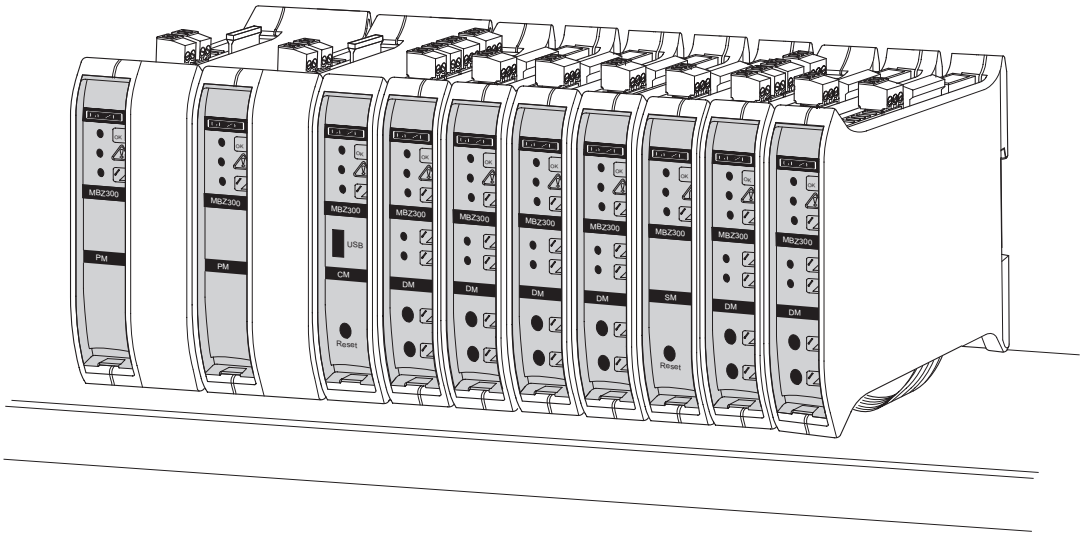

MBZ 300

Configuration Software

Program for configuring RWA systems comprising components from the MBZ 300 series made by GEZE GmbH

DE User manual

Software version 2.8

GEZE

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1 About this document

This user manual describes the the operation of the GEZE-MBZ 300 Configuration Software.

1.1 Key to symbols

Warning
In these instructions, warnings are used to warn against material damage and injuries.
- ▶ Always read and observe these warnings.
- ▶ Follow all instructions marked with the warning symbol and the word WARNING.

Warning symbol	Warning	Meaning
	**DANGER**	Danger for people. Non-observance can result in death or serious injuries.

Further symbols used in these instructions
Important information and technical notes are emphasised to illustrate the correct operation.

Symbol	Meaning
	means “Important note“
	means “Additional information”
▶	Symbol for a user action. Here you have to take an action. ▶ Observe the sequence if there are several action steps.

2 System requirements

The program can be installed on a computer with at least the following properties:

CPU	Recommended processor: 1 GHz or faster. If the processor is slower, at least a version with MMX is required.
Operating system	Microsoft Windows 2000 Server with Service Pack (SP) 4 or higher; Windows 2000 Professional Edition with SP 4 or higher; Windows XP with SP 2 or higher; Windows Server 2003 Standard Edition, Enterprise Edition, or Datacenter Edition with SP 1 or higher; Windows Small Business Server 2003 with SP 1 or higher, Windows Vista, Windows Server 2008, Windows 7.
Memory	512 MB RAM or more; 1 GB or more is recommended, at least 100 MB free RAM is required.
Hard drive space	At least 100 MB free hard drive space is required.
Drive	At least 1 drive with a "C" partition is required
Graphic card / monitor	Super VGA (1.024x768) or higher
Accessories	Microsoft mouse or compatible
Other requirements	.NET 2.0 Runtime and the Visual C 2008 redistribution package. These packages are installed automatically by the installer package if they are not already in the system.

3 General information

3.1 Software installation

After MBZ 300 software training you are registered in the user list. You then receive the software and licence via the GEZE customer portal. Please make sure you always work with the latest software.
Please go to the GEZE customer portal: www.geze-partnerlogin.de
Please install the software on a laptop which is used to commission the MBZ 300:

- You need administrator rights for installation
- Install the program in a file with writing rights for the user
- Make sure that the driver is also installed. (If this is not done automatically, the driver can be installed later from the directory „...\Programme\GEZE\MBZ300\Driver“ when an MBZ 300 control unit is installed.)

3.2 Licence levels

The program can be cleared on different user levels by means of an authorisation system.
Pre-condition for licensing is the acceptance of a licence contract with GEZE GmbH.

3.2.1 View licence

This level does not have to be cleared. After installation the software is automatically in the view level. The following possibilities are available:

- Display of system or module status
- Display of the log entries
- Setting of the charging current on the basis of the battery capacity
- When a weather module is installed: Setting of the type of peripherals connected and selection of wind speed
- Setting of the system time

3.2.2 Basic licence (partner level)

This level must be licensed. The following additional possibilities are then available:

- Modification of various module properties (see chapters on the various modules)
- Configuration of venting groups
- Activation of deluxe ventilation properties
- All module properties can be configured.
- Creation / configuration of smoke zones
- Configuration of extended networking of several MBZ300 via CAN
- Firmware update of individual modules
- Resetting to factory setting
- Password protection

3.2.3 All licence (exclusively GEZE internal)

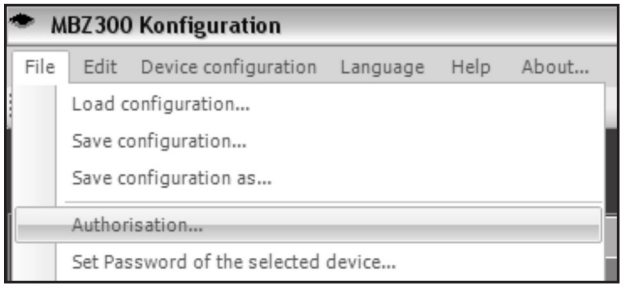
This level must be licensed. The following additional possibilities are then available:

- Smoke detector reset period
- Smoke detector recovery period
- Delete system log.

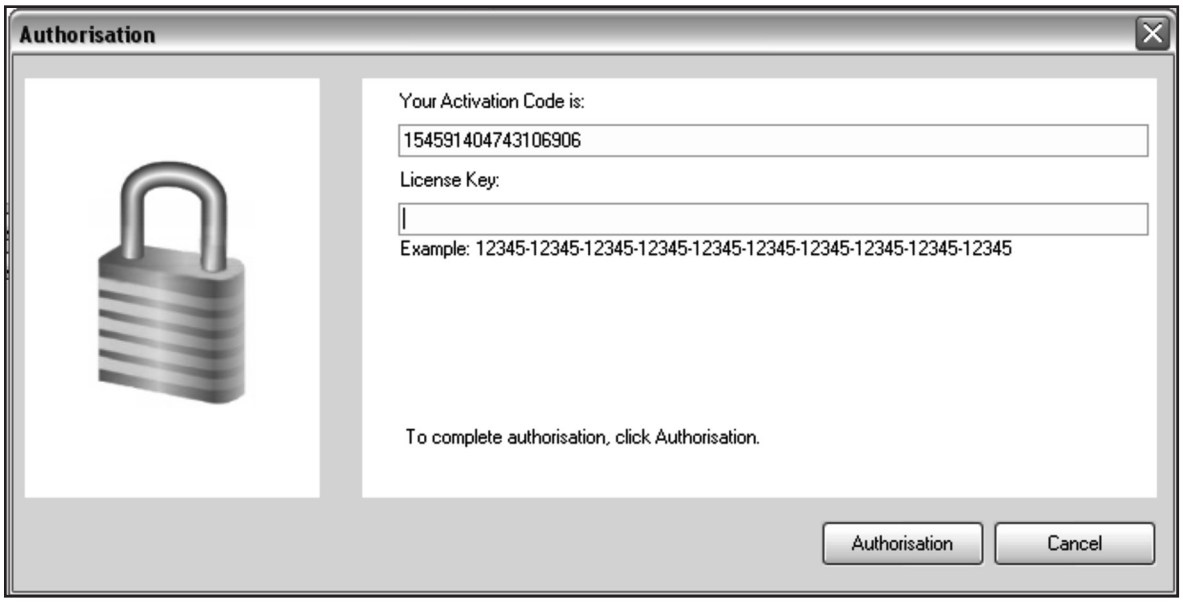
3.3 Authorisation (licensing)

