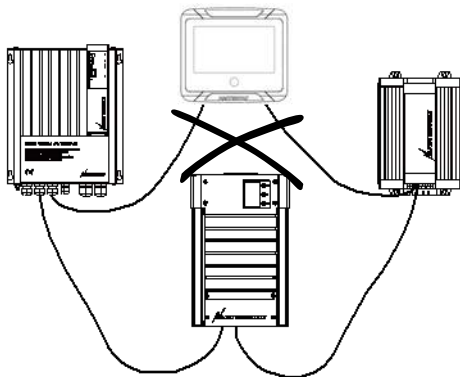


At least one device in the network should have powering capabilities (see specifications).

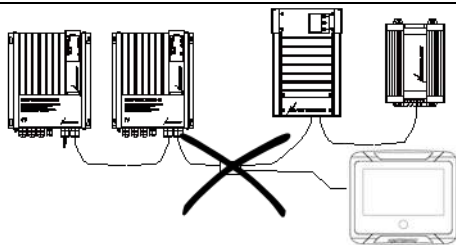
The EasyView 5 does have powering capabilities, if the auxiliary supply is connected to the battery.



Do not make ring networks.



Do not make T-connections in the network.



4 Installation instructions

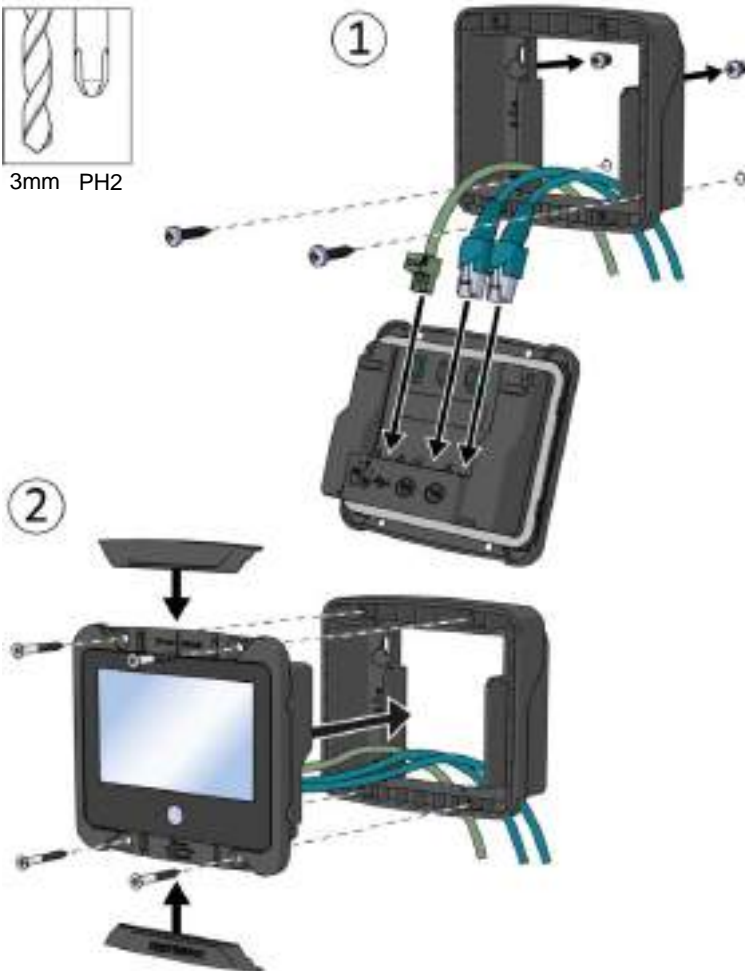
The EasyView 5 offers three mounting options:

- **Panel mounting** onto the wall box - see section 4.1
- **Flush mounting** in an 82 x 113 mm hole - see separate instruction sheet with saw template
- **Clamp mounting** in a hole > 82 x 113 mm - see section 4.2

