MASTERVOLT

OPERATION MANUAL

MasterView Easy for Whisper Generator sets

Remote and control panel for Mastervolt Whisper generator sets and the MasterBus network

MASTERVOLT
Snijdersbergweg 93,
1105 AN Amsterdam
The Netherlands
Tel.: +31-20-3422100
Fax.: +31-20-6971006
www.mastervolt.com

Art.nr. 50200271

V3 November 2008

TABLE OF CONTENTS:

1 GENERAL INFORMATION

1.1 GENERAL

The Mastervolt MasterView Easy is a panel to monitor, configure and operate the Mastervolt Whisper generator set. Communication between the MasterView Easy and the generator set is established by means of the *MasterBus* network. In addition to the generator set, several other *MasterBus* compatible equipment can be added to the *MasterBus* network, which can all be monitored, configured and operated by the *MasterView Easy*. See chapter 11 for more information about *MasterBus*.

1.2 VALIDITY OF THIS MANUAL

This manual serves as a guideline for the save and effective operation and maintenance of the MasterView Easy for Whisper Generator sets.
This manual is valid for the following models:

Part no.	Version	Description
77010300	A	MasterView Easy for Whisper Generator sets

See 1.5 for identification of the product. For other models see other manuals available on our website: www.mastervolt.com.
Keep this manual at a secure place!
The English version has 40 pages.

1.3 GUARANTEE SPECIFICATIONS

Mastervolt guarantees that this product was built according to the legally applicable standards and stipulations. If you fail to act in accordance with the regulations, instructions and stipulations in this user's manual, damage can occur and/or the product will not fulfil the specifications. This may mean that the guarantee will become null and void.

IMPORTANT: Additional warranty agreements, like "Mastervolt system warranty" may contain restrictions which forbid resetting of historical data.

1.4 LIABILITY

Mastervolt can accept no liability for:

- consequential damage due to use of the MasterView Easy;
- possible errors in the manuals and the results thereof;
- use that is inconsistent with the purpose of the product.

Mastervolt cannot be held responsible for damage caused by unattended running of the generator due to the use of *event based commands.*

1.5 IDENTIFICATION LABEL

The identification label (see figure 1) is located at the back side of the MasterView Easy. Important technical information required for service, maintenance & secondary delivery of parts can be derived from the identification label.

Figure 1: Identification label

Never remove the identification label!.

2 SAFETY GUIDELINES AND WARNINGS

2.1 USE OF SYMBOLS

Safety instructions and warnings are marked in this manual by the following pictogram:

A procedure, circumstance, etc which deserves extra attention.

WARNING
A warning symbol draws attention to special warnings, instructions or procedures which, if not strictly observed, may result in damage or destruction of equipment, severe personal injury or loss of life.

DANGER
This danger symbol refers to electric danger and draws attention to special warnings, instructions or procedures which, if not strictly observed, may result in electrical shock which will result in severe personal injury or loss of life.

2.2 USE FOR INTENDED PURSPOSE

1 The *MasterView Easy* is constructed as per the applicable safety-technical guidelines.
2 Use the *MasterView Easy* only:
- in a technical correct condition;
- in an environment which is protected against rain, moist, dust and condensation (IP 21);
- observing the instructions in this manual.
- connected to the *MasterBus* network

3 Use of the *MasterView Easy* other than mentioned in point 2 is not considered to be consistent with the intended purpose. Mastervolt is not liable for any damage resulting from the above.

2.3 SAFETY REGULATIONS AND MEASURES

1 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 Connection and protection must be done in accordance with local standards.

2.4 GENERAL SAFETY AND INSTALLATION PRECAUTIONS

One of the main features of *MasterBus* is the possibility of programming for interactive operation of the connected devices, including automatic starting and stopping of the generator set. This is done by means of *event based commands*. Refer to the contents of this manual for details about programming these *event based commands.*

DANGER
Using *event based commands* the generator can start unexpectedly. When working on the electrical system, the 30 Amp fuse must be removed from the *Local Control Panel* and the battery plus cable must be removed from the battery.

WARNING
Mastervolt cannot be held responsible for damage caused by unattended running of the generator due to the use of *event based commands*.

3 INSTALLATION AND INITIAL SETTINGS

WARNING
During installation and commissioning of the *Masterview Easy*, the Safety Guidelines and Measures are applicable at all times. See chapter 2 of this manual.

3.1 THINGS YOU NEED

Tools:
- ☐ A drill for the mounting holes
- ☐ A saw to make a cut-out for building in the panel
- ☐ A cross-head screw driver

Materials:
- ☑ The *MasterView Easy* panel (included)
- ☑ 4 screws for mounting (included)
- ☑ *MasterBus* communication cable (15 meter / 50ft included)
- ☑ *MasterBus* terminating devices (2 pcs included)

3.2 INSTALLATION STEP-BY-STEP

The Masterview Easy must be mounted on an easy accessible location, protected against rain, moist, dust and condensation. For good visibility avoid installing the panel in direct sunlight

The Masterview Easy can be flush mounted or panel mounted on a wall or board. For flush mounting the outer housing can be removed easily. The connections are at the back of the panel and space for the two *MasterBus* connectors is provided when for panel mounting is opted.

Below mentioned steps describe a basic installation of the MasterView Easy in combination with a generating set. If necessary, refer to the installation manual of your specific generator set.

Refer to section 11.3 if you want to use two or more generator sets in the same electrical installation.

1 The generating set is provided with two communication ports for *MasterBus*. The location of these communication ports differs for each model Refer to the installation manual of the generating set. Insert a *MasterBus* terminating device into one of both communication ports (it doesn't matter which one). Insert the communication cable in the other communication port.

2 See figure 2. Connect the other end of the communication cable to one of both communication ports of the *MasterView Easy*. Insert a *MasterBus* terminating device into the other communication port.

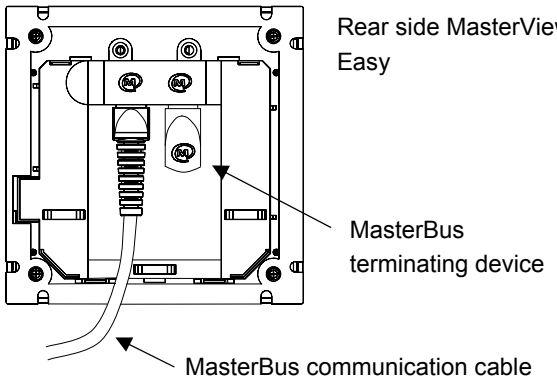

Figure 2

3 The Masterview Easy can be flush mounted or panel mounted on a wall or board:

o Flush mounting (see figure 3):
- Remove the outer housing and remove the front from the panel.
- Make a cut out in the mounting wall and drill the holes using the saw template in the box or using the dimensions at the back of the front plate.
- Mount the MasterView Easy onto the panel (1) and then reattach the front (2).

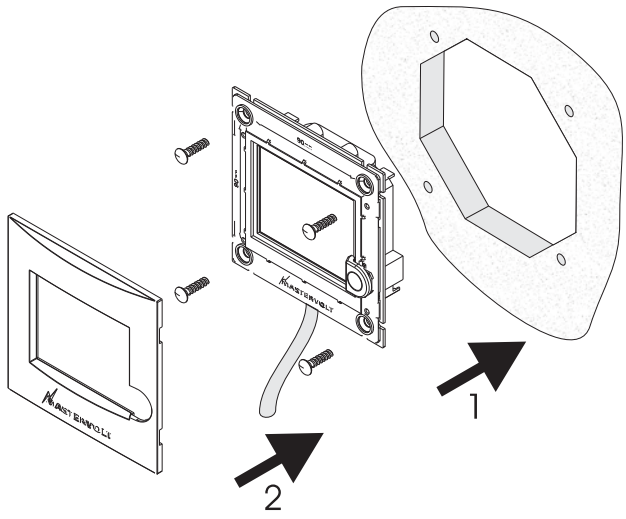

Figure 3

o Panel mounting (see figure 4):
- Remove the outer housing and remove the front.
- Drill the holes using the dimensions at the back of the front plate and fasten the outer housing (1).
- Click the panel into the outer housing (2).
- Re-attach the front (3).

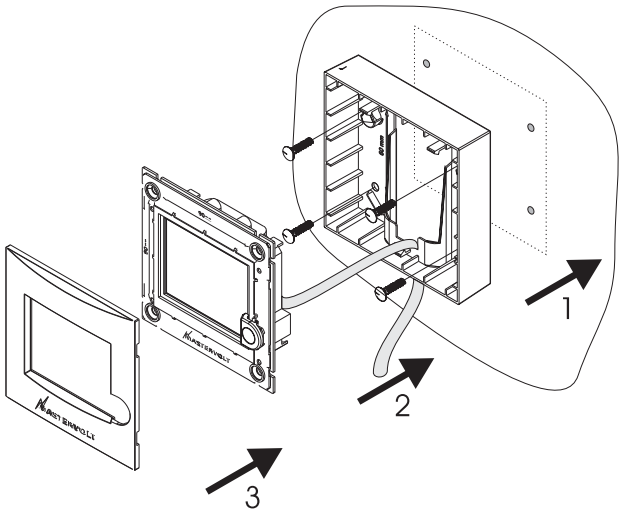

Figure 4

3.3 INITIAL SETTINGS

After commissioning of the generator set (see installation manual of the generator set), the generator set will be recognized by the *MasterBus* network automatically. This may take a few seconds. Then the *MasterView Easy* will show the initial screen (see figure 5)

If the *MasterView Easy* doesn't show any information at all, press the button shortly to switch it on (see figure 14). Refer to chapter 12 if the *MasterView Easy* still doesn't show any information.

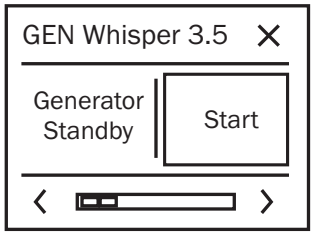

Figure 5: initial screen of the MasterView Easy connected to a Whisper generator set.

Before using the generator set for the first time, some initial settings must be made on the *MasterView Easy*:

Example:
- Language: English (default setting)
- Clock: 18:13:00

NOTE: Settings are stored in the memory of the selected device (i.e. the Whisper generator set). This means that switching of or disconnecting the *MasterView Easy* will not affect the settings of the selected device.

Follow the steps below:

1 Make sure that the Whisper generator is not running and that the initial screen is shown (see figure 5).

NOTE: If any other screen is shown, touch the X in the right upper corner several times until a listing of devices is shown. Then touch the field indicates "Whisper".

2 Figure 6: Touch the right pointing arrow > on the menu bar repeatedly until "Go to Configuration" is shown.

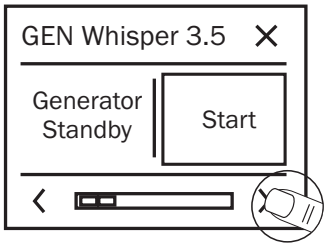

Figure 6

3 Figure 7: Touch on the "Go to Configuration" field. Then "Device Settings" is shown.

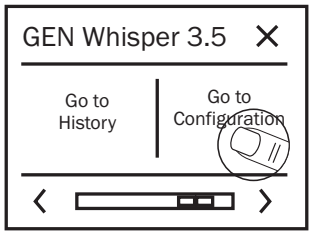

Figure 7

4 Figure 8: Touch the “Device Settings” field to open the device settings menu.

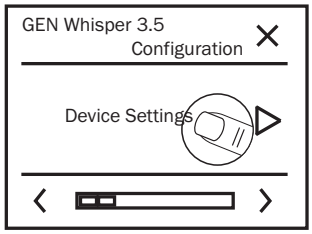

Figure 8

5 Figure 9: With the first screen you can select the desired language by touching the up/down pointing arrows. After selecting, touch ✓ to confirm.

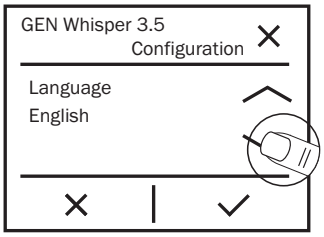

Figure 9

6 Touch the right pointing arrow > on the menu bar. Device name is shown (figure 10). By default the model name of the Whisper generator set is shown. You can change the device name by touching the up/down/left/right pointing arrows. Touch ✓ to finish.

NOTE: We recommend modifying the default device name ONLY when a conflict may occur between two devices with of the same default device name. This will only happen when two similar products are connected to the *MasterBus* network. See section 11.3.

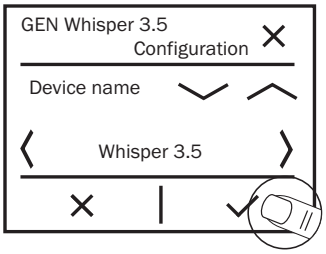

Figure 10

7 Touch the right pointing arrow > on the menu bar. The hours setting of the clock is shown (figure 11). Touch the up/down pointing arrows to change. Example: 18. Then touch ✓ to confirm.