3.3.1 Reading out the activation code (with control unit connected)

First, the program must be started with the system connected (the MBZ300 must be connected to the computer to be licensed via USB). In the menu bar, click „File“ and then „Authorisation“.

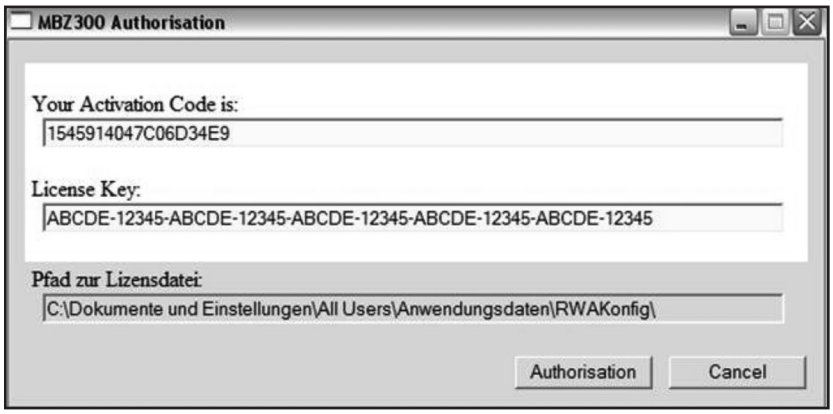


The following appears:



3.3.2 Reading out the activation code (alternative without control unit connected)

In the Windows start menu there is a shortcut to an external authorisation tool which can be used for authorisation without starting the program and connected to the control unit.
Path for pre-installed software installation:
START -> All programs -> GEZE -> MBZ 300 -> Authorisation



Here, the activation code for a new licence can be read out.
In addition, if an older program version was licensed this tool can transmit the existing PC „licence key“ to newly installed software by clicking the „Authorisation“ button.

3.3.3 Requesting licence key

Please go to the GEZE customer portal as a registered software user: www.geze-partnerlogin.de
There, you can enter the activation code and request the key under „Authorisation“.
It can be marked using the mouse, for example, copied to the clipboard using <strg>+<c> and then pasted using <strg>+<v>. Your contact responsible will send you the suitable licence key by email as soon as possible.
If you have any questions, please contact MBZ300@geze.com.

3.3.4 Entering a licence key

If the authorisation window has been closed in the meantime, request it again as described above. Enter the licence key under „Licence key“. After you have clicked „Authorisation“ the extended functionality will be available.

3.4 Notes on the software

Always use the latest configuration software together with the latest firmware! Update the firmware as required.
Please note the two different program versions:

- „Individual control unit“
- „Networked control unit“

(see „Firmware update“ and „Procedure for configuration of a control unit“)

3.4.1 What happens after the system has been connected via USB

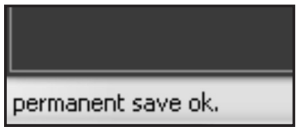
As soon as the system has been connected to the PC, the settings and the current system configuration are read out. Depending on the size of the system, this procedure can take a few seconds. The software is ready when the info-area of the main window (bottom left) displays „Startup OK“:

Please always operate the laptop on battery power to ensure the electrical isolation between the mains of the control unit and the power supply of the laptop.

The program has to be terminated before the USB connection cable between the PC and MBZ300 is removed.

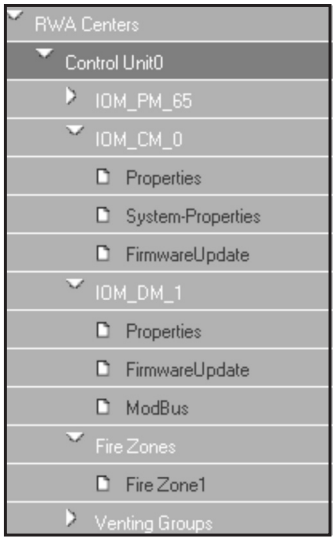
3.4.2 Status bar

In the status bar (info-area of the main window) at the bottom left you can see whether the control unit is ready and whether the configuration has been successfully saved to the control unit, for example.



3.4.3 Navigation bar

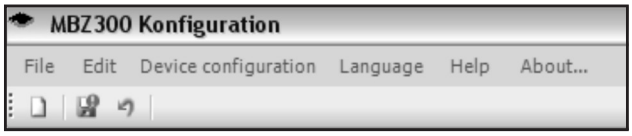
All the modules connected in the system are displayed in a tree view, and from the basic licence onwards the groups are listed:



The properties of each module can be reached by clicking the symbol on the left of the respective module.

3.4.4 Menu functions

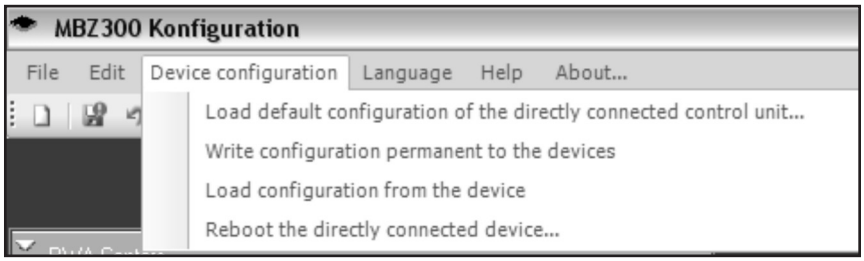
A wide range of different software functions can be executed via the menu in the header. Navigation is by left mouse click, analogue to familiar programs.