4.1 Panel mounting

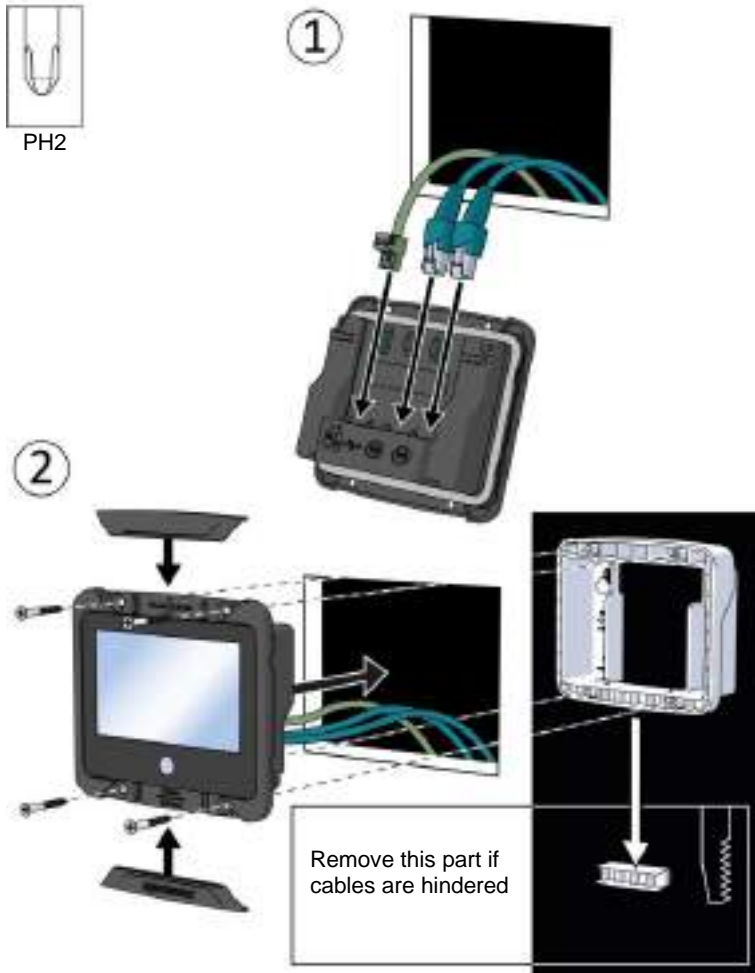


3mm PH2



4.2 Clamp mounting

In case the mounting screws of the EasyView 5 have no grip, for instance when the EasyView 5 is installed as a refit and the dimensions of the mounting hole are too big, the wall box can also be used as a mounting clamp. Position the wall box at the back side of the installation panel, and use the supplied screws to fasten the display onto the wall box. The display will be clamped onto the panel. Depending on the thickness of the installation panel, use either the supplied 4x14mm or 4x30mm screws.



4.3 Aux power supply

The EasyView 5 can be powered from the MasterBus network. There must be MasterBus powering devices available to provide sufficient power to the network. If there is no MasterBus powering device or the available power is not sufficient, the EasyView 5 must be connected to a 12/24V battery via the supplied connector (see section 1.4).



4.3.1 Aux power connector

Connect the positive wire to the left terminal, the negative wire to the right terminal of the connector.

Use a 3mm flat blade screw driver to tighten the screw of the connector.



4.3.2 Wire size

Use appropriate wire size to connect the aux power supply to the battery.

Wire diameter Ø	
Min.	1 mm (18AWG)
Max.	2.5 mm (13AWG)

4.3.3 Fuse

Insert a 1A fuse in the positive battery line.



Insert a 1A fuse in the positive battery line.



Be sure to connect the battery to the EasyView 5 correctly! It is not protected against reverse polarity!

5 Operation

5.1 General

The Mastervolt EasyView 5 is a central monitoring and control panel for devices that are connected to the MasterBus network. It shows status information of your electrical system by means of a touch screen.

5.2 Home Button



5.2.1 Switching on and off

Press the Home Button shortly to switch on the EasyView 5. After a short time the first screen is shown for device selection, this screen is called the Dashboard. Pressing the Home Button again for more than 5 seconds results in switching off the EasyView 5.