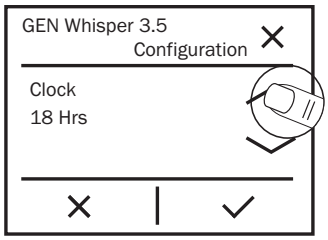

Figure 11

8 Touch the right pointing arrow > on the menu bar. The minutes setting of the clock is shown (figure 12). Touch the up/down pointing arrows to change. Example: 13. Then touch ✓ to confirm.

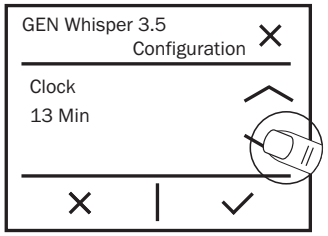

Figure 12

9 Touch the right pointing arrow > on the menu bar. The seconds setting of the clock is shown (figure 13). Touch the up/down pointing arrows to change. Example: 00. Then touch ✓ to confirm.

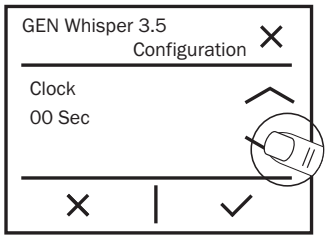

Figure 13

10 Now touch the X in the right upper corner twice to return to the initial screen (figure 5).

Ready!

4 BASIC OPERATION OF THE MASTERVIEW EASY

4.1 OPERATION OF THE MASTERVIEW EASY

The *MasterView Easy* is a central monitoring and control panel for devices that are connected to the *MasterBus* network, including a *MasterBus* compatible Whisper Generating set. Operation of the *MasterView Easy* is done by means of a *touch screen*.

NOTE: See chapter 11 for more information about *MasterBus*

4.2 BUTTON CONTROL

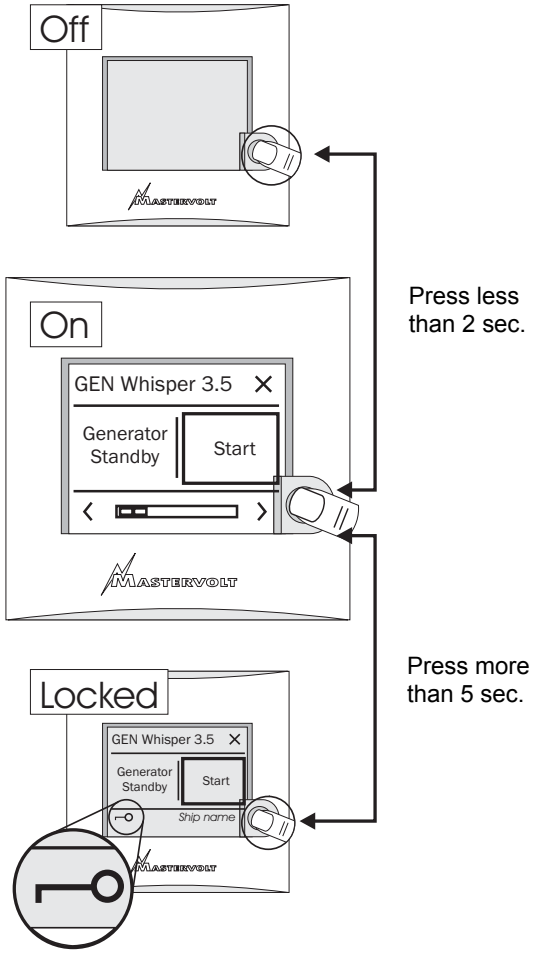

Figure 14: Use of the button.

4.2.1 Switching on and off

Press the button shortly to switch on the *MasterView Easy* panel. See figure 14. After a short time the initial screen is shown. Pressing the button shortly again results in switching off the *MasterView Easy* panel.

NOTE: Switching off the *MasterView Easy* panel will lead to a Communication Failure, causing the generator to stop! (See section 7.3.3, ***Engine failures***)

NOTE: If after start-up the *MasterView Easy* panel has found more than one device on the *MasterBus* network, a listing of devices is shown. See figure 15. To go to the initial screen of the Whisper generator, touch the field which indicates “Whisper” (reference 1). Touch the X in the right upper corner to return to the listing of devices (reference 2).

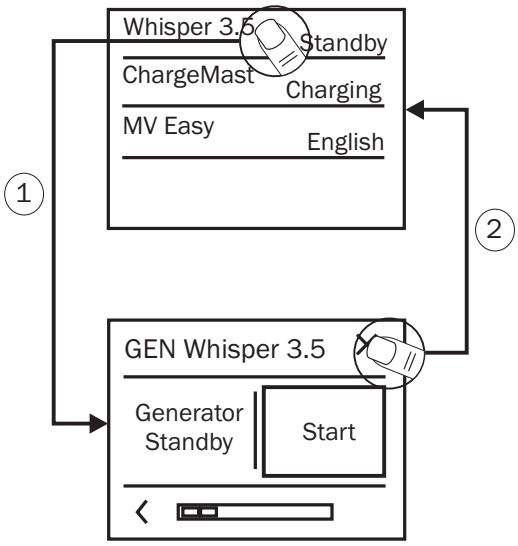

Figure 15: Initial screen if more than one device is connected to the MasterBus network.

4.2.2 Locking

Pressing the button for more than five seconds when the Easy panel is switched on, results in locking the panel, see figure 14. In this mode the panel will not react on touching the screen. The “locked” key is shown in the left lower corner, see figure 11. Unlocking is accomplished by pressing the button for more than five seconds again.
The MasterView Easy can also be locked automatically a few minutes after it was touched for the last time. See section 10.2.

4.3 NAVIGATION

Monitoring and control of the *MasterView Easy* can be done by scrolling through the menus.

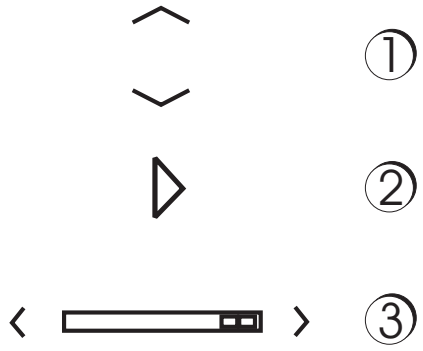

Figure 16 navigation of the MasterView Easy

- Touch the Up and Down arrow to scroll through a menu vertically (see figure 16, number 1);
- Touch the Up and Down arrow to increase resp. decrease a value or (see figure 16, number 1);
- Touch the right pointing triangle to show a group (see figure 16, number 2);
- Touch the Right or Left arrow of the menu bar to scroll through a menu horizontally, through the groups (see figure 16, number 3);
- Touch X in the right upper corner to leave a menu or to cancel a setting.

4.4 CONFIGURATION OF THE DISPLAY

The default settings of the display are optimal for most applications. In some applications however, it is desirable to change settings. Refer to chapter 10.

4.5 MAINTENANCE

Refer to the user's manual of the Whisper generator set for maintenance of the generator set.

No specific maintenance is required for the MasterView Easy panel. If it is necessary to clean the touch screen, the panel must be switched off (see 4.2.1) or locked (see 4.2.2) to avoid unintended operation.

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

5 BASIC OPERATION OF THE WHISPER GENERATOR SET

5.1 STARTING AND STOPPING

There are three ways to initiate a start cycle of the generator set:

- Manually, by touching the Start field shortly;
- Automatically, after a failed start attempt;
- Automatically, triggered by an *Event based command* (see chapter 9, ***Auto settings***).

In all cases the start cycle is similar. See section 5.1.1.

There are four ways to stop the generator set:

- Manually, by touching the "GEN Stop" field shortly;
- Automatically, triggered by a *Event based command* (see chapter 9, ***Auto settings***);
- Automatically, caused by a hardware failure of the generator set (see chapter 7);
- Automatically, after a failed start attempt (see section 7.3.2).

In all cases the stop cycle is similar; see section 5.1.2.

5.1.1 Start cycle

When the generator set is started, the display shows all stages of the start cycle (figure 17).

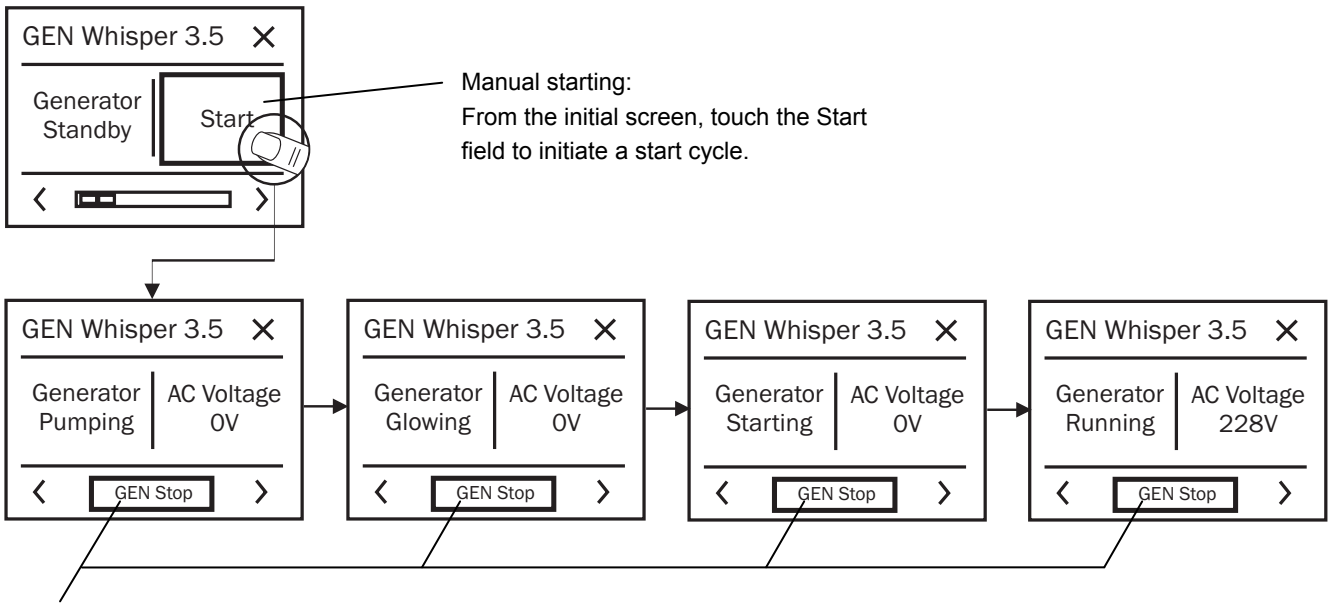

Figure 17: start cycle

When the generator was started successfully, the status of the generator set will become *Running*. See section 5.2.
When the generator set failed to start, all stages of the start cycle are repeated (default: 3 times; see chapter 9, ***Motor management*** to adjust the settings of the start cycle). When the generator set is still not running OK after the maximum number of start attempts, it is stopped and a failure code is displayed. See section 7.3.3 for an overview of all possible failure codes.

5.1.2 Stop cycle

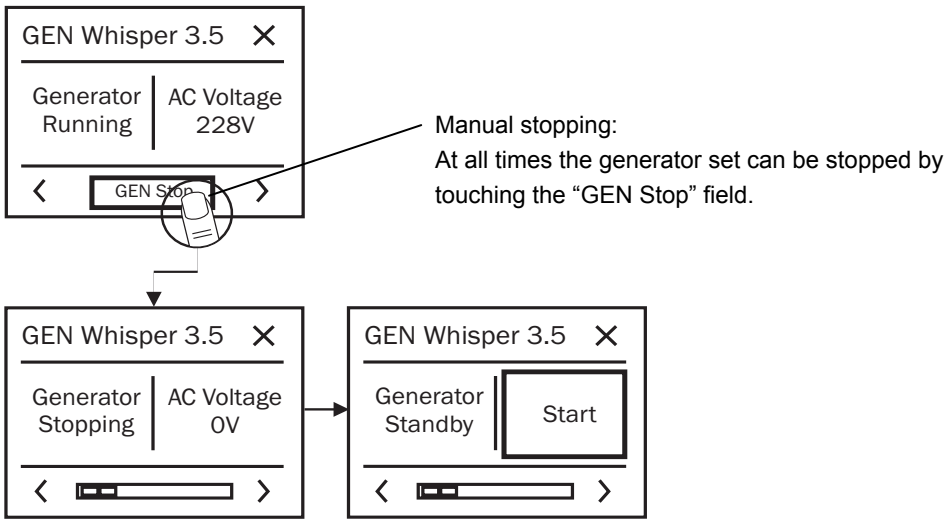

Figure 18: stop cycle

See chapter 9, ***Motor management*** to adjust the settings of the stop cycle (model Whisper 3.5 only; all other models: 10 seconds, fixed). After the generator set was stopped, the MasterView Easy returns to the *Stand-by* status (or the *Failure* status if a failure was detected).