File

Load configuration...	A saved configuration (*.EMB) is loaded to the software interface. It is not yet written into the system. ▶ Please check the settings after loading. ▶ The following settings are not saved in the file and must be adapted manually ▫ PM: ▫▫ Size of the battery ▫▫ Number of PMEs ▫ WM: ▫▫ Sensors ▫▫ Wind thresholds ▫ CM: ▫▫ Maintenance time ▫▫ Time ▫ Password ▶ See „System configuration“ for how to write the configuration into the system
Save configuration...	The current configuration is saved in a file (*.EMB) on the PC.
Save configuration as ...	Like „Save configuration...“ but under a new file name.
Authorisation...	see „Authorisation“
Set Password of the selected device...	Protect the system by means of a password.
Printer settings...	Page set-up.
Printer preview selected device...	Documentation of the system acceptance protocol/check list. **<u>Note</u>: In order to get all current status entries in the PDF as well, click in all modules (status page) before generation / printing to ensure the current status displays are requested.**
Printer preview of all devices...	
Print the configuration of the selected device...	
Print the configuration of all devices...	
Generate a PDF of the selected device configuration...	
Generate a PDF containing all device configurations...	
Exit	Terminates the program

System configuration



Load default configuration of the directly connected control unit...	The system configuration is reset to factory settings. The self-teaching function is re-activated. Refer also to „ „Buttons“ on the interface“ **Note: All the settings are lost!**
Write configuration permanently to the devices	The configuration in the software interface is transmitted to the system. Refer also to „ „Buttons“ on the interface“
Load configuration from the device	Reads the existing configuration out of the system and displays it in the software interface. If a configuration in the software interface is not saved it is lost.
Reboot the directly connected device...	Reboots the connected system. It is necessary to reboot the system when all the required changes have been written into the system and a check on system behaviour is to be made. = equivalent to: switching the control unit voltage-free for at least 30 seconds (without rechargeable battery).

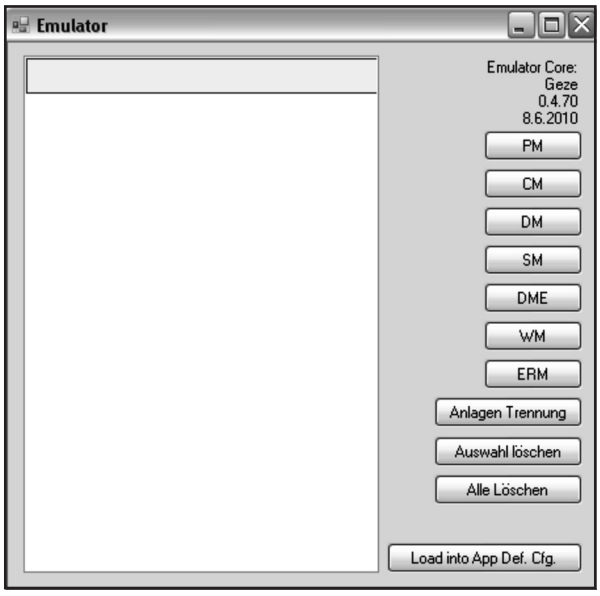
3.4.5 „Buttons“ on the interface

As an alternative to items from the header menu, some functions are available as buttons. The functions of the button are described below.

	„Clear“ The system configuration is reset to factory settings. Refer also to „System configuration“. **Note: All the settings are lost!**
	„Save to CM“ The configuration in the software interface is transmitted to the system. Refer also to „System configuration“.
	„Undo“ Changes to the configuration in the software interface are reversed. **Note: This only affects the current view on the PC, not the control unit. For this, the configuration has to be re-transmitted to the control unit.**

Whether or not a property can be modified depends on the user level.

3.4.6 EMU (emulator)



The emulator is used to simulate system set-up when the PC is no longer connected to an MBZ 300 control unit. To simulate the system set-up, the various modules are added to a list in descending order. The modules can be moved in the list by drag-and-drop. Then the system set-up is loaded to the configuration program, where the settings can be made.

PM, CM, DM, SM, DME, WM, ERM	Adds the corresponding module to the list.
System separation	Allows a new control unit to be started in the list in order to map several control units connected via CAN-bus. (This function only becomes effective when the "Networked control units" program version is used.)
Delete selection	Deletes the module selected in the list
Delete all	Deletes all the modules from the list
Load into App Def. Cfg.	Loads the list as system set-up into the configuration program.

When configuration has been completed it can be saved (*.EMB) in order to be exported to an actually existing control unit locally at a later date.
The configuration file of an actually existing system can also be loaded into an identical, emulated system.

The configuration can only be loaded to an identical control unit (same module sequence). The set-up must be known.
Tip: Always save the *.PDF file in addition to the configuration file (*.EMB).

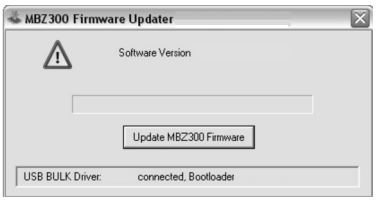
- ▶ Please check the settings on the real control unit!
  The following settings are not saved in the *.EMB file and must be adapted manually:
  - PM: Battery size and number of PMEs
  - WM: Sensors and wind thresholds
  - CM: Maintenance time and time
  - Password

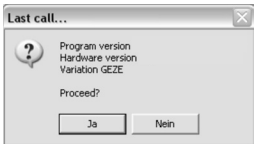
3.5 Firmware update

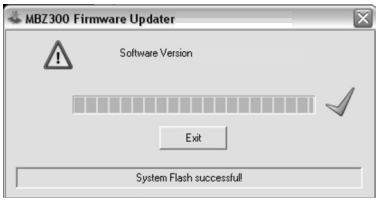
Carry out the firmware update using the „Update“ program. You will find the program in the Start menu.
Please proceed as follows:

- ▶ Connect the control unit via USB
- ▶ Start Update program.
  Path for pre-installed software installation:
  START -> All programs -> GEZE -> MBZ 300 -> Update -> Update
  The Update program contains the following:
  - ▫ Intermediate saving of the configuration

  - ▫ Updating of all firmware statuses of the modules installed







  - ▫ Loading of the configuration which has been saved intermediately
- ▶ Starting of the software „Individual control unit“.
  The following settings are not saved intermediately and must be adapted manually:
  - ▫ PM: Battery size and number of PMEs
  - ▫ WM: Sensors and wind thresholds
  - ▫ CM: Maintenance time and time
  - ▫ Password

4 Procedure for configuration of a control unit

Please note the following steps when commissioning or modifying an MBZ 300:

4.1 Preparation of an individual control unit

- [1] Ensure the system is voltage-free (no 230V connection, no battery)
- [2] Insert further modules if appropriate
- [3] Check wiring between the modules
  - Power supply
  - Bus cable **(NEVER connect or disconnect when the control unit is switched on!)**
  - Ensure that the cables are fitted correctly.
  - Connect drives, push buttons etc. (can also be done later)
  - Make sure that all line monitoring devices are connected properly
- [4] Activate the 230V supply
- [5] Connect the rechargeable battery
- [6] Keep the reset push button on the CM pressed for 20s (until all modules are flashing - not longer!). This ensures the modules are addressed correctly. This process is essential when the hardware (modules and order) has been changed.
- [7] Connect USB cable to CM and connect to the laptop.
- [8] Start the software „Individual control unit“
  (please make sure you always use the current version (see „Software installation“).
- [9] Check the firmware version of the control unit to make sure it is up-to-date.
- [10] Carry out firmware update if necessary (see „Firmware update“)
- [11] Load the default settings (see „System configuration“)
  Standard groups (alarm / ventilation / weather groups) are formed along module settings through the self-learning function (connection of modules) or default loading.
  Caution: all previous settings are deleted!
- [12] Adapt battery size and number of PMEs (see „Battery settings“).
- [13] Set the individual configuration:
  - If new modules are added or the order is changed, the settings must be adjusted manually directly in the software.
  - If the hardware has not changed, you can load an already saved *.EMB-file. Prerequisite is a suitable (same) hardware configuration! Please check the settings (see Section 3.4.4) and go to the next step.
- [14] Transmit to the control unit.
- [15] Reboot the directly connected control unit.
- [16] Check settings.
- [17] Test functions (please note interactions with GLT, BMA, relaying!).
- [18] Save central configuration as *.EMB and *.PDF and archive for the project.
- [19] In the control unit, note that the configuration has been adapted by software (user, date and rough description – print out PDF and enclose if appropriate).
- [20] Terminate software, then remove USB cable.