5.2.2 Locking

Pressing the Home Button for more than two seconds when the EasyView 5 is switched on, results in locking the panel. In this mode the panel will not react on pressing the screen. The "locked" symbol is shown in the upper left corner.



Unlocking is accomplished by pressing the Home Button for more than two seconds again.

5.2.3 Home

Pressing the button shortly when the EasyView 5 is switched on, returns you to the Home screen. The Home screen is the first favorite page on the Dashboard.

5.3 Dashboard and navigation

The dashboard consists of one or more favorite pages, showing an overview of user picked settings and values of connected devices on the MasterBus network. See section 6.1 for more details.

Navigate to another page by swiping or by tapping the left or right bottom of the screen. The bullets on the bottom of the dashboard show how many favorite pages there are, and which favorite page is currently being shown.



On the top bar of the screen the following buttons can be shown:



Alarm button

Opens the list of active alerts. The button is only present when an alert is active.



Edit button

Opens the Edit page where you can add and edit widgets on the Dashboard.



EasyView 5 settings button

Open the EasyView 5 Device page



System button

Opens the System page, displaying a list of all connected devices.



USB button

Opens the USB update page. The button is only present when an USB flash drive is detected.



Add widget

Add widget(s) to the favorite page(s)



Back

Back one page

5.4 Maintenance

If you need to clean the touch screen without controlling functions, use the lock function as described in chapter 5.2.2.

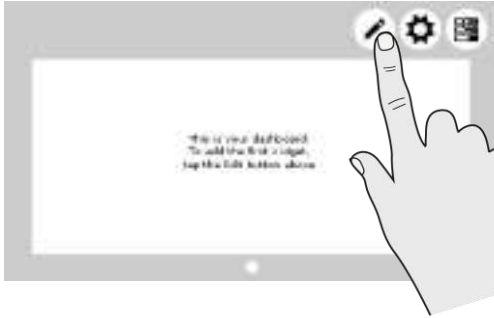
Clean touch screen with a soft cloth. Do NOT use acids or scourers!

6 Monitoring and configuration

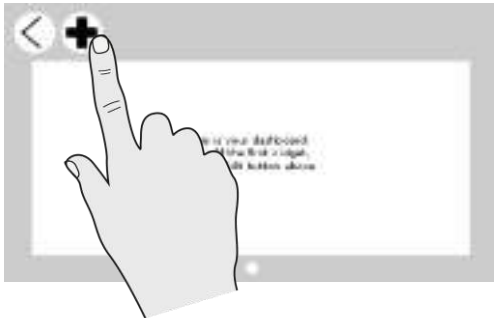
6.1 Favorite pages

Favorite pages showing widgets containing system information or controls can be configured to be shown on the dashboard.

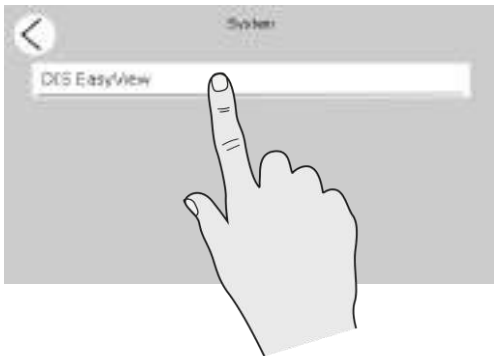
6.1.1 Adding widgets to favorite pages



Tap the Edit button, to start configuring your favorite page(s).



After tapping the Edit button, you enter the Edit page. To go back to the dashboard, tap the back arrow. Tap the plus button to add widget(s) to the favorite page.



Select device in the System page. When no other devices are connected to the EasyView 5, only the EasyView 5 is shown in the System page.

The Device page of the EasyView 5 is shown as example in the following screenshots. Other devices have similar pages and widgets.



The Device page shows which items can be added on the favorite page.



Select item(s), and tap confirm button to confirm the selection. 1 to a maximum of 6 items can be selected per favorite page. When 6 items are selected, selection of more items is automatically blocked.