5.2 MONITORING AND ACCESS TO SUBMENUS

From the initial menu several monitoring parameters are immediately accessible by touching the Right or Left arrow. The availability of these parameters depends on the status of the generator.

Status	Meaning
Standby	The generator is not running and is ready for a start; see section 5.2.1 for monitoring options
Standby Automat	Automatic operation mode; the generator is not running and is enabled for automatic starting
Standby Silent	Automatic operation mode; the generator is not running and is enabled for automatic starting but starting is temporarily disabled as the silent period is active
Pumping	A start cycle is in progress (see section 5.1.1)
Glowing	
Starting	
Running	The generator is running; see section 5.2.2 for monitoring options
Stopping	The generator set is in a stop cycle (see section 5.1.2)
Failure	The generator set was stopped automatically due to a failure (see chapter 7)

NOTE: Below descriptions are only applicable if the setting for *Monitor Menu* is set to *Short* (see chapter 9, ***Device settings*** for adjustment). If this setting is adjusted to *Extended*, several other screens are displayed as well. See chapter 6 for an overview.

5.2.1 Status: Standby

When the generator set is in rest (the generator is not running) and no failure was detected, the Stand-by screen is shown. The stand-by menu offers the user the following information about the generator set.

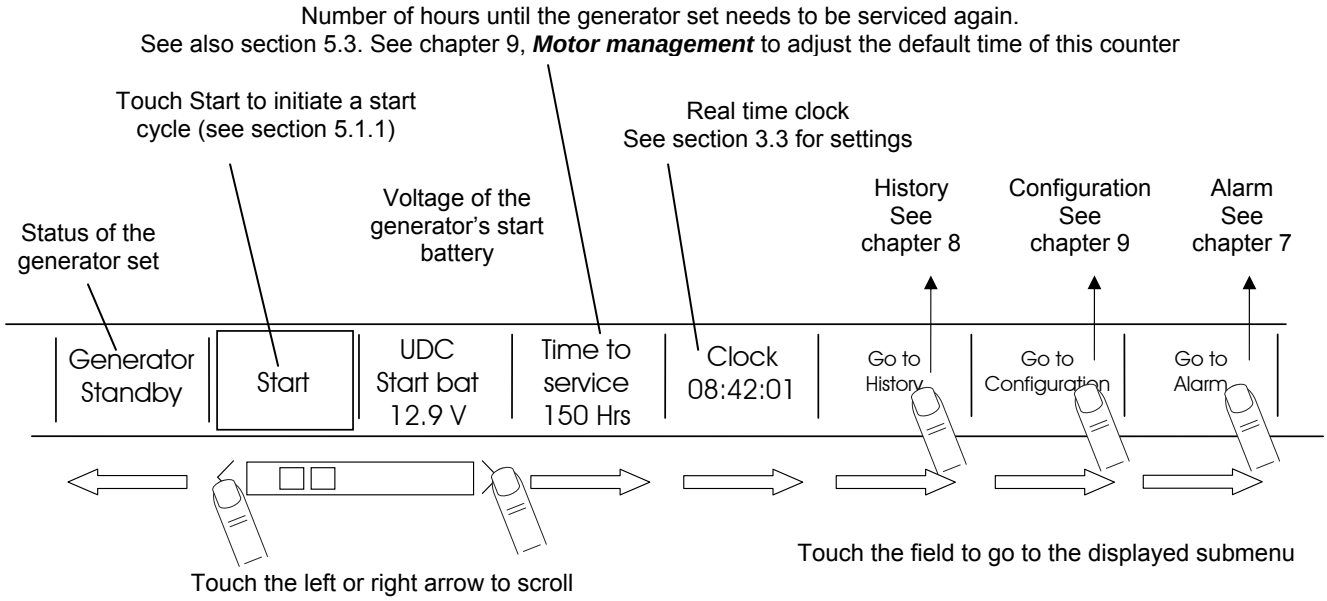

Figure 19: Monitoring functions when status = standby

5.2.2 Status: Running

When the generator set is running and no failure was detected, the following information can be monitored by touching the Right or Left arrow.

Single phase generator sets (230V):

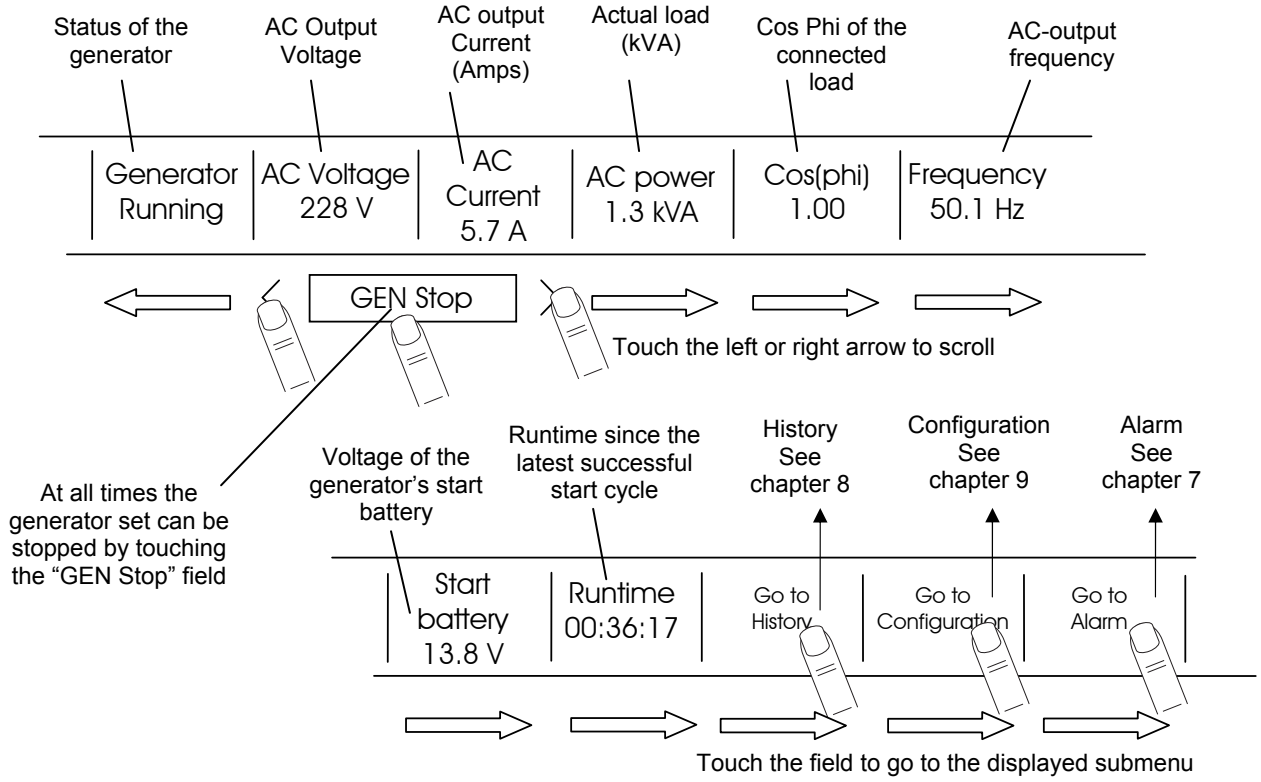

Figure 20: Monitoring functions when status = running (Single phase generator sets - 230V)

Split phase generator sets (2x 120V):

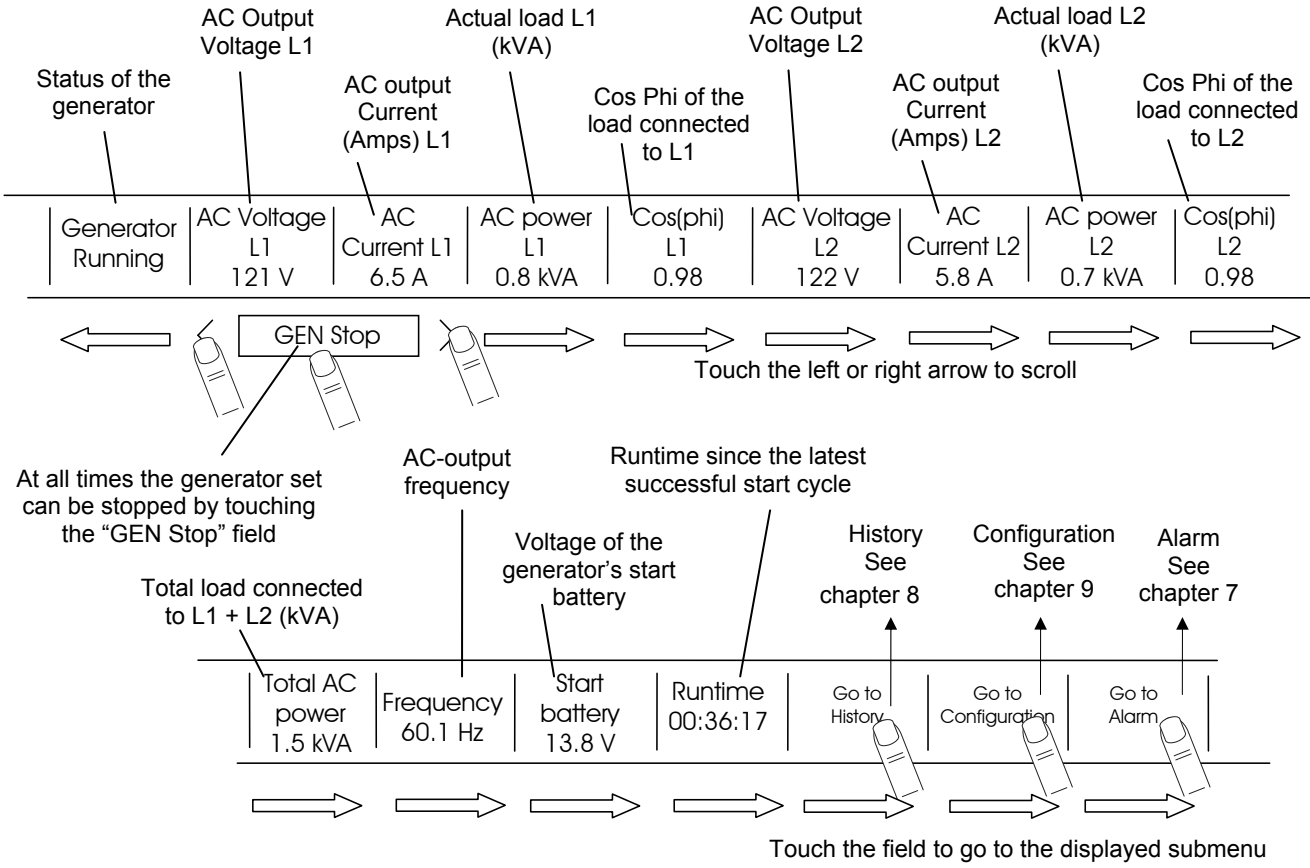

Figure 21: Monitoring functions when status = running (Split phase generator sets – 2x 120V)

Three phase generator sets:
Not applicable for this version

5.2.3 Status: Failure

When a failure is detected, the generator set will be stopped automatically. It is made visible by means of a pop-up. This pop-up can be cancelled for approximately 4 minutes by touching "Snooze".
See chapter 7 for explanation of the failures.

5.3 GENERATOR MAINTENANCE

Regular service and maintenance should be carried out according to the directions in the user's manual of the Whisper generator set.

The Whisper generator set is equipped with an hour counter to indicate the time before maintenance. It will help you to schedule maintenance.

Default settings of the maintenance time interval	
First maintenance	After 50 hrs.
Next maintenance	Every 150 hrs.

WARNING
The maintenance time interval is not only determined by the number of running hours, but also by factors like environmental conditions, average runtime, connected load, etcetera. The hour counter of the Whisper generator set does not take account of these factors.

5.3.1 Reset maintenance time

Proceed as follows to reset the counter of the maintenance time after the generator set has been serviced (figure 23).

1 Make sure that the Whisper generator is not running and that the initial screen is shown.

NOTE: If any other screen is shown, touch the X in the right upper corner several times until a listing of devices is shown. Then touch the field which indicates “Whisper”

2 Touch the right pointing arrow ＞ on the menu bar repeatedly until “Go to Configuration” is shown.
3 Touch on the “Go to Configuration” field. Now “Device Settings” is shown.
4 Touch the right pointing arrow ＞ on the menu bar repeatedly until “Service group” is shown.
5 Touch the right pointing triangle ▷ next to “Service Group”.
6 “Reset serv. int. Off” is shown. Touch the up pointing arrow once. Now “Reset serv. int. On” is shown.
7 Touch ✓ to reset the counter of the maintenance time (or touch ✕ to cancel this operation).
8 Now touch the X in the right upper corner twice to return to the initial screen.