4.2 Several control units networked via CAN

(see „CAN parameters“) The procedure is in addition to / instead of the above-described points as follows:
Set up the USB connection to each individual control unit and start the software „Individual control unit“ every time.

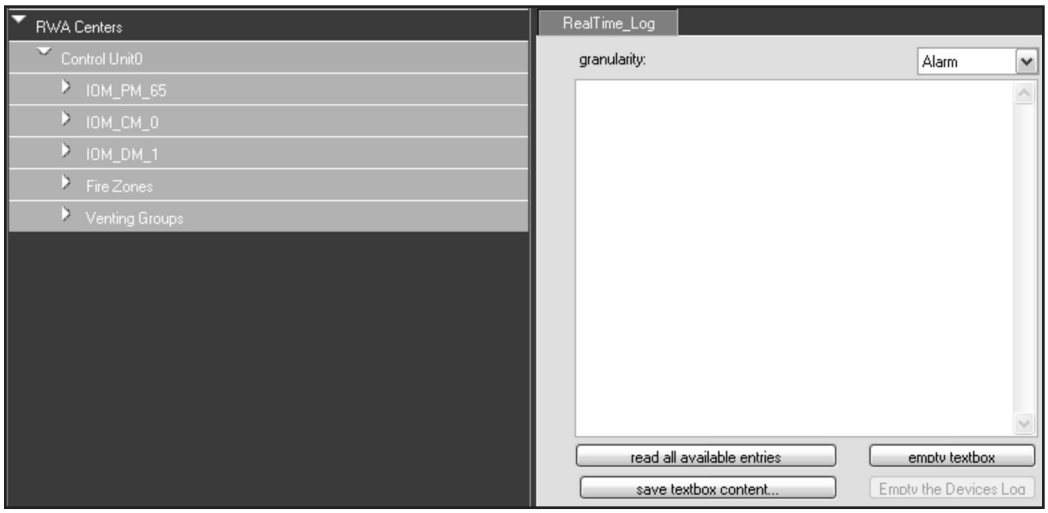
- [12a]: For every individual control unit with CM CAN parameters set the address and the number of control units.
  - Transmit to the control unit
  - Reboot the directly connected control unit
  - It is advisable to mark the control units according to their addresses
- [12b]: At this point at the latest, make sure that the CAN cables incl. terminator jumper are correctly connected between the control units
  - Establish a USB connection to any control unit
  - Open the „Networked control units“ software
- zu [13]: Set the configurations and particularly comprehensive functions now and transmit to the control units.
- zu [18]: Save the configuration file as *.EMB (several files) and *.PDF.

5 Control system

The individual setting possibilities for the various modules are described below. The standard value is always in bold type.

5.1 RealTime_Log - control unit

The program displays the entries in the „RealTime_Log“ memory. This lists events which have had at least alarm or error status.



Various selection possibilities can be used to set which events and messages are to be recorded. The setting does not represent a filter of the view, rather it specifies what is actually to be saved.

Granularity:	Fine (everything)	All events are saved e.g. including ventilation control
	Information	All messages are saved
	Alarm	Alarm and error messages are saved
	Error	Error messages are saved

<u>Note:</u> The granularity settings must be written into the system for the changes to take effect

Read all available entries	All the messages available for the control unit are read. Caution: This can take a very long time!
Empty textbox	Only deletes the display on the software interface.
Save textbox content...	Saves the contents of the fault memory in a file. (.TXT)
Empty the devices log	Deletes the fault memory of the control unit.

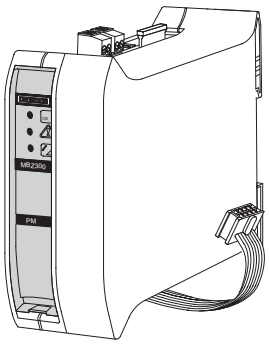
The log is a circular buffer (the oldest data are overwritten) with sufficient capacity (depending on granularity).
Tip: Use the log memory for trouble shooting and for functional test (granularity „Fine“).

6 PM - Power module

6.1 Purpose

- Provision of a non-interrupted power supply.
- Battery charging.
- Provision of secondary voltages.

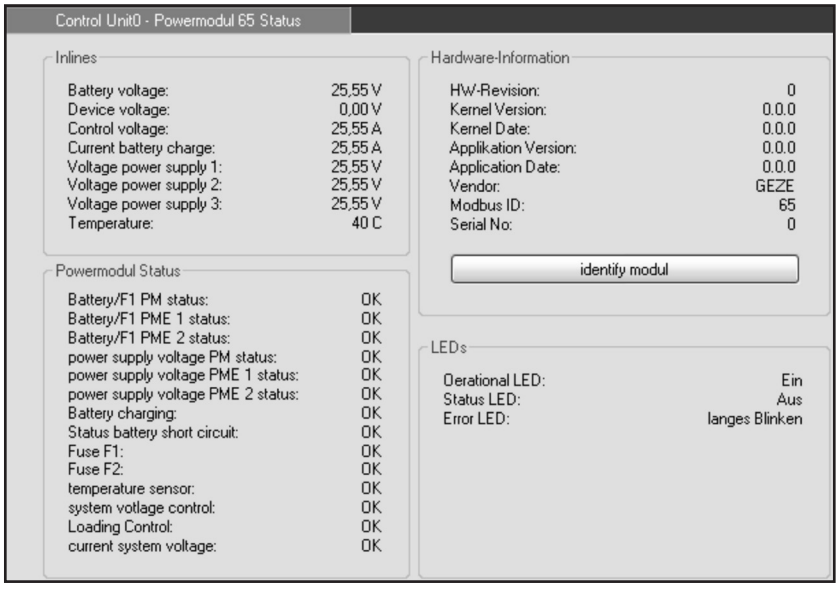
6.2 Electrical properties



Possible battery sizes	2 .. 38 Ah, 24 V
Battery types	Lead
Load bearing capacity voltage outputs	0,5 A, SELV

6.3 Status - PM

The current status can be compared with the target value table shown below to evaluate the condition