In total 6 favorite pages can be configured.



Upon return to the Edit page, the selected items appear as widgets.

An empty bullet is shown at the bottom of the Edit page. Navigate to this page by either swiping to the right or tapping the area right of the empty bullet, to create a new empty favorite page.



Optionally the device name of the item shown on the widget can be customized. Tap on the device name to open the Custom name page. After changing the name, tap confirm.



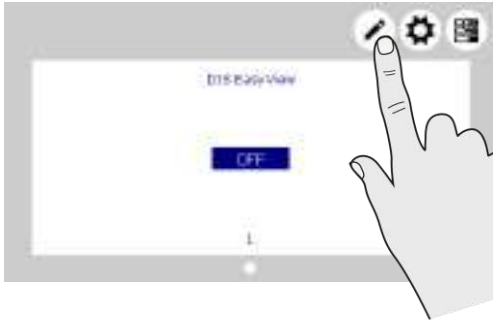
When the favorite page(s) are configured, tap the back arrow and you will return to the dashboard, now showing the favorite page(s) with widget(s).

6.1.2 Widget order

The order in which the widgets are selected, is also the order in which they appear on the favorite page. See figure below.



6.1.3 Removing widget(s)



To remove a widget from a favorite page; tap the Edit button to go to the Edit page.



Tap the red cross shown in the right upper corner of the widget to remove it.

6.2 System



Tap the system browsing button to navigate to the System page.



The System screen displays a list of all connected devices in alphabetical order. Select a device to navigate to its Device page. Devices from the list with an active alarm are accompanied by an alarm symbol.

6.3 Device page



From the System screen (section 6.2), tap on a device to go to the Device page. Each device has its own Device page.

The Device page shows the current state of the selected device. The displayed values and switches depend on the device.

Press 'i' for Device information.

To enable configuration, see section 6.6.



Device information

Shows a summary of device information and history.

6.4 Alarms



An Alarm popup is displayed when a connected device generates an alarm. Tap 'Log' to navigate directly to the device page or 'Snooze' to snooze the alarm. If the alarm persists, the popup is shown every 9 minutes.

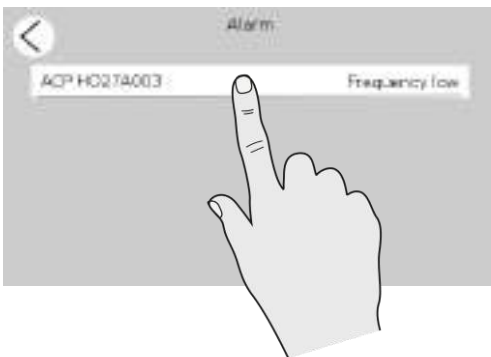
The buzzer can also be target in the MasterBus events. See also section 6.7.

This means the buzzer can sound even if you switched it off in the configuration.

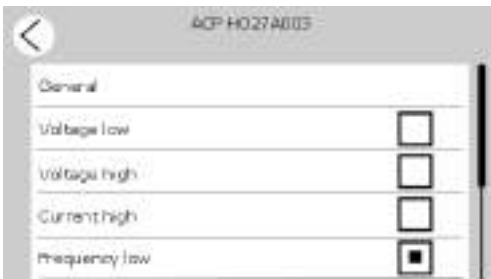


In case an alarm is present in the system, the Alarm button will be shown in the upper left corner of the Dashboard.

Tap the Alarm button from the Dashboard to open the list with active alerts from all connected devices.



Tap the device you want to inspect.



The alarm page of the selected device is shown. The selected box indicates the current alarm(s).

6.5 EasyView 5 monitoring settings

If you select the EasyView 5 from the System screen you will find the settings listed below. The settings are stored in the internal memory of the selected device. Therefore, switching off the EasyView 5 will not influence the settings.