Ready!

To check whether you actually did reset the counter of the maintenance time, touch the right pointing arrow ＞ on the menu bar repeatedly until “Time to service” is shown. A new maintenance time interval shall be shown here (default: 150hrs.)

NOTE: As the starting battery of the generator was probably disconnected during generator maintenance, it may be necessary to readjust the real time clock of the generator set. See section 3.3.

If you want to change the settings of the maintenance time interval, see chapter 9, ***Motor management***.

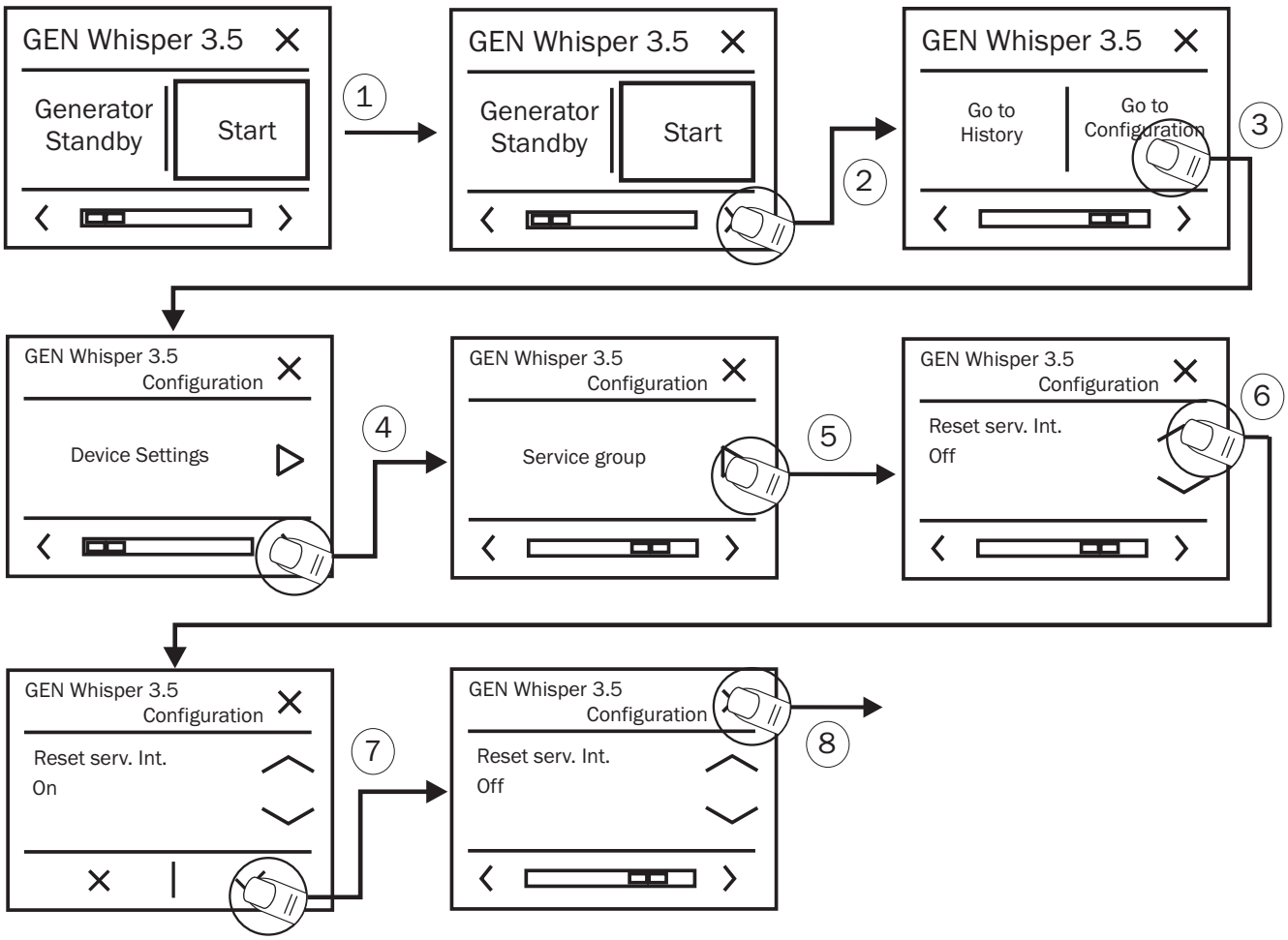

Figure 23: resetting the counter of the maintenance time

6 MONITORING

This chapter describes the monitoring functions showing an actual status overview of the generator set and the starter battery.
From the initial menu (see figure 5) this information is immediately accessible by touching the Right or Left pointing arrow repeatedly. None of the displayed information can be modified.

NOTE: If the setting for *Monitor Menu* is adjusted to *Short* (default setting) only parameters mentioned under ***Engine Monitor*** will be displayed. To view all parameters the setting for *Monitor Menu* must be adjusted to *Extended* (see chapter 9, ***Device settings*** for adjustment).

Value	Meaning	Remarks
Engine Monitor		
Generator	Status of the generator set	See section 5.2 for an overview of all statuses
UDC Start bat	Voltage of the generator's start battery	
Time to service	Shows the number of hours until the generator set needs to be serviced again. See also section 5.3	Not shown when the generator is running. See chapter 9, ***Motor management***. to adjust the default time of this counter
Clock	Shows the actual time	Not shown when the generator is running. See section 3.3 for adjustment
AC Monitor (Single phase AC output)*		
AC Voltage	AC output Voltage	AC Single phase only
AC Current	AC output Current (Amps)	AC Single phase only
AC Power	Actual load (kVA)	AC Single phase only
Cos(phi)	Cos Phi of the connected load	AC Single phase only
Frequency	AC-output frequency	AC Single phase only
AC monitor (split phase)*		
AC Voltage L1	AC output Voltage of phase L1	AC split phase only
AC Current L1	AC output Current (Amps) of phase L1	AC split phase only
AC Power L1	Actual Power (kVA) of phase L1	AC split phase only
Cos(phi) L1	Cos Phi of phase L1	AC split phase only
AC Voltage L2	AC output Voltage of phase L2	AC split phase only
AC Current L2	AC output Current (Amps) of phase L2	AC split phase only
AC Power L2	Actual Power (kVA) of phase L2	AC split phase only
Cos(phi) L2	Cos Phi of phase L12	AC split phase only
Total AC Power	Total AC Power (kVA) (L1+L2)	AC split phase only
Frequency	AC-output frequency	AC split phase only
AC monitor (three phase)**		
--	(Not applicable for this version)	

Value	Meaning	Remarks
DC monitor		
Start battery	Actual voltage of the start battery	
Runtime	Runtime since the latest successful start cycle	
UDC Charger	Actual output voltage of the battery charger	
UDC Fuel	DC voltage to fuel lift pump	
IDC Fuel	DC current through fuel lift pump	
UDC Glow	DC voltage to glow plug	
IDC Glow	DC current through glow plug	
UDC Start	DC voltage to start solenoid	
IDC Start	DC current through start solenoid	
UDC Stop	DC voltage to pull to stop relay	Whisper 3.5 only
IDC Stop	DC current through pull to stop relay	Whisper 3.5 only
Controller temp	Internal temperature of the Digital Diesel Control unit on the generator set.	

* Only applicable for generators with a single phase AC output (230VAC).

** Only applicable for generators with a split phase AC output (2x 120VAC).

** Only applicable for generators with a three phase AC output (3x 230/400VAC).

7 WARNINGS AND FAILURES

7.1 GENERAL

When a warning or failure occurs, it is immediately displayed on the MasterView Easy.

Note that there is a distinction between a WARNING and a FAILURE:

- WARNING. A Warning message will be shown on the display of the MasterView Easy when the generator is exceeding the Warning Levels as set in the *Configuration* menu. The generator will keep running, but adequate actions should be taken, else a Failure will occur. Threshold values of the Warning Levels can be adjusted at the *Configuration* menu (see chapter 9, ***Warning Levels***);
- FAILURE. A Failure message will be displayed when a hardware error is detected or when the generator set is exceeding its specifications. A failure will initiate the generator to stop automatically. Restarting the generator set is only possible after correcting the failure and accepting the failure message. See section 7.3. Threshold values of the failures are factory set and can not be adjusted.

7.2 WARNINGS MESSAGES

7.2.1 Example

A MasterView Easy is used for remote operation of a Whisper 3.5. A pop-up is shown on the display of the MasterView Easy. See figure 24.

1 Here the alarm message “AC Warning” is shown. By touching the “Snooze”-field this message will disappear for a while.
2 To see the exact origin of this warning, you should go to the alarm menu. To do so, touch the right pointing arrow ⟩ on the menu bar repeatedly until “Go to Alarm” is shown.
3 Touch the “Go to Alarm” field to open the Alarm menu.
4 As said before, an “AC Warning” was displayed. At the Alarm menu touch the right pointing arrow ⟩ repeatedly until “AC Warning” is shown.
5 Here “Overload” is displayed. This means that the connected load is more than 95% (see chapter 9, ***Warning Levels***) of the nominal AC output power of the generator. As the nominal load of the Whisper 3.5 generator set is specified at 3kW (fixed value), it means that the connected load was more than 95% of 3000W, i.e. more than 2850W.
6 Touch the X in the right upper corner once to leave the Alarm menu.

Now you should reduce the connected load, else a failure may occur, causing the generator to stop.

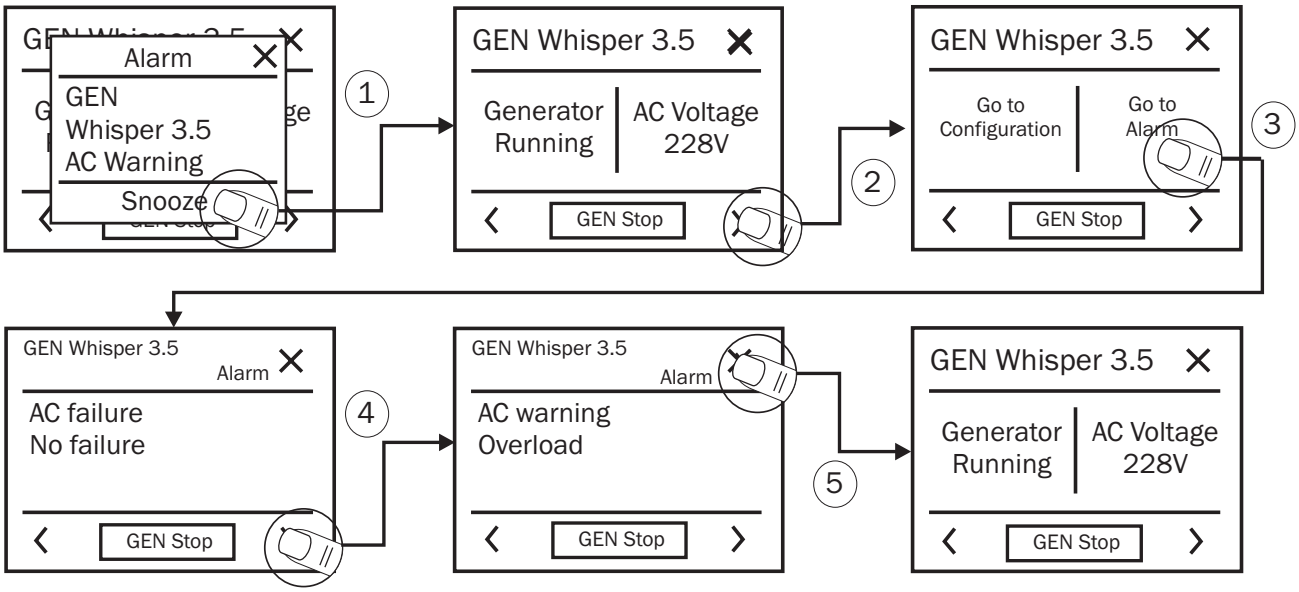

Figure 24: warning message

7.2.2 Overview of Warning messages

The table below gives an overview of all possible *warning messages*. Refer to the trouble shooting chapter at the user's manual of the generator set. Consult an installer, if you cannot solve the problem by means of this user's manual.