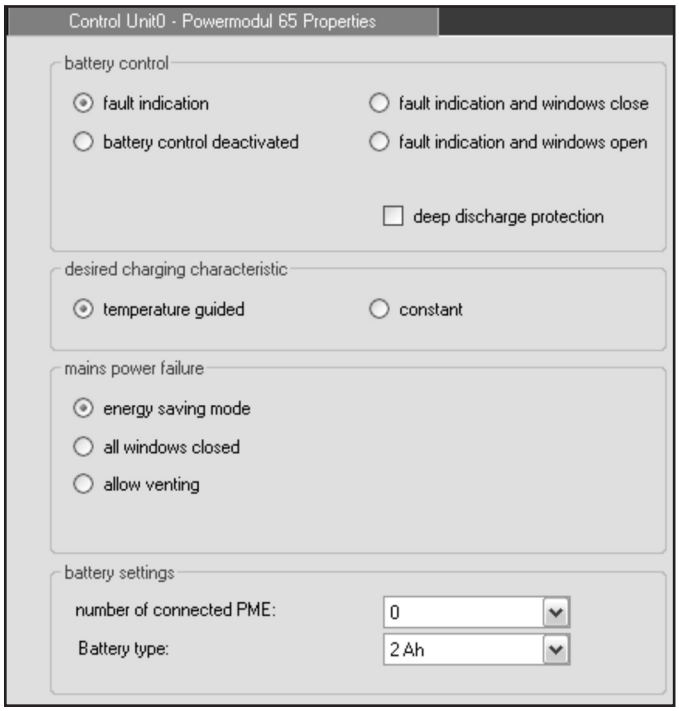


6.3.1 PM target value table

Inputs	Minimum value	Standard value	Maximum value
Battery voltage	approx. 24 V (depending on the battery charge state)	27.4 V (depending on the temperature, if configured this way)	28.8 V (depending on the temperature, if configured this way)
Device voltage	23 V	Mains operation: as power supply voltage Battery operation: as battery voltage	28 V
Current control voltage	Approx. 6 mA/module depending on system version		0,5 A
Current battery charge	Between 0.22 A .. 1.8 A depending on the battery capacity configured		1,8 A
Voltage power supply 1	23,5 V	26 V	28 V
Voltage power supply 2	23,5 V *)	26 V *)	28 V *)
Voltage power supply 3	23,5 V *)	26 V *)	28 V *)
Temperature	0 °C	25 °C	40 °C

*) if the corresponding number of PMEs has been configured, otherwise display is „0.1 V“

6.4 Properties – PM



Akkuüberwachung

[•]	**Fault indication**	Fault indication is outputted via the malfunction LED or e.g. via the signal relay with corresponding parameter settings.
[ ]	Battery control deactivated	No reaction in the event of a malfunction. **Note: Fault display on the PM is still active.**
[ ]	Fault indication and windows close	A fault indication is outputted and all drive modules are actuated to CLOSE.
[ ]	Fault indication and windows open	A fault indication is outputted and all drive modules are actuated to OPEN.
[ ]	Deep discharge protection	In battery operation, the control unit does not operate until the rechargeable battery is completely discharged (deep discharge), it is switched off before this point in order to protect the rechargeable battery (this deep discharge protection triggers at around 21.5 V) e.g. if the power failure can last for longer than 72 h.

Desired charging characteristic

[•]	**Temperature-guided**	The charging voltage is adapted depending on the temperature. Should always be used.
[ ]	Constant	The charging voltage is independent of the ambient temperature.

Mains power failure

[•]	**Energy-saving mode**	Ventilation signals are suppressed, weather sensors are not evaluated
[ ]	Close all windows	All drive modules are actuated to CLOSE in the event of a power failure.
[ ]	Allow venting	Ventilation is allowed. The back-up time is shortened by ventilation movements in battery operation.

Battery settings

Number of connected PMEs	**0..2 (Standard: 0)**	Adaptation of the number of PMEs if any changes have been made to the power supply

If the system has been extended by further power supplies, a corresponding number of PME modules have also been added. This number must be configured here (range 0..2) so that fault evaluation works correctly.

Battery type:	2 Ah	The corresponding battery type must be set
	6 Ah	
	10 Ah	
	12 Ah	
	17 Ah	
	24 Ah	
	38 Ah	

After the default values have been loaded, this setting must always be checked and adapted if necessary!

CAUTION

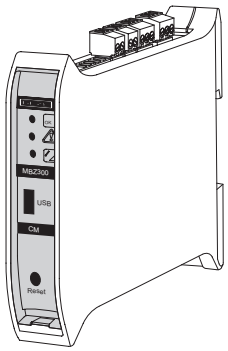
If the battery type is set incorrectly this can lead to excessively high charging current. Excessively high charging current can damage the rechargeable battery. The rechargeable battery will become very hot: Risk of explosion!
The parameters must always be checked following a software update on a control unit.

7 CM - Control module

7.1 Purpose

- Control and operation of the complete system.
- The configuration settings of the control unit are mainly saved in the CM.
- Evaluation/monitoring of manual detectors.
- Evaluation/monitoring of automatic fire alarms or external alarm contacts.
- Evaluation of ventilation signals.
- Provision of a potential-free contact (signal relay).
- Connection possibility with a PC via USB
- Connection of several MBZ300 systems via CAN (CAN additional module necessary)

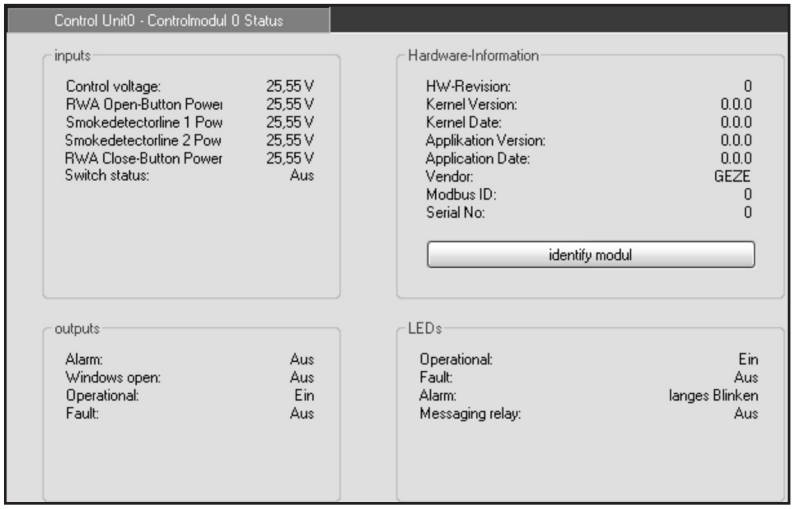
7.2 Electrical properties



Alarm voltage	24 V DC
Input switching voltage	24 V DC
Load bearing capacity signal relay	0,5 A, SELV

7.3 Status - CM

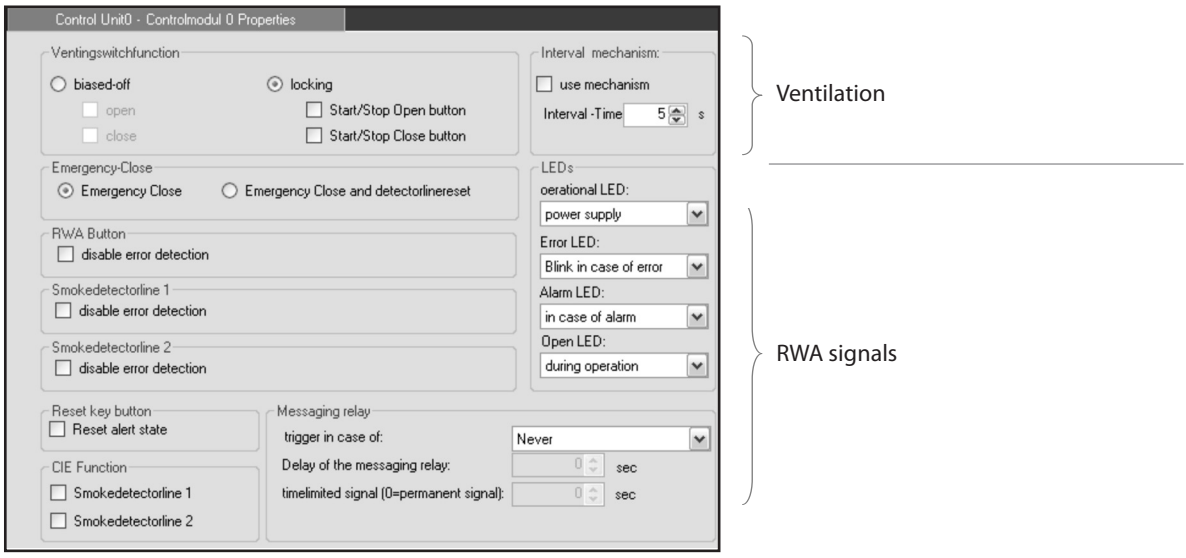
The current status can be compared with the target value table shown below to evaluate the condition.