Item	Meaning	Default	Range
General			
Language	Displayed language of the EasyView 5 This display enables changing the language of all connected MasterBus devices in one go.	English	See specifications
Configuration	Enter code to unlock the configuration menu.		
Switches			
Switch X	Configurable switch on the EasyView 5	-	X = 1 to 6
Power save			
Backlight time	Time the display backlight stays illuminated since the last button was touched.	2 minutes	Off, 2, 5, 10 minutes, always on
Auto off	Time after which the EasyView 5 will be switched off since the last button touch.	1 day	1 day, 2 days, always on
Backlight	Percentage of illuminance	50%	0-100%, in 10% steps
Widgets			
Page duration	Time each favorite page is shown, when slideshow of favorite pages is activated.	15 seconds	Off, 15, 20, 30, 40, 50, 60 seconds
Slide show	Slideshow of favorite pages	Off	On, Off

6.6 EasyView 5 configuration settings

To change settings of the EasyView 5 display, enable configuration by entering the code 1991. The EasyView 5 configuration menu is used for read out and adjustment of settings.

Item	Meaning	Default	Range
General			
System name	Name of the system, the EasyView 5 is installed on.	System name	Maximum 16 characters
Device name	Name of this device. This name will be recognized by all connected devices.	DIS EasyView 5	DIS+Maximum 12 characters

Switch X	Switches to use for event configuration. Renaming the switches after their application is recommended. X ranges 1 – 6.	Switch X	Maximum 16 characters
Devices in list	Devices to show in the device list. At <i>Selection</i> five selection boxes appear to choose a MasterBus device connected. <i>Excluded</i> means, you can select all devices except a maximum of five excluded devices.		Selection, All, Excluded
Alarm sound	Sound of the buzzer when an alarm is generated. When activated it repeatedly sounds for 10 seconds, 10 seconds off. The buzzer can also be target in the MasterBus events. See also section 6.7. This means the buzzer can sound even if you switched it off in the configuration.	On	On, Off
Auto Lock after	Time after which to lock the panel.	Off	Off, 2, 5, 10 minutes
Alarm	To only show alarms of selected devices, select <i>selection</i> .	All	All, selection

6.7 EasyView 5 events

Shown are the events to configure on the EasyView 5. The EasyView 5 can be both configured as an *event source* and an *event target*.

6.7.1 Event source

The EasyView 5 can be configured as an *event source*; an event source can be used to initiate an *event command* and an *event action by another device* that is connected to the MasterBus.

An example of an event where the EasyView 5 is the event source can be that a light can be switched Off when the Easy is switched On, the event source is then State.

Item	Meaning	Default	Range
Event X Source	Choose an event to serve as Event X Disabled means no event has been configured. The EasyView 5 features 6 Switches to serve as event sources. These switches can be named after their application.	Disabled	Disabled, Switch 1 - 6, Backlight change, State
Event X Target	Selection of the MasterBus connected device to take action due to Event X	Choose...	System dependent

Event X Command	<i>Event-based command</i> Action to be taken by the Event X target.	Choose...	System dependent
Event X Data	Event 1 data controls the Event X command, see section 6.8 for explanation.	Off	Off, On, Copy, Copy Invert, Toggle

6.7.2 Event target

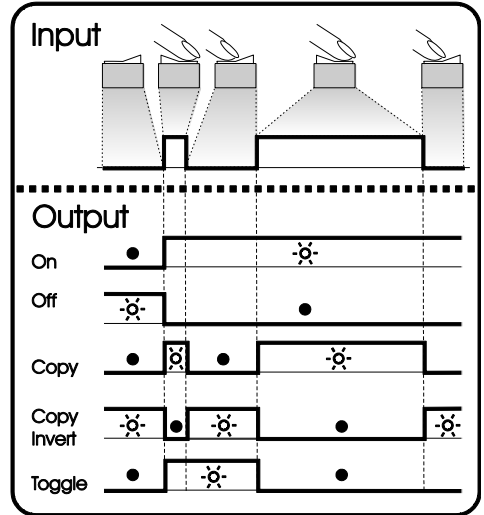
The EasyView 5 can be configured as an *event target by other devices* on the MasterBus network. When the display is configured as an *event target* by another device, this device can initiate an *event command* and an *event action* to be performed by the EasyView 5.