Warning message	Meaning	Remarks
AC warnings		
No warning	None (no warning detected)	
UAC Low	AC output voltage is too low	1) 4)
UAC High	AC output voltage is too high	1) 4)
UAC1 Low	AC output voltage of phase 1 is too low	1) 5)
UAC1 High	AC output voltage of phase 1 is high	1) 5)
UAC2 Low	AC output voltage of phase 2 is too low	1) 5)
UAC2 High	AC output voltage of phase 2 is high	1) 5)
IAC High	AC output current is too high	1) 4)
IAC1 High	AC output current of phase 1 is too high	1) 5)
IAC2 High	AC output current of phase 2 is too high	1) 5)
FAC Low	AC output frequency is too low	1)
FAC High	AC output frequency is too high	1)
Overload	Too much load connected to the AC output of the generator	2)
DC warnings		
No warning	None (no warning detected)	
UDC Bat low	Voltage of the start battery is too low	2)
IDC Fuel low	DC current through the fuel lift pump was too low	1)
UDC Fuel low	DC voltage to the fuel lift pump was too low	1)
IDC Stop low	DC current through the pull to stop relay was too low	1) 7)
UDC Stop low	DC voltage to the pull to stop relay was too low	1) 7)
IDC Glow low	DC current through the glow plug was too low	1)
UDC Glow low	DC voltage to the glow plug was too low	1)
IDC Start low	DC current through the start solenoid was too low	1)
UDC Start low	DC voltage to the start solenoid was too low	1)
Charger failure	Defective charger, charger fuse blown	1)
Charge temp.	Internal temperature of battery charger circuit on local control panel too high	1)
Engine warnings		
No warning	None (no warning detected)	
Oil pressure low	Oil pressure too low, oil pressure switch tripped	1)
Exhaust temp high	Exhaust temperature too high, exhaust temperature switch tripped	1) 8)
Alternator temp	Alternator temperature too high, alternator temperature switch tripped	1) 9)
Engine temp	Engine temperature too high, engine temperature switch tripped	1)
Water pressure	Water pressure too low, water pressure switch tripped	1)
Service needed	Time to service interval has elapsed, generator needs maintenance	3)

Remarks:

1) Normally not shown, but representation may be enabled by a Mastervolt certified installer.
2) Will be shown by default settings, but representation may be disabled by a Mastervolt certified installer.
3) This warning will always be shown if it occurs (cannot be disabled).
4) Only applicable for generators with a single phase AC output (230VAC).
5) Only applicable for generators with a split phase AC output (2x 120VAC).
6) Only applicable for generators with a three phase AC output (3x 230/400VAC).
7) Whisper 3.5 only.
8) Not applicable for generator sets for mobile applications or keel cooling.
9) Not applicable for generator sets for marine applications.

See chapter 9, ***Warning Levels*** for setting of threshold values.

7.3 FAILURE MESSAGES

7.3.1 Example

A MasterView Easy is used for remote operation of a Whisper 6 Ultra. A pop-up is shown on the display of the MasterView Easy; see figure 25. At the same time the generator set stops running.

1 The alarm message “Engine Failure” is shown. By touching the “Snooze”-field this message will disappear for a while.
2 After touching the “Snooze”-field the origin of this failure is shown: Last failure Engine temp high” (see section 7.3.3 of an overview of all possible failure messages). Investigate the cause of this failure by means of the fault finding table in the user’s manual of the generator set and take adequate measures to avoid such failure in the future.
3 Restarting the generator set is disabled until you have accepted the displayed failure. Therefore touch the “Accept failure”-field.

Now the MasterView Easy returns to the initial menu. See section 5.1 to start the generator set again.

The last occurred failure will be added to the counters at the Historical data menu. See chapter 8, Historical data.

7.3.2 Failure during starting

If the generator set fails to start after a start attempt, the control unit on the generator automatically tries to start the generator again. Note that the maximum number of start attempts is restricted (see chapter 9, ***Motor management*** for settings).

Activation of the cranking motor is stopped when the following conditions are met:

- The output frequency of the generator set is >25Hz *or* the generator set produces a battery charging voltage;
- None of the sensor switches on the generator set detects an error.

The measurement of these conditions will be delayed by the *ErrorBypass time* to be sure the generator set is running stable. Factory setting of the *ErrorBypass time*: 15 sec (see chapter 9, ***Motor management*** for adjustment of this timer).

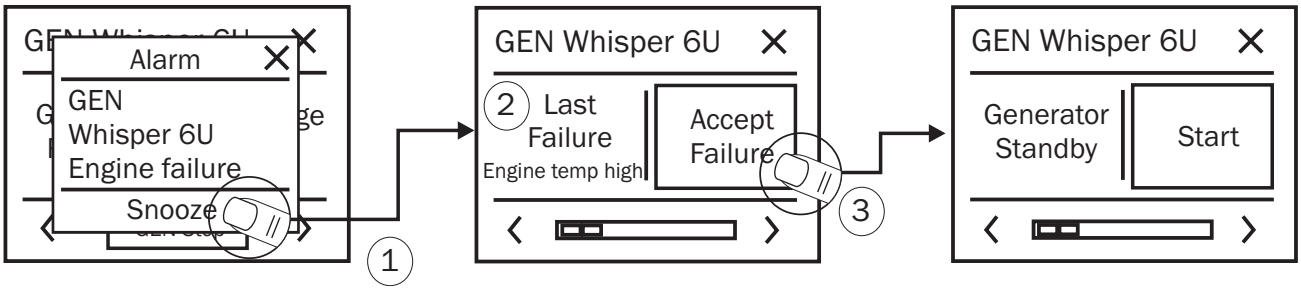

Figure 25: Failure message

7.3.3 Overview of Failure messages

The table below gives an overview of all *failure messages*. Refer to the trouble shooting chapter at the user’s manual of the generator set. Consult an installer, if you cannot solve the problem by means of this user’s manual.

Failure message	Meaning	Remarks
AC failures		
No failure	None (no failure detected)	
UAC Low	AC output voltage is too low	1)
UAC High	AC output voltage is too high	1)
UAC1 Low	AC output voltage of phase 1 is too low	2)
UAC1 High	AC output voltage of phase 1 is high	2)
UAC2 Low	AC output voltage of phase 2 is too low	2)
UAC2 High	AC output voltage of phase 2 is high	2)
IAC High	AC output current is too high	1)

Failure message	Meaning	Remarks
IAC1 High	AC output current of phase 1 is too high	2)
IAC2 High	AC output current of phase 2 is too high	2)
FAC Low	AC output frequency is too low	
FAC High	AC output frequency is too high	
Overload	Too much load connected to the AC output of the generator	
DC failures		
No failure	None (no failure detected)	
UDC Bat low	Voltage of the start battery is too low	
Charger failure	Defective charger, charger fuse blown	
Charger temp.	Internal temperature of battery charger circuit on local control panel too high	
IDC Fuel high	DC current through the fuel lift pump was too high	
IDC Stop high	DC current through the pull to stop relay was too high	4)
IDC Glow high	DC current through the glow plug was too high	
IDC Start high	DC current through the start solenoid was too high	
UDC Fuel high	DC voltage to the fuel lift pump was too high	
UDC Stop high	DC voltage to the pull to stop relay was too high	4)
UDC Glow high	DC voltage to the glow plug was too high	
UDC Start high	DC voltage to the start solenoid was too high	
UDC Fuel low	DC voltage to the fuel lift pump was too low	
UDC Stop low	DC voltage to the pull to stop relay was too low	4)
UDC Glow low	DC voltage to the glow plug was too low	
UDC Start low	DC voltage to the start solenoid was too low	
Engine failures		
No failure	None (no failure detected)	
Oil pressure low	Oil pressure too low (oil pressure switch tripped)	
Engine temp high	Engine temperature too high (engine temperature switch tripped)	
Exhaust temp hi	Exhaust temperature is too high (exhaust temperature switch tripped)	5)
Alternator temp	Alternator temperature too high (alternator temperature switch tripped)	6)
Water pressure	Water pressure too low, water pressure switch tripped	
Communication	Communication error between the generator set and the apparatus that gave a command which resulted in starting of the generator set. For instance connection between the generator set and the MasterView Easy was lost	
Start failure	Start failure (see section 7.3.2)	
Not configured	No serial number was assigned to the generator set. This may mean that calibration of the generator fails. Contact your supplier.	

Remarks:

1) Only applicable for generators with a single phase AC output (230VAC).
2) Only applicable for generators with a split phase AC output (2x 120VAC).
3) Only applicable for generators with a three phase AC output (3x 230/400VAC).
4) Whisper 3.5 only.
5) Not applicable for generator sets for mobile applications or keel cooling.
6) Not applicable for generator sets for marine applications.

8 HISTORICAL DATA

Knowing the history of your generator set can be very useful. It will help you to check if the generator set needs major service maintenance. This can be done by reading the number of successful start attempts compared to the unsuccessful ones. It will also help you to decide whether the batteries need to be recharged or replaced. Therefore the number of deep voltage hits can be read.
The values mentioned below can not be reset by the user, unless otherwise notified. See section 5.2 to get access to the Historical data.

Value	Meaning	Remarks
Engine failures		
Oil pressure low	Number of oil pressure failures	Oil pressure switch tripped
Exhaust temp hi	Number of failures due to high exhaust temperature	Exhaust temperature switch tripped; not applicable for generators with dry exhaust (mobile applications or keel cooling)
Alternator temp hi	Number of failures due to high alternator temperature	Alternator temperature switch tripped; not applicable for generators with wet exhaust (marine versions)
Engine temp high	Number of failures due to high engine temperature	Engine temperature switch tripped
Water pressure	Number of failures due to low water pressure	Water pressure switch tripped
Start failures	Number of failed start attempts	see section 5.1.1 and 7.3.2
Good starts	Number of successful start attempts	see section 5.1.1
Communication	Number of times that a communication error occurred between the generator set and the apparatus that gave a command which resulted in starting of the generator set.	For instance connection between the generator set and the MasterView Easy was lost due to loose cabling.
AC failures		
Last failure	Cause of the last failure which resulted in a generator stop	See section 7.3.3 for an overview of all possible failures
UAC High UAC1 High UAC2 High	Number of times that the AC output voltage was too high (single phase, split phase L1, split phase L2)	See specifications of the generator set for threshold values
UAC Low UAC1 Low UAC2 Low	Number of times that the AC output voltage was too low (single phase, split phase L1, split phase L2)	See specifications of the generator set for threshold values
IAC High IAC High1 IAC High2	Number of times that the AC output current was too high (single phase, split phase L1, split phase L2)	See specifications of the generator set for threshold values
FAC High	Number of times that the AC output frequency was too high (engine speed too high)	See specifications of the generator set for threshold values
FAC Low	Number of times that the AC output frequency was too low (engine speed too low)	See specifications of the generator set for threshold values
Overload	Number of times that the generator set stopped due to too much load connected to the AC output	See specifications of the generator set for threshold values
DC failures		
UDC Bat low	Number of times that the voltage of the start battery dropped too low	UDC Bat low level: 10.0V in idle mode, 4.5V during starting
Charger failure	Number of times that the battery charger of the generator set failed in operation	
Charger temp	Number of times that the internal temperature of battery charger circuit on the generator set was too high	
IDC Fuel high	Number of times that the DC current through the fuel lift pump was too high	

Value	Meaning	Remarks
IDC Stop high	Number of times that the DC current through the pull to stop relay was too high	Only applicable for Whisper 3.5
IDC Glow high	Number of times that the DC current through the glow plug was too high	
IDC Start high	Number of times that the DC current through the start solenoid was too high	
UDC Fuel high	Number of times that the DC voltage to the fuel lift pump was too high	
UDC Stop high	Number of times that the DC voltage to the pull to stop relay was too high	Whisper 3.5 only
UDC Glow high	Number of times that the DC voltage to the glow plug was too high	
UDC Start high	Number of times that the DC voltage to the start solenoid was too high	
UDC Fuel low	Number of times that the DC voltage to the fuel lift pump was too low	
UDC Stop low	Number of times that the DC voltage to the pull to stop relay was too low	Whisper 3.5 only
UDC Glow low	Number of times that the DC voltage to the glow plug was too low	
UDC Start low	Number of times that the DC voltage to the start solenoid was too low	
Runtimes		
Hist Runtime	Hour counter of the generator set	
Total Runtime	Shows the cumulative runtime since the latest service maintenance inspection	This value will be reset when the maintenance counter is reset
Serv Int1 Time ↓ Serv Int10 Time	Shows the time between the service intervals Serv Int1 Time always shows the most recent time interval between two service maintenance inspections.	See section 5.3 for additional information about service and maintenance of the generator set
Runtime P0	Number of hours that the generator was loaded by less than 20% of its nominal output power	This value will be reset when the maintenance counter is reset
Runtime P20	Number of hours that the generator was loaded by 20-40% of its nominal output power	This value will be reset when the maintenance counter is reset
Runtime P40	Number of hours that the generator was loaded by 40-60% of its nominal output power	This value will be reset when the maintenance counter is reset
Runtime P60	Number of hours that the generator was loaded by 60-80% of its nominal output power	This value will be reset when the maintenance counter is reset
Runtime P80	Number of hours that the generator was loaded by more than 80% of its nominal output power	This value will be reset when the maintenance counter is reset

See section 5.3.1 if you want to reset the maintenance counter

9 CONFIGURATION

The Configuration menu is used to adjust the settings of the generator set in accordance with the electrical installation and the requirements of the user.
Under normal circumstances adjustments at the Configuration menu are not recommended. See section 3.3 if you want to adjust the settings for time and language.
See section 5.2 to get access to the Configuration.