7.3.1 Target value table

Inputs	Minimum value	Standard value	Maximum value
Control voltage	22 V	25,3 V	28 V
RWA Open-Button Power	900 µA (standby)	1250 µA (standby)	3000 µA (standby)
Smoke detector line 1 Power	1000 µA (standby)	2550 µA (standby)	6000 µA (standby)
Smoke detector line 2 Power	1000 µA (standby)	2550 µA (standby)	6000 µA (standby)
RWA Close-Button Power	1000 µA (standby)	1250 µA (standby)	3000 µA (standby)
Push button status	Depending on the switched status NA (not actuated), OPEN, CLOSE or STOP		

7.4 Properties – CM



In the standard configuration the CM forms the first smoke zone. All the following DMs (up to the next SM) are assigned to this smoke zone.

Other smoke zone assignment (see „Smoke zones“).

7.5 Configuration possibilities
(Partner level)

7.5.1 Vent switch function

In the standard configuration the push button input of the control module in the first venting group is linked with all drive modules in the system. This venting group has a higher priority than the push buttons connected directly to the drive modules (= central push button for the whole control unit). Other venting group assignment (see „Venting groups“).

Function setting		Behaviour with button OPEN pressed	Behaviour with button CLOSE pressed	Stop by
[ ]	Biased-off	**<u>Note:</u> Always select OPEN and / or CLOSE in addition. Without this definition the push button continues to be in self-locking mode.**		
	[ ] open	The DMs switch to "open" as long as the button is pressed. If the button is released, the DMs switch off again.	If "CLOSE" is not set to biased-off, the DMs switch to the "close" direction of travel permanently.	In biased-off direction: Release the push button
	[ ] close	If "OPEN" is not set to biased-off, the DMs switch to the "open" direction of travel permanently.	The DMs switch to "close" as long as the button is pressed. If the button is released, the DMs switch off again.	If only one is active, the other is in self-locking mode STOP = both push buttons at the same time
[•]	**Self-locking**	Modules switch permanently to "open" direction of travel.	Modules switch permanently to "close" direction of travel.	Press both push buttons at the same time
	[ ] Start/stop open push button	Modules switch permanently to „open“ direction of travel. Pressing the button again switches the lines off again (stop)	Modules switch permanently to „close“ direction of travel. Stop = Press both push buttons at the same time	If both directions are activated: Stop = Press the same button again
	[ ] Start/stop close push button	Modules switch permanently to „open“ direction of travel. Stop = Press both push buttons at the same time	Modules switch permanently to „close“ direction of travel. Pressing the button again switches the lines off again (stop).	
	<u>Note:</u> If the function „stop through same push button“ is desired: Check OPEN and CLOSE so that the ventilation push button function makes sense.			

„Permanently“ means the set „drive line switch-off time“ at maximum.

7.5.2 Automatic step control

[ ]	Use mechanism	When this option is activated the drives are only actuated in the „OPEN“ direction for the time step set. This function must be combined with the ventilation push button function „self-locking“. This has no influence on the RWA function.
Interval time:	0 .. 120 s **(Standard: 5 s)**	Movement interval of the interval time.

Pressing the push button again during movement increases the overall interval time by the respectively set interval time.
(Example: First time push button pressed = 5 s, second time = 10 s, third time = 15 s etc.)

7.5.3 Emergency-close

(Concerns the green push button „CLOSE/RESET“ in the connected RWA button)

[•]	**Emergency-close**	When the emergency-close push button of the manual detector is actuated, all DMs of the smoke zone are switched to "close" and the alarm status in the control unit is reset. If a smoke detector reset should be necessary, this must be carried out directly at the module via the "RESET" push button.
[ ]	Emergency-close and detector line reset	When the emergency-close push button of the manual detector is actuated, all DMs of the smoke zone are switched to "close" and the alarm status in the control unit is reset. The smoke detectors are also reset.

„Emergency-close“ always has the effect of triggering a „CLOSE“ movement and (partly) resets the alarm status, no matter whether alarm signals (e.g. fire alarm system) are pending or not. All pending alarm signals must be removed for complete alarm reset.

7.5.4 RWA button

[ ]	Disable error detection	Error detection (line monitoring) of the RWA button line is thus deactivated. Line break and short-circuit are no longer recognised! This means setting a terminating resistance is superfluous.

7.5.5 Smoke detector line 1

[ ]	Disable error detection	Error detection (line monitoring) of the smoke detector line 1 is thus deactivated. Line break and short-circuit are no longer recognised! This means setting a terminating resistance is superfluous.

7.5.6 Smoke detector line 2

[ ]	Disable error detection	Error detection (line monitoring) of smoke detector line 2 can be deactivated, line break and short-circuit are no longer recognised! This means setting a terminating resistance is superfluous.

7.5.7 Reset key button

(Concerns the reset key button directly on the CM module)

[ ]	Reset alarm status	As standard, brief confirmation of the key button only resets the smoke detector of the smoke detector lines of the smoke zone (smoke detector reset see „Operating parameters (GEZE internal All Licence)“). When the option is activated, the alarm is also reset in the assigned smoke zones and all the drive modules are actuated to „close“.

- Please check how meaningful this function is if the module detector lines are used for different smoke zones.
- If „Reset alarm status“ is activated, the alarm status is only reset and the drive modules actuated to „close“ when all pending alarm signals have been removed.

7.5.8 CIE function

Automatic remote resetting of the alarm status via fire alarm system.

[ ]	Smoke detector line 1	When this option is activated, opening the fire alarm system status contact to smoke detector line 1 will automatically reset the control unit.
[ ]	Smoke detector line 2	When this option is activated, opening the fire alarm system status contact to smoke detector line 2 will automatically reset the control unit.

- The fire alarm system function covers resetting the alarm status and CLOSING the drives.
- If „Emergency-close and detector line reset“ is activated in combination with the fire alarm function, the smoke detector lines are switched voltage-free for the time set under „Smoke detector reset period“ (see CM „Operating parameters“) when the fire alarm signal is no longer received.

7.5.9 Messaging relay

Selection of the message which leads to the messaging relay switching.