An example might be that the buzzer of the EasyView 5 is switched on when there is a battery pre-low warning by a MLI battery. The event source is battery pre-low, the event target is the EasyView 5, the event command is Buzzer and event data Copy.

Item	Meaning	Default	Range
Event X Source	Choose an event to serve as Event X Disabled means no event has been configured.	Choose...	System dependent
Event X Target	Selection of the MasterBus connected device to take action due to Event X	Choose...	System dependent
Event X Command	<i>Event-based command</i> Action to be taken by the Event X target.	Disabled	Disabled, Feedback 1-6, Lock, State, Buzzer,
Event X Data	Event 1 data controls the Event X command, see section 6.8 for explanation.	Off	Off, On, Copy, Copy Invert, Toggle

6.8 Event data

The figure on the right shows an example of Input (pulses) and Output (data) to explain the Event Data. On changes the status to On at the first signal. Off changes the status to Off at the first signal. Copy lets the status follow the input. Copy Invert lets the status follow the opposite of the input. Copy is used for dimming too by holding the pulse switch pressed for a longer time. Toggle changes the status at the first signal and back at the second signal. It is used in combination with a pulse switch.



Event Data

6.9 Configuring other devices

Monitoring and configuring other devices is possible by selecting a device in the EasyView 5 device list, see section 6.2. Refer to the user's manual of the connected device for an overview of all available settings. Settings are stored in the memory of the selected device. This means that switching off or disconnecting of the EasyView 5 will not affect the settings of the connected devices. See section 6.6 to enable configuration of all connected devices.

6.10 Digital switches

The EasyView 5 features 6 digital switches. Their function is based on event configuration of other devices. The switches, named Switch 1 to 6, can be renamed after their application.

The switches can be configured to show feedback information from the device that is being controlled by the configured event. In this other device, the feedback event needs to be configured to show feedback on the EasyView 5. See section 6.7.

7 Updates

Software updates can be uploaded to the EasyView 5 by either MasterAdjust software (see section 8.1) or by USB flash drive. Other devices which are connected to the MasterBus network can only be updated using MasterAdjust software.

To upload firmware to the EasyView 5 by USB, insert a USB flash drive in the USB port at the back of the device. After inserting the USB flash drive, restart the display (see 5.2.1). The USB flash drive is now detected, and a USB flash drive button appears on the dashboard.



After the EasyView 5 has been switched off and on, the USB button is being shown in the left upper corner of the screen.

Tap the USB button to go to the USB page.



During the loading of the firmware the button 'Update software from USB' is grey.



Once the firmware is ready to be installed, the button changes color to white. Now tap the button and the display will show bootloading.

This will take approximately 30-60 seconds*, depending on the size of the update.

After the upgrade the display will switch on automatically.



Do not disconnect or switch off the EasyView 5 while updating!

* Updating via MasterAdjust takes approximately 15 minutes.

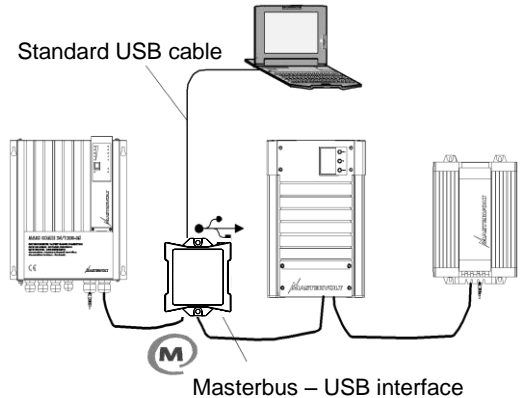
8 Additional information

8.1 MasterAdjust software

For system configuration settings, you need the MasterAdjust or System Panel software. To use MasterAdjust, you need a MasterBus-USB interface for communication between your PC and the MasterBus. See ordering information. See the user manual of the MasterBus-USB interface for detailed information.