WARNING!
Invalid settings at the Configuration menu can cause serious damage to the generator set as well as the electrical installation. Adjustments may be undertaken by authorised personnel only!

Value	Meaning	Default setting	Adjustable. range
Device settings			
Language	Language that is displayed on a monitoring device connected to the *MasterBus*.	English	English, Nederlands, Deutsch, Français, Castellano, Italiano, Norsk, Svenska, Suomi, Dansk.
Name device	Name of this device. This name will be recognized by all devices that are connected to the *MasterBus* network.	Whisper xx *	All names with a maximum of 16 characters.
Clock (Hrs)	Hours setting of the real time clock.	0 hr.	0-23 hr.
Clock (Min)	Minutes setting of the real time clock.	0 min	0-59 min
Clock (Sec)	Seconds setting of the real time clock.	0 sec	0-59 sec
Monitor menu	There are two options to display the parameters at the Monitoring menu: a short version and a long version If *Short* is chosen, only the most important monitoring information is shown (as described in section 5.2). If *Extended* is chosen, all monitoring information is shown (see chapter 6).	Short	Short, Extended.
Motor management			
Glow time	Pre heat time. For safe operation and longer life span of the generator set it is necessary to glow before starting the generator. Required glow time depends on average ambient temperature in which the generator set is used.	10 sec	1-20 sec.
Max. start time	Adjustment of the maximum run time of the cranking motor.	5 sec	5-15 sec.
ErrorBypass time	To check whether a start attempt was successful, the AC-output voltage, AC frequency and status of the switches is checked This check is delayed by the ErrorBypass time to be sure the generator set is stable in operation.	15 sec	10-30 sec.
Start attempts	If the generator set fails to start after a start attempt, starting of the generator is repeated. This function allows the user to set the maximum number of start attempts.	3	1, 2, 3
Pump time	Adjustment of the operation time of the fuel lift pump prior to the cranking of the engine	3 sec	3-30 sec.
Alt. temp bypass	Delay time for the alternator temperature switch; not applicable for generators with wet exhaust (marine versions)	180 sec	10-180 sec.
Stop time	Time setting for activation of the pull to stop relay (Whisper 3.5 only)	8 sec	5-10 sec.

Value	Meaning	Default setting	Adjustable. range
Time to service	Under normal circumstances the generator set needs to be serviced for the first time after 50 running hours (fixed value), and then after every 150hrs. However, in some cases a different maintenance interval should be applied. Refer to the user's manual of the generator for detailed information	150 Hrs	100-250 Hrs
Default settings	If this function is enabled, all prior adjustments of the *Motor management* menu will be reset to the default settings	Off	Off, On
Auto settings			
Auto start	When using the Autostart function the generator can be started automatically triggered by an event based command. See section 11.4 for details. This setting must be set to "On" if you want to enable the Autostart function.	Off	Off, On
Min runtime	The minimum time that the generator set will keep running after it was started by the Autostart function	60 min	0-65535 min
Max runtime	To avoid an incessant generator run a maximum runtime can be set here.	60 min	0-65535 min
Silenttime begin	Hours setting of the begin time of the Silenttime. *Silenttime* is the daily time period that the generator set should not be started automatically by the *autostart function*. You can use this function to avoid an unintended generator run during night time.	22 hr.	0-23 hr.
Silenttime begin	Minutes setting of the begin time of the Silenttime	0 min	0-59 min
Silenttime end	Hours setting of the end time of the Silenttime	7 hr.	0-23 hr.
Silenttime end	Minutes setting of the end time of the Silenttime	0 min.	0-59 min
Warning Levels*			
UAC High ** UAC1 High *** UAC2 High ***	When the AC output voltage of the generator set is higher than this value, a warning is displayed	Model dependent	Model dependent
UAC Low ** UAC1 Low *** UAC2 Low ***	When the AC output voltage of the generator set is below this value, a warning is displayed	Model dependent	Model dependent
IAC High** IAC1 High*** IAC2 High***	When the AC output current of the generator set is higher than this value, a warning is displayed	Model dependent	Model dependent
FAC Low	Low frequency warning level	Model dependent	Model dependent
FAC High	High frequency warning level	Model dependent	Model dependent
Overload	When the load connected to the AC output of the generator is higher than this percentage of the nominal output power, a warning is displayed	95%	0-100%
UDC Low	A warning will be displayed when the voltage of the start battery drops below this setpoint for at least 2 seconds.	11.00V	> 0V
Default settings	If this function is enabled, all prior adjustments of the *Warning levels* menu will be reset to the default settings	Off	Off, On
Events			
Event x source	*Event-based command* (see section 11.4) Event by the Whisper generator set that should result in an action by one of the other devices on the *MasterBus* network.	Disabled	(See List of event sources, section 11.4.2)

Value	Meaning	Default setting	Adjustable. range
Event x target	*Event-based command* (see section 11.4) Selection of device on the *MasterBus* network that should take action due to an event by the Whisper generator set.		(See Device list)
Event x command	*Event-based command* (see section 11.4) Action to be taken by the selected device.		(See *List of event commands* in the manual of the selected device,)
Event x data	*Event-based command* (see section 11.4) Value of the action to be taken by the selected device.		(See *List of event commands* in the manual of the selected device,)
Service group			
Reset serv. int	Reset of maintenance time. See section 5.3.1	Off	Off, On
Art. nr Ser. nr	Shows the article number and the serial number of the *Whisper generator set.*		(read only)

* xx = model identification.

** Only applicable for generators with a single phase AC output (230VAC).

*** Only applicable for generators with a split phase AC output (2x 120VAC).

**** Note: representation of warnings may be restricted by settings of the installer.

10 SETTINGS AND CONFIGURATION OF THE MASTERVIEW EASY

10.1 MASTERVIEW EASY MONITORING

The default settings of the MasterView Easy are optimal for most applications. In some cases however, it is desirable to change settings.

Take following steps to go to the settings of the MasterView Easy.

1 Touch the X in the right upper corner several times until a listing of devices is shown.
2 Touch the field which indicates “MV Easy”
3 At the first screen you can change settings for language or backlight illumination. See table below. Or touch the right pointing arrow ＞ on the menu bar repeatedly until “Go to Alarm” is shown. From here you can open the Configuration menu of the MasterView Easy. See section 10.2.

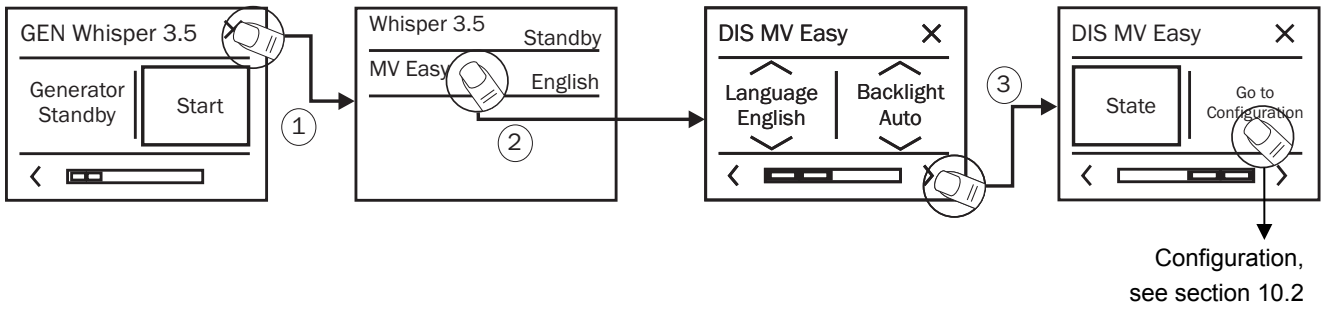

Figure 26: Monitoring functions and access to the Configuration menu of the Masterview Easy

Value	Meaning	Default	Adjustable. Range
Language	Displayed language of the *MasterView Easy.*	English	English, Nederlands, Deutsch, Francais, Castellano, Italiano, Norsk, Svenska, Suomi, Dansk
Backlight	Illumination of the display’s backlight	Auto	Auto/On/Off
State	Operation status of the Masterview Easy	On	On/Off

10.2 MASTERVIEW EASY CONFIGURATION

The configuration menu of the *MasterView Easy* is used for read out and adjustment of settings like backlight illumination, displayed language and number of devices. It also allows you to program *event based commands* for the *MasterView Easy.* Switching off the *MasterView Easy* does not affect the settings. Some settings, for instance battery capacity, can only be read out.

Variable	Meaning	Default	Adjustable. range
General			
Name yacht	Name of the boat or vehicle on which the MasterView Easy panel is installed.	Yacht name	All names with a maximum of 16 characters
Name device	Name of this device. This name will be recognized by all devices that are connected to the *MasterBus* network	MasterView	All names with a maximum of 16 characters
Selected devices	Limitation of number of devices that can be assigned to this MasterView Easy panel. See section 11.3.2 for application example.		multiple devices, all devices
Device 1 (Device 2) (Device 3)	Only displayed if “Devices” is set to “Multiple devices”. Selection of the device that will be assigned to be displayed by the MasterView Easy.		(See Device list)
Buzzer	Switching of the buzzer	On	Off, On
Auto Lock after	The delay time after which the MasterView Easy will be locked automatically since it was used for the last time. See also section 4.2.2	Off	Off, 2 minutes, 5 minutes, 10 minutes
Backlight colour	The backlight can be selected white or red. In alarm the backlight turns red. If you choose a red backlight, it will not change colour in case of an alarm.	White	White, red
Power save			
Backlight time	The time that the backlight of the display stays illuminated since it was touched for the last time.	1 minute	always off, 2 minutes, 5 minutes, 10 minutes, always on
Auto off	The time after which the *MasterView Easy* will be switched off since it was touched for the last time.	1 day	1 day, 2 days, always on
Backlight	Percentage of illuminance	50%	0-100%, in steps of 10%
Events			
Event x source	*Event-based command* (see section 6.4) Event by the MasterView Easy that should result in an action by one of the other devices on the *MasterBus* network.		(See *List of event sources* in the user’s manual of the *MasterView Easy*)
Event x target	*Event-based command* (see section 6.4) Selection of device on the *MasterBus* network that should take action due to an event. by the MasterView Easy.		(See Device list)
Event x command	*Event-based command* (see section 6.4) Action to be taken by the selected device.		(See *List of event commands* in the manual of the selected device,)
Event x data	*Event-based command* (see section 6.4) Value of the action to be taken by the selected device.		(See *List of event commands* in the manual of the selected device,)
Art. nr Ser. nr	Shows the article number and the serial number of the *MasterView Easy*.		(read only)

11 ADDITONAL INFORMATION

11.1 WHAT IS MASTERBUS?

All devices that are suitable for *MasterBus* are marked by the *MasterBus* symbol.

MasterBus is a fully decentralized data network for communication between the different Mastervolt system devices. It is a CAN-bus based communication network which has proven itself as a reliable bus-system in automotive applications. *MasterBus* is used as power management system for all connected devices, such as the inverter, battery charger, generator and many more. This gives the possibility for communication between the connected devices, for instance to start the generator when the batteries are low.

MasterBus reduces complexity of electrical systems by using UTP patch cables. All system components are simply chained together. Therefore each device is equipped with two *MasterBus* data ports. When two or more devices are connected to each other through these data ports, they form a local data network, called the *MasterBus*. The results are a reduction of material costs as only a few electrical cables are needed and less installation time.

For central monitoring and control of the connected devices Mastervolt offers a wide range of panels which show full status information of your electrical system at a glance and a push of a button. Three different panels are available, from the small Mastervision compatible 120 x 65mm LCD screen up to the full colour MasterView System panel. All monitoring panels can be used for monitoring, control and configuration of all connected *MasterBus* equipment.

Mastervolt also offers several interfaces, making even non-*MasterBus* devices suitable to operate in the *MasterBus* network. For more details about *Masterbus*, see the “Frequently asked questions about *MasterBus*” in the Mastervolt Powerbook.

11.2 HOW TO SET UP A MASTERBUS NETWORK

Each device that is suitable for the *MasterBus* network is equipped with two data ports. When two or more devices are connected to each other through these ports, they form a local data network, called the *MasterBus*.

Keep the following rules in mind:

Connections between the devices are made by standard straight UTP patch cables. Mastervolt can supply these cables. These cables are also commonly available at computer supply stores.