Trigger in case of:	Never	No reaction. Or alternative function (see CM „Operating parameters“: Setting „Collective fault“)
	Fault within the group	The messaging relay switches when there is a fault within the group (concerns faults on modules which are assigned to the smoke zones of the CM).
	General group alarm	The messaging relay switches when there is an alarm within the group (smoke zone). **Note: Changeover contact NC/NO is inverted!**

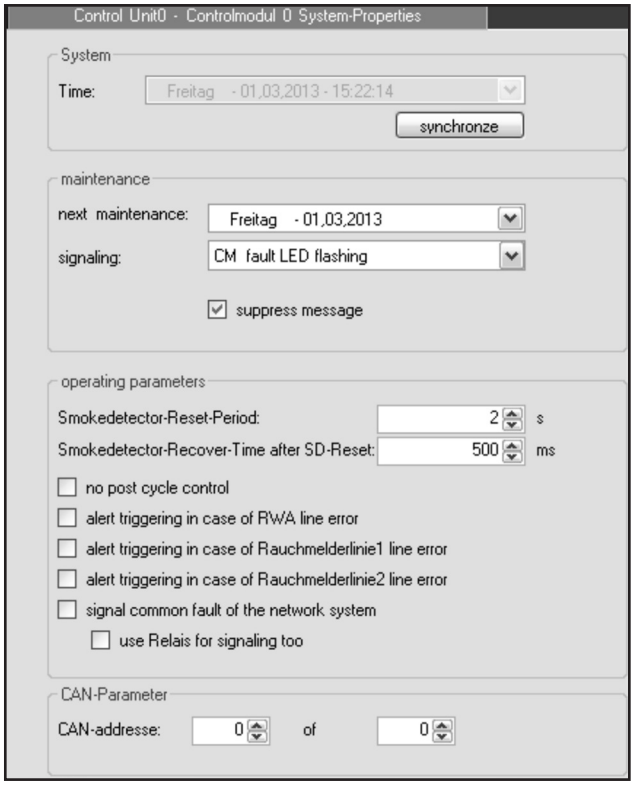
Delay for messaging relay:	0..0 sec	Currently disabled.
Time-limited signal	0..0 sec	Currently disabled.

7.5.10 LEDs

The function of the LEDs on the RWA button are shown here.
If „alternative function“ is selected, the display of the LEDs depends on the special system functions set.

7.6 System properties – CM

The system settings are made here.



7.6.1 System

Time:	Setting the system time.
synchronise	The system time can be compared with the time on the PC connected by pressing the „synchronise“ button. Please make sure that the PC time is correct.

The system time is used for the time stamp for messages in the RealTime log.

7.6.2 Maintenance

Next maintenance	The date for the next routine system maintenance check can be set here using a date selection list. **Note: There is no date set as standard.**

Signalling:	[•]	**CM fault LED flashing**	Any maintenance due is signalled by the fault LED flashing on the CM.
	[ ]	CM fault LED flashes and messaging relay is set	Maintenance due is signalled by the fault LED flashing on the CM and by the messaging relay being switched.
	[ ]	Ventilation open blocked on all DMs	When maintenance is due, ventilation movement in the OPEN direction is blocked on all DMs.
	[ ]	Flashing + ventilation open blocked	Maintenance due is signalled by the fault LED on the CM flashing and ventilation movement in the OPEN direction being blocked on all DMs.
	[ ]	Flashing + relay + ventilation open blocked	Maintenance due is signalled by the fault LED on the CM flashing, by the messaging relay being switched and ventilation movement in the OPEN direction being blocked on all DMs.
	Note: GEZE recommends variant 1 or 2		

[•]	**Suppress message**	The maintenance message can be suppressed completely here.

7.6.3 Operating parameters
(GEZE internal All Licence)

Smoke detector reset period	0..60 s **(Standard: 2 s)**	Smoke detectors are reset by switching off the supply voltage to the detector for the period set here.
Smoke detector recover time after SD reset	0..1000 ms **(Standard: 500 ms)**	The detector line evaluation is deactivated for the time given here following reset of a smoke detector line.

During the smoke detector reset no detector line evaluation takes place, including on the RWA button lines.

[ ]	no post cycle control	Post cycle control (= VdS post-triggering) is suppressed in the event of an alarm.
[ ]	Alarm triggering in case of RWA line error	An alarm is triggered in the event of a line break or short-circuit on a RWA button line.
[ ]	Alarm triggering in case of smoke detector line 1 line error	An alarm is triggered in the event of a line break or short-circuit on smoke detector line 1.
[ ]	Alarm triggering in case of smoke detector line 2 line error	An alarm is triggered in the event of a line break or short-circuit on smoke detector line 2.
[ ]	Common fault of the network system	The system-wide issue of faults is activated. Faults are shown on all RWA buttons in the network system (all control unit modules and control units networked via CAN). **Note:** ▫ **When the collective fault is activated, the LED setting „Fault“ in the CM and SM properties is set to „Alternative functions“ and the drop-down menu is deactivated.** **Caution:** ▫ **When the collective fault is subsequently deactivated the function of the LED must be restored manually. (see „LEDs“ in CM and SM)**
[ ]	Use relay for signalling too	The messaging relays of all CM and SM are switched in the event of collective fault. **Note:** ▫ **Changeover contact NC/NO is inverted!** ▫ **When the relays are activated, the setting „Trigger messaging relay for:“ in CM and SM is set to „Never“ and the drop-down menu is deactivated.** **Caution:** ▫ **When „Use relay for signalling too“ is subsequently deactivated, the settings must be restored manually.**

- With the MBZ 300, post cycle control means CLOSE briefly every 2 min and then OPEN signal again for a total of 30 min.
  All GEZE window drives have been designed for this post cycle control.
- The collective fault is also transmitted in the CAN-bus network. Display can be delayed by several minutes in the case of triggering and particularly resetting / eliminated the fault via the CAN-bus.

7.6.4 CAN parameters

In the case of control units networked via CAN-bus, an individual address must be entered here for each control unit.

The setting remains „0 of 0“ for some control units.

CAN address:	0 .. 30 **(Standard: 0)**	(starting with 1) is increased by 1 for every control unit so that each control unit is assigned an unambiguous sequential number in the system.
from	0 .. 30 **(Standard: 0)**	Number of all control units in the network.

(Refer also to „Several control units networked via CAN“)

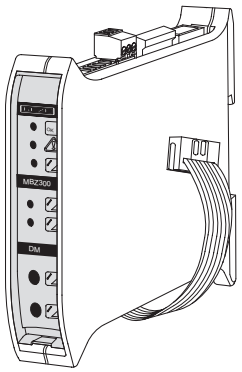
The CAN-bus is an MBZ 300-internal bus and is exclusively used for the networking of several control units.

8 DM - Drive module

8.1 Purpose

- Actuation of 24V drives for RWA and/or ventilation purposes.
- Evaluation of ventilation signals and status contacts.
- Monitoring of the drive cable (see MBZ 300 installation instructions).