Mastervolt MasterAdjust software is available as free to download software on the Mastervolt website (www.mastervolt.com). Features:

- System configuration: to adjust the entire MasterBus network and all connected devices in accordance with your personal preferences, including programming of *Event-based commands* (see section 6.7);
- System Monitor: complete actual overview of your entire electrical installation;
- System logger: data logging instrument to retrieve historical data of your electrical installation.



8.2 Ordering information

Part number	Description
77040000	MasterBus terminating device*
77040020	MasterBus cable, 0,2m
77040050	MasterBus cable, 0,5m
77040100	MasterBus cable, 1,0m
77040300	MasterBus cable, 3,0m
77040600	MasterBus cable, 6,0m*
77041000	MasterBus cable, 10m
77041500	MasterBus cable, 15m
77042500	MasterBus cable, 25m
77050100	100m / 330ft MasterBus cable (UTP cable)
77050200	50 pcs. modular jacks
77050000	Complete set to assemble MasterBus cables. Delivery includes: 100 meter UTP cable, 50 pcs. modular jacks and crimping tool
77030100	MasterBus-USB interface, required as interface between your PC and the MasterBus when using MasterAdjust software.

* These parts are standard included with the delivery of the EasyView 5

9 Trouble shooting

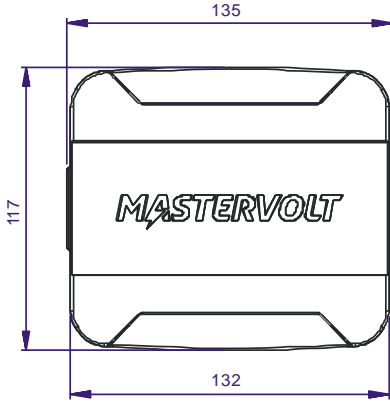
Contact your local Mastervolt Service Centre if you cannot correct a problem with the aid of the trouble shoot table below. See www.mastervolt.com for an extended list of Mastervolt Service Centres.

Failure	Possible cause	What to do
No display function.	Display is switched off.	Press button shortly.
	Error in the wiring.	Check the MasterBus cables.
	In case the EasyView 5 is connected only to MasterBus, no powering device available.	The EasyView 5 can be powered by the network. This means that at least one device in the network should have powering capabilities (see section 3.3). Connect the aux supply of the EasyView 5, section 4.3.
Display shows ALARM.	A MasterBus device connected indicates an alarm situation.	Check the alarm source shown on the display and press LOG to stop the alarm or SNOOZE to let the alarm repeat every 9 minutes.
Backlight suddenly changes colour from white to red.	An alarm situation triggers the backlight to turn red. See also section 6.4.	Check the alarm source shown on the display and press LOG to stop the alarm or SNOOZE to let the alarm repeat every 9 minutes.
Back light does not switch on after touching the screen.	Back light has been set to switch off.	Check EasyView 5 Configuration. See section 6.5
Back light does not switch off.	Back light settings wrong.	Back light settings need to be changed. Check EasyView 5 settings. See section 6.5
No backlight.	Backlight switches off after default 2 minutes.	Tap on the screen or Home button or refer to section 6.5 to adjust the settings of the backlight.
Slow or no communication.	Error in the MasterBus wiring.	Check the MasterBus cables.
	No terminating device placed at the ends of the network.	MasterBus needs a terminating device on both ends of the network. Check if connected (see section 3.2).