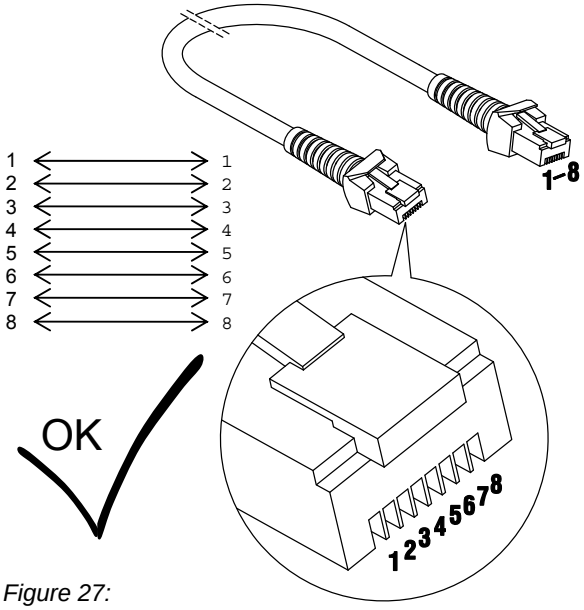

Figure 27:

As with all high speed data networks, MasterBus needs a terminating device on both ends of the network

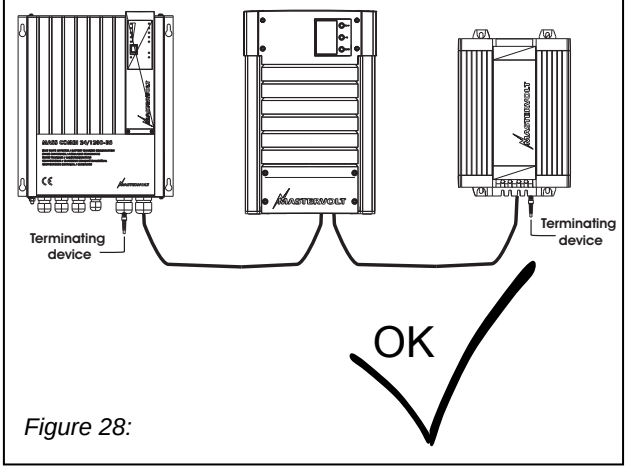

Figure 28:

The electric power for the network comes from the connected devices.
At least one device in the network should have powering capabilities (see specifications).
One powering device can power up to three non-powering devices.
As all powering devices are galvanically isolated, multiple powering devices are allowed

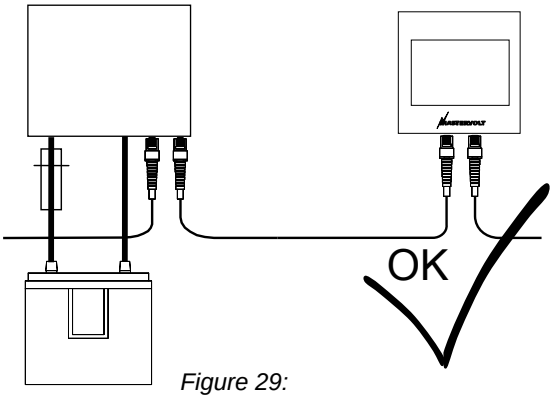

Figure 29:

Do not make ring networks

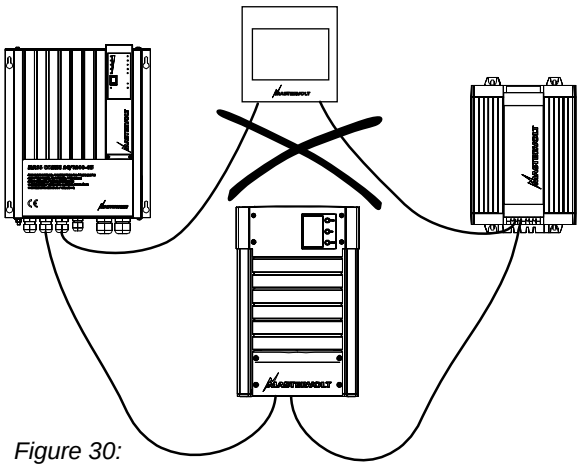

Figure 30:

Do not make T-connections in the network

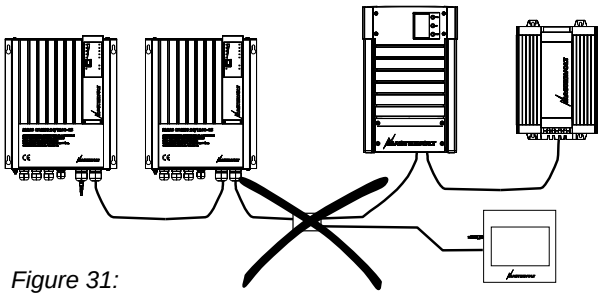

Figure 31:

11.3 EXTENSION OF THE MASTERBUS NETWORK

With the standard delivery of the Generator set, you will set up a *MasterBus* network that consists of two devices, i.e. the Whisper Generator set and the *MasterView Easy* remote panel.
More devices can be added to the existing network in a very easy way by just extending the network. See section 11.2.

Please mind that equal products by default have the same identification name. To avoid any confusion when connecting two or more equal products to the same *MasterBus* network, you should change the *Device names* of these products. For instance, when using two battery chargers model *ChargeMaster 24/100*, each battery charger should have its own *Device name*, such as “CM24/100 #1” and “CM24/100 #2” See section 3.3 to change the *Device name*.

11.3.1 Installing two or more generator sets

WARNING
Two or more generator sets in the same electrical installation, should NOT be operated by one single MasterView Easy remote panel. Instead each generator set should have its own dedicated MasterView Easy remote panel.

Giving each generator set its own dedicated MasterView Easy remote panel can be achieved in either two ways:

- The easiest way is by setting up two independent *MasterBus* networks where each generator set is connected to its own *MasterView Easy* panel by its own *MasterBus* network. See figure 32. In this way no additional settings are required.

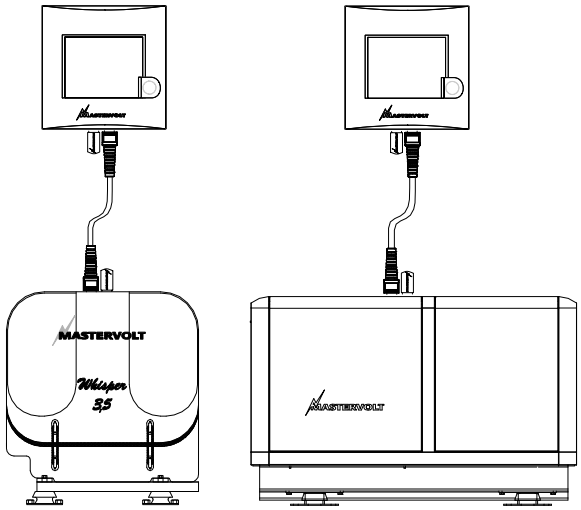

Figure 32:
Two independent MasterBus networks when using two generator sets in the same electrical installation.

- By setting up one *MasterBus* network with two *MasterView Easy* panels. See figure 33. Here each *MasterView Easy* panel should be configured as dedicated panel for its corresponding generator set. To do so, see section 11.3.2.

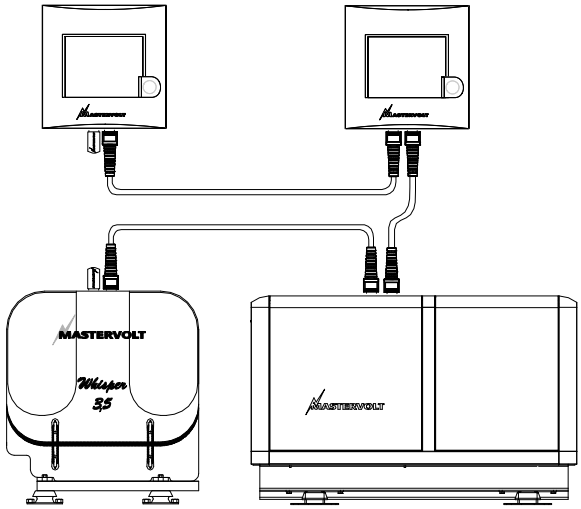

Figure 33:
One MasterBus network with two generator sets. Here each MasterView Easy panel should be configured as dedicated panel.

11.3.2 Configuration of dedicated MasterView Easy panels

Below steps should only be taken if you want to set up **one *MasterBus* network** for **two or more generator sets** with two or more corresponding *MasterView Easy* panels. As an example, in the steps below the electrical installation consists of a *Whisper 3.5* and a *Whisper 6 Ultra*; *MasterView Easy* panel #1 will be made dedicated for the *Whisper 3.5* while *MasterView Easy* panel #2 will be made dedicated for the *Whisper 6 Ultra*. Configuration for other Whisper models is similar.

1 Make sure that none of the Whisper generator sets is running.
2 Disconnect the *Whisper 3.5* from the *MasterBus* network by unplugging its *MasterBus* cables. Then connect the *MasterView Easy* panel #1 directly to the *Whisper 3.5*. Note that *terminating devices* should plugged into the remaining *MasterBus* connections of the *MasterView Easy* panel and the *Whisper 3.5*.
3 At the *MasterView Easy* panel #1 go to the device listing by touching the X in the right upper corner several times until a listing of connected devices is shown (i.e. “Whisper 3.5” and “MV Easy”)
4 Touch the field which indicates “MV Easy”.
5 Touch the right pointing arrow ＞ on the menu bar repeatedly until “Go to Configuration” is shown.
6 Touch on the “Go to Configuration” field. Now “General” is shown.
7 Touch the right pointing triangle ▷ next to “General” to open the general configuration menu.
8 Touch the right pointing arrow ＞ on the menu bar repeatedly until “Selected devices” is shown.
9 Now touch the up/down pointing arrows until “multiple devices” is shown. Confirm your setting by touching ✓.
10 Touch the right pointing arrow ＞ on the menu bar once. “Device 1 / Select…” is shown.
11 Touch the up/down pointing arrows until “*Whisper 3.5*” is shown. Confirm your selection by touching ✓.
11 Now touch the X in the right upper corner twice to return to the initial screen.

Repeat these steps to make *MasterView Easy* panel #2 dedicated for the *Whisper 6 Ultra*. After finishing programming, restore the wiring of the *MasterBus* network to its original configuration.

11.4 EVENT-BASED COMMANDS

DANGER
When using *event based commands* the generator can start unexpectedly. When working on the electrical system, the 30 Amp fuse must be removed from the *Local Control Panel* and the battery plus cable must be removed from the battery.

WARNING
Mastervolt cannot be held responsible for damage caused by unattended running of the generator due to the use of *event based commands*.

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

11.4.1 List of event commands and data

Below the list of event commands and event data of the *Whisper Generator* is shown. Other devices connected to the *MasterBus* can be programmed to initiate these commands and actions at the *Whisper Generator.*

WARNING
The *Event Command* “Start” is intended for programming of manual starting applications only (such as an additional generator remote control panel). Therefore the *Event Command* “Start” should NEVER be used for automatic starting of the generator set as it denies several critical restrictions such as maintenance time. In case of automatic starting applications you should use the *Event Commands* “Autostart” and “Stop” only.

Event command	Event data	Description
Start	On	The generator set will be started without any restrictions. This command should NEVER be used for automatic starting of the generator set. See WARNING in the text above.
Autostart	On	The generator set will be started but starting is restricted. The generator will not start if: • The *Autostart* function is disabled. See chapter 9, ***Auto settings*** • *Silent period* is active See chapter 9, ***Auto settings*** • *Maintenance time* has elapsed. See section 5.3 • A failure has occurred which has not yet been accepted. See section 7.3
Stop	On	The generator set will be stopped without any restrictions

11.4.2 List of event sources

Below the list of event sources of the *Whisper generator* is shown. These event sources can be used to initiate an event command and an event action at an other device that is connected to the *MasterBus*.

Event source	Description
Disabled	(no event programmed)
Running	The generator set is running
Off	The generator set is not running

11.5 MASTERADJUST SOFTWARE

MasterAdjust software allows you to monitor, control and configure a *MasterBus* network from a Windows PC or laptop. Use of a *MasterBus-USB interface* for communication between your PC and the *MasterBus* is required. See ordering information. See the user manual of the *MasterBus-USB interface* for detailed information.

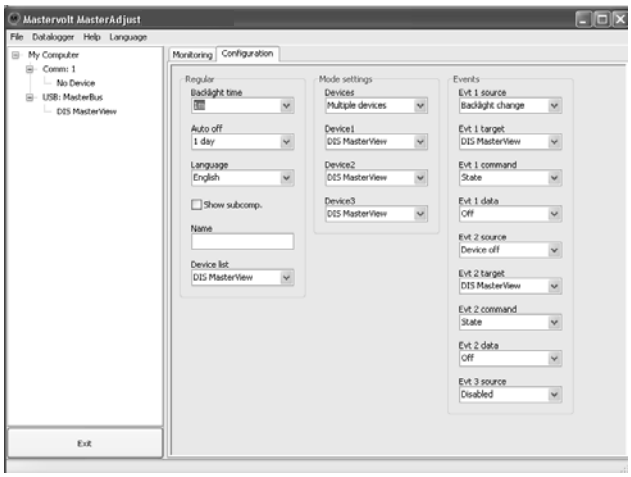

Figure 34: MasterAdjust software

Mastervolt *MasterAjust* 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 11.4);
- System Monitor: complete actual overview of your entire electrical installation;
- System logger: data logging instrument to retrieve historical data of your electrical installation.