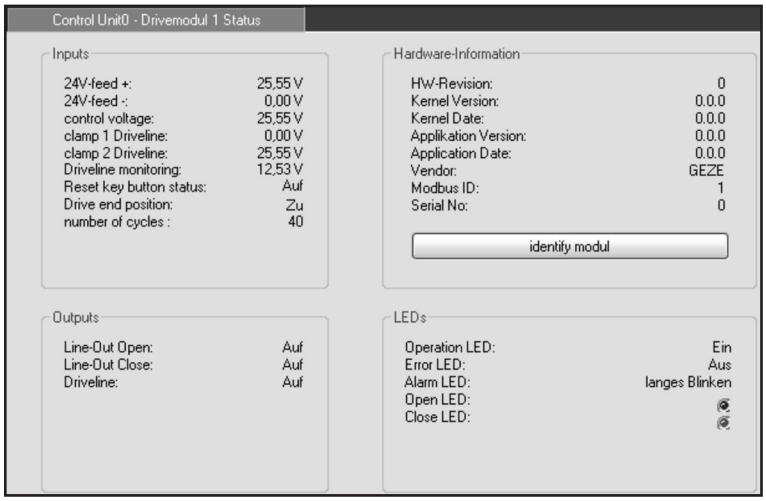
8.2 Electrical properties



Max. drive current	10 A
Input switching voltage:	24 V DC

8.3 Status - DM

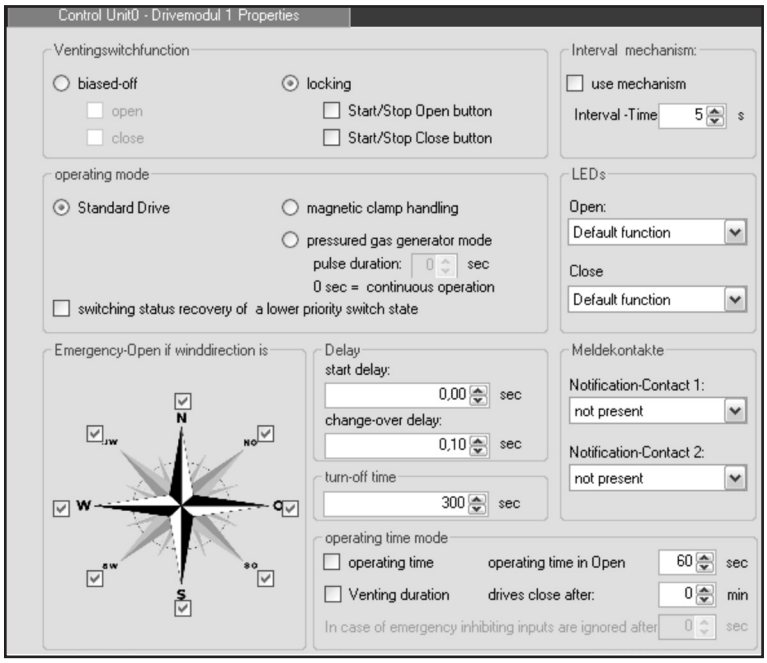
The current status can be compared with the target value table shown below to evaluate the condition.



8.3.1 Target value table DM

Inputs	Minimum value	Standard value	Maximum value
24V supply +	23,5 V	26 V	28 V
24 V supply -	0 V (without load)	0.1 V (without load)	0.4 V (with load)
Control voltage	21 V	25,3 V	28 V
Clamp 1 drive line	OPEN or stopped when switched: 0 .. 0.1 V (without load), max. 0.4. V (with load). CLOSE when switched: 23.5 V .. 28 V		
Clamp 2 drive line	OPEN when switched: 23.5 V .. 28 V CLOSE or stopped when switched: 0 .. 0.1 V (without load), max. 0.4 V (with load)		
Drive monitoring	0,8 V	1 V	3 V
Push button status	Depending on the switched status NA (not actuated), L_L_OPEN, L_L_CLOSE or L_L_STOP		
Drive end position	Concerns the signal inputs: Depending on the switched status NA (not actuated), E_A_OPEN (status contact 1) or E_A_CLOSE (status contact 2)		
Number of cycles	Counts how often the line has been switched open and closed		

8.3.2 Properties – DM



8.4 Configuration possibilities
(Partner level)

8.4.1 Vent switch function

In the standard configuration the push button input of the drive module in a venting group is linked with this drive module itself. Other venting group assignment (see „Venting groups“).

Function setting			Behaviour with button OPEN pressed	Behaviour with button CLOSE pressed	Stop by
[ ]	Dead-man		**<u>Note:</u> Always select OPEN and / or CLOSE in addition. Without this definition the push button continues to be in self-locking mode.**		
	[ ]	open	The DMs switch to "open" as long as the button is pressed. If the button is released, the DMs switch off again.	If "CLOSE" is not set to biased-off, the DMs switch to the "close" direction of travel permanently.	In biased-off direction: Release the push button
	[ ]	close	If "OPEN" is not set to biased-off, the DMs switch to the "open" direction of travel permanently.	The DMs switch to "close" as long as the button is pressed. If the button is released, the DMs switch off again.	If only one is active, the other is in self-locking mode STOP = both push buttons at the same time
[•]	**Self-locking**		Modules switch permanently to "open" direction of travel.	Modules switch permanently to "close" direction of travel.	Press both push buttons at the same time
	[ ]	Start/stop open push button	Modules switch permanently to „open“ direction of travel. Pressing the button again switches the lines off again (stop)	Modules switch permanently to „close“ direction of travel. Stop = Press both push buttons at the same time	If both directions are activated: Stop = Press the same button again
	[ ]	Start/stop close push button	Modules switch permanently to „open“ direction of travel. Stop = Press both push buttons at the same time	Modules switch permanently to „close“ direction of travel. Pressing the button again switches the lines off again (stop).	
	<u>Note:</u> If the function „stop through same push button“ is desired: Check OPEN and CLOSE so that the ventilation push button function makes sense.				

„Permanently“ means the set „drive line switch-off time“ at maximum.

8.4.2 Automatic step control

[ ]	Use mechanism	When this option is activated the drives are actuated in the „OPEN“ direction for the time step set. This function must be combined with the ventilation push button function „self-locking“. This has no influence on the RWA function.
Interval time	0..120 s **(Standard: 5 s)**	Movement interval of the interval time.

Pressing the push button again during movement increases the overall interval time by the respectively set interval time. (Example: First time push button pressed = 5 s, second time = 10 s, third time = 15 s etc.)

8.4.3 Operating mode

[•]	**Standard motor**	This mode is designated for standard 24V drives on ventilation flaps and windows. The change in direction is achieved by reversing the polarity of the supply voltage. The drive lines are only supplied (for the duration of the drive line switch-off time) when an OPEN or CLOSE signal is pending. In the event of an alarm, the post cycle control is also active (see CM „Operating parameters“).
[ ]	Magnetic clamp operation	This mode is designated for the connection of magnetic clamps. The module only reacts to alarm commands. The LED „Window OPEN“ on the module and on any vent switch (without function!) connected lights up red in idling state. The LED indicator „Window OPEN“ on the fire button is not active. **Note:** ▫ **In magnetic clamp mode the maximum current must be taken into account (30% of the power supply). The battery movement time must be calculated separately. When current is permanently tapped, a back-up time of 72 h can no longer be achieved. Mixed designs (drives and magnetic clamps) require particular consideration.** ▫ **This setting requires the alarm direction of travel „Emergency-open“.** **Important note:** ▫ **If a DM with magnetic clamp mode is connected to a control unit, the LED indicator „Window OPEN“ is not active on the fire buttons connected. We recommend using separate control units for standard drives and magnetic clamps.**
		Idling state: Drive line actuated ("Open")
		Alarm state: Drive line off
[ ]	Pressure gas generator mode	This mode is designated for the connection of pressure gas generators. The module only reacts to alarm commands. **Note:** ▫ **If „Impulse duration“ = 0 is set, the drive line remains on permanently in alarm state.**
		Idling state: Drive line off
		Alarm state: Drive line actuated ("Open") for the set "impulse duration"
		Impulse