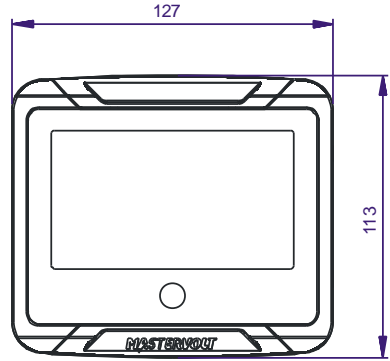
Failure	Possible cause	What to do
	MasterBus network is configured as a ring network.	Ring networks are not allowed. Check the connections of the network (see section 3.3).
	T-connections in the MasterBus network.	Check if T-connections are made in the network. T-connections are not allowed (see section 3.3).
Touch screen does not react.	Lock has been activated.	Press Home button long to unlock keyboard, see section 5.2.
Functions are controlled without intention while touch screen is cleaned.	A touch screen reacts at every touch.	Press Home button long to lock keyboard, see section 5.2. Clean touch screen with a soft cloth. Do NOT use acids or scourers! Press button long again to unlock keyboard.
One of the connected devices cannot be found.	Settings error: maximum number of devices is 63.	If you want to monitor more than 63 devices, you need to have a second EasyView 5 panel.
	The display is in "Selection" mode with another device selected.	Change the setting to "All devices".
	Error in the wiring.	Check the MasterBus cables.
	Device not suitable for MasterBus or it is excluded in the "Excluded" mode.	Check whether the device is suitable for MasterBus. Maybe the MasterBus cable is connected to a non-MasterBus connector.
The EasyView 5 is switched off after some time.	The EasyView 5 is set up to switch off automatically, when no button is touched for 1 day.	See section 6.5 for settings (Auto off).
The device name is not correct.	Device name has not yet been set.	Adjust device name, see section 6.4.
Wrong language is displayed.	Wrong setting of the language at the EasyView 5.	See section 6.5 for adjustment of the language.
	Wrong setting of the language at one of the connected devices.	Each separate connected device can have its own language setting. See user's manual of the connected devices.

Failure	Possible cause	What to do
Wrong system name is displayed.	Wrong setting of the system name at the EasyView 5.	See section 6.6 for setting "Name system".
You don't have the slightest idea where in the menu structure you have ended up.	You just discovered some unexpected screens.	Tap the Home button, this always takes you back to the home screen
Widget shows Device offline	A device is not communicating, or has been removed from the MasterBus network.	Check the connections of the network (see section 3.2). If the device has been removed from the network, go to edit mode and remove the widget.

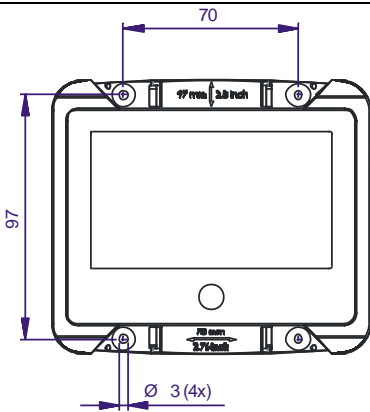
10 Dimensions



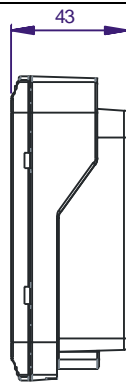
Front cover



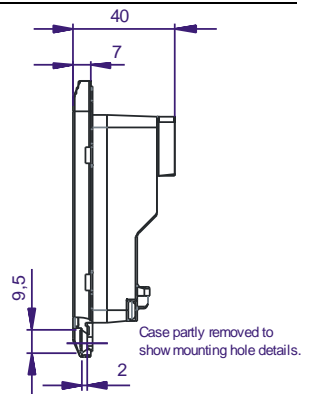
Front



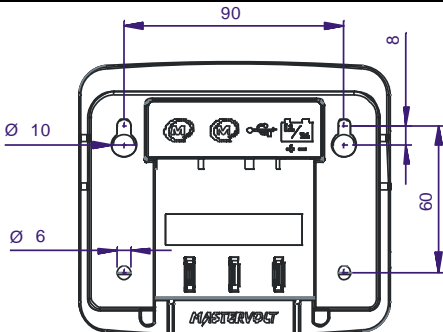
Front, mounting holes



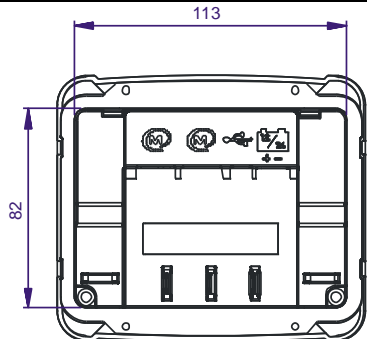
Side, with wall box



Side, without wall box



Back, with wall box



Back, without wall box



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