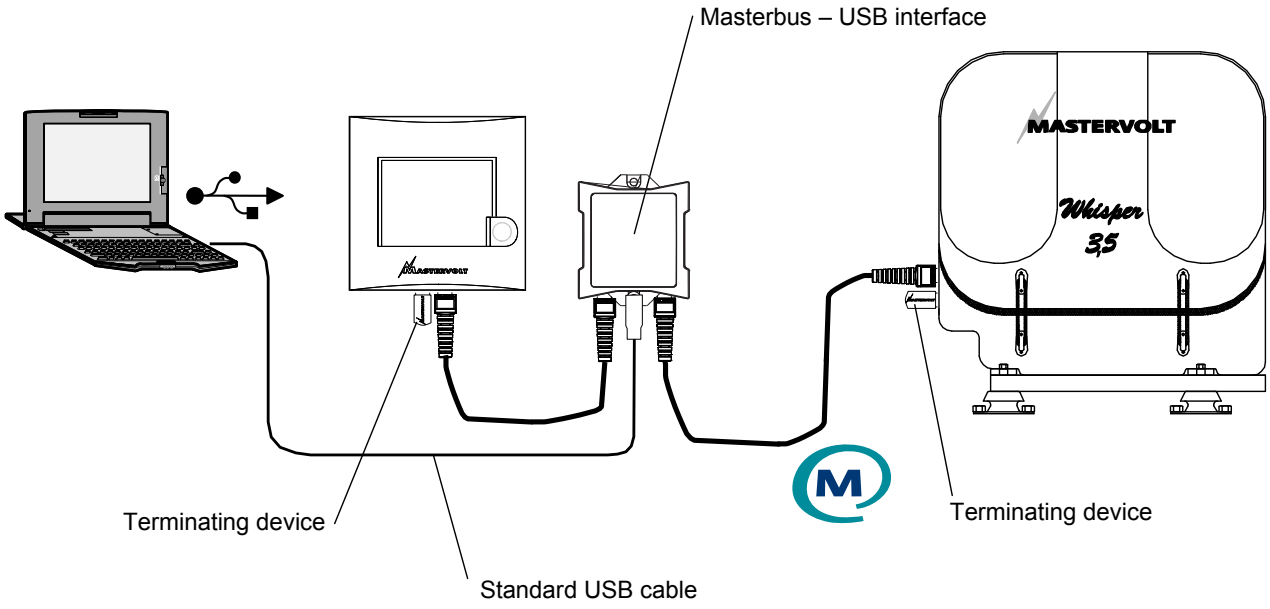

Figure 35: Connection of the MasterBus-USB interface

12 TROUBLE SHOOTING

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

Problem	Possible cause	What to do?
General		
MasterView Easy doesn't show any information at all.	*MasterView Easy* is switched off.	Press the button shortly (see section 4.2.1).
	Error in the wiring.	Check the *MasterBus* cables. See section 3.2 and 11.2.
	No battery connected to the generator set.	Check the wiring between the generator set and the battery. Check battery fuse. (see installation manual of the generator set).
MasterView Easy shows some information but no data of the Whisper generator set.	Information is shown about an other device that is connected to the *MasterBus* network.	Touch the X in the right upper corner several times until a listing of devices is shown. Then touch the field which indicates "Whisper". See also section 4.2.1.
	Error in the wiring.	Check the MasterBus cables. See section 3.2 and 11.2
Back light of the *MasterView Easy* does not switch on after touching the screen.	Back light has been set to switch off.	Check the *Configuration* of the *MasterView Easy*. See section 10.2.
Back light of the *MasterView Easy* does not switch off.	Back light settings need to be changed.	Check the *Configuration* of the *MasterView Easy*. 10.2, ***Power save***.
No backlight.	Backlight switches off after default 60 seconds.	Touch the screen of the *MasterView Easy* or refer to section 10.2, ***Power save*** to adjust the settings of the backlight.
Touch screen does not react.	Operation of the touch screen has been locked manually.	Hold the button pressed for at least 5 seconds to unlock operation of the touch screen, see section 4.2.2.
	Automatic keyboard lock function has been activated.	Hold the button pressed for at least 5 seconds to unlock the operation of the touch screen, see section 4.2.2, or see section 10.2 to change settings.
	Touch screen needs to be cleaned.	See section 4.5 (Maintenance).
Other devices connected to the *MasterBus* are not recognized by the *MasterView Easy*.	Error in the wiring.	Check the *MasterBus* cables. See section 3.2 and 11.2.
	Device not suitable for *MasterBus*.	Check whether the device is suitable for *MasterBus*. Maybe the *MasterBus* cable is connected to a non-*MasterBus* connector.
	The display is in "Multiple devices" mode with another device selected.	Change the setting to "All devices". See section 10.2, ***General***.
	Settings error: maximum number of devices is 20.	If you want to monitor more than twenty devices, you need to split up the MasterBus network into two separate networks
	In case of two or more generator sets: each generator set should have its own *MasterView Easy* panel.	See section 11.3.1 for details.
The *device name* (name of the generator set) is not correct.	*Device name* has not been set yet.	See section 3.3 or 10.2, ***General*** to change the *device name*.
Wrong boat / vehicle name is displayed.	Wrong setting.	See section 10.2, ***General*** to adjust the name of the boat / vehicle.

Problem	Possible cause	What to do?
Wrong time is displayed.	Wrong setting.	See section 3.3 (Initial settings) or chapter 9, *Clock* to adjust the real time clock.
Wrong language is displayed.	Wrong setting of the language at the MasterView Easy.	See section 3.3 (Initial settings) or 10.2, ***General*** 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 device.
Warnings and failures		
Display shows WARNING	The generator set is performing beyond the settings of the Warning Levels. If nothing is done, a FAILURE may occur resulting in a generator stop.	See chapter 7.
Display shows FAILURE	The generator indicates a failure. The generator set will stop automatically.	See chapter 7.
Display still shows FAILURE while problem has been solved	The failure must be accepted first.	Touch "Accept failure". See section 7.3.
Autostart function		
Event based programming is done correctly but generator fails to start.	*Autostart* function is disabled.	See chapter 9, ***Auto settings*** to enable the *Autostart* function (*Autostart* must be set to On).
	Silent period is active.	Wait until the silent period elapses or see chapter 9, ***Auto settings*** to change settings of the *Silenttime.*
	Autostart function is disabled if *Maintenance time* has elapsed.	Maintenance must be executed. See section 5.3.
	Autostart function is disabled caused by a *failure.*	The failure must be corrected and accepted first. See section 7.3.
	Wrong setting of the real-time clock.	See section 3.3 (Initial settings) or chapter 9, *Clock* to adjust the real time clock.
Event based programming is done correctly but generator starts at night.	*Silent period* is inactive.	See chapter 9, ***Auto settings*** to change settings of the *Silenttime*.
Engine failures		
Generator does not respond to a command given by the *MasterView Easy*.	Error in the wiring.	Check the *MasterBus* cables. See section 3.2 and 11.2.
	Electrical or mechanical fault.	Refer to the Trouble Shooting section in the user's manual of the Whisper generator set.
	In case of two or more generator sets: each generator set should have its own *MasterView Easy* panel.	See section 11.3.1 for details.
After some time the *MasterView Easy* switches off and the generator stops.	When the *MasterView Easy* panel is not operated for 1 day, it will switch off automatically. Switching off the *MasterView Easy* panel will lead to a *Communication Failure*, causing the generator to stop.	See section 10.2, ***General*** for settings (setting for *Auto off* must be adjusted to *Always on*).

13 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
77010300	(Additional) MasterView Easy panel
77010400	MasterView System. Full colour LCD System monitor four your onboard electrical system
---	MasterAdjust software, free download from www.mastervolt.com. See section 11.5
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 *MasterView Easy*

Mastervolt can offer a wide range of products for your electrical installation, including an extended program of components for your *MasterBus* network. Our website www.mastervolt.com shows an overview of all our products and free downloadable software.

14 SPECIFICATIONS

14.1 TECHNICAL SPECIFICATIONS

Model:	MasterView Easy (for Whisper generator sets)
Article number:	77010300
Delivery includes:	Panel, outer casing, MasterBus terminating device, MasterBus connection cable (15m/49ft), user's manuals
Function of instrument:	Monitoring and configuration of devices that are connected to the MasterBus network
Manufacturer:	Mastervolt Amsterdam, the Netherlands
Readout:	By means of an LCD touch screen
Available languages:	English, Nederlands, Deutsch, Français, Castellano, Italiano, Norsk, Svenska, Suomi, Dansk
Powering capabilities:	No, needs to be powered via the MasterBus (at least one of the connected devices should have powering capabilities)
MasterVision compatible:	No
Power consumption:	Off: 16 mW On: 160 mW (backlight off); 900mW (backlight on)
Dimensions:	113 x 113 x 37 mm / 4.45 x 4.45 x 1.46 inch; see figure 36
Required depth	38 mm minimum
Weight	230 g / 8.1 oz.
Protection degree:	IP 21

14.2 DIMENSIONS

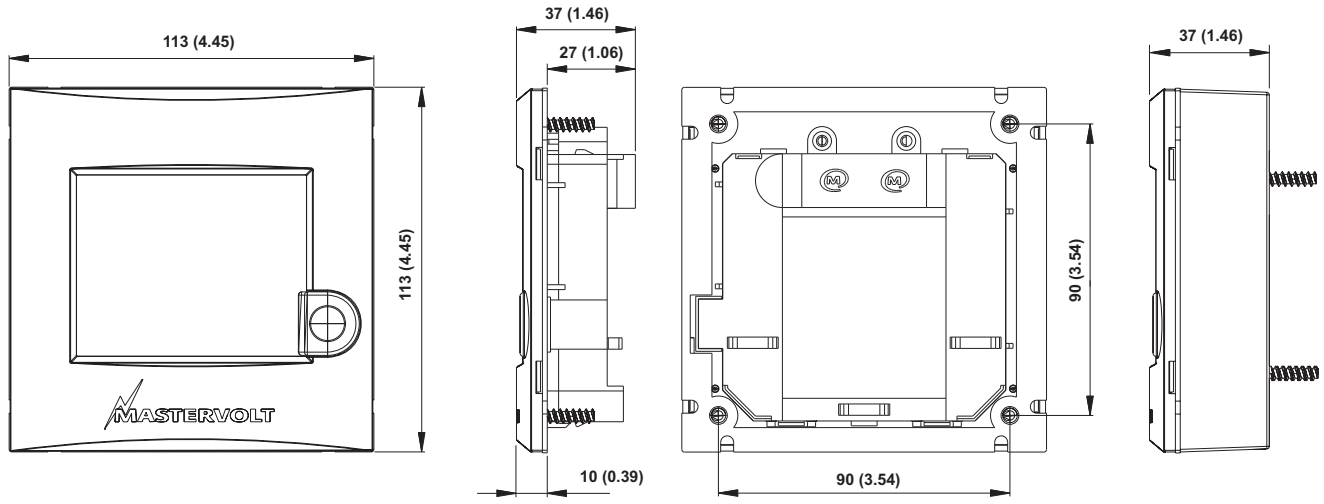

Figure 36: Dimensions of the panel without and with outer casing. All dimensions are in mm (inches)

15 EC DECLARATION OF CONFORMITY

CE

Manufacturer Mastervolt
Address Snijdersbergweg 93
1105 AN Amsterdam
The Netherlands

Herewith declares that:

Product:
77010300 MasterView Easy

Is in conformity with the following provisions of the EC

- 2004/108/EC (EMC directive). The following harmonized standards have been applied:
  - Generic emission standard: EN61000-6-3: 2007
  - Generic immunity standard: EN61000-6-1: 2007

- 2006/95/EC (Safety directive), with the following standard:
  - Low voltage standard: EN60950: 2000

- 2002/95/EC (ROHS Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment)

- 2002/96/EC from 27.01.2003 (The Directive on Waste Electrical and Electronic Equipment)

Amsterdam,

P. F. Kenninck,
C. E. O. Mastervolt.

NOTES

MASTERVOLT
Snijdersbergweg 93, 1105 AN Amsterdam, The Netherlands
Tel : + 31-20-3422100 / Fax : + 31-20-6971006
www.mastervolt.com / info@mastervolt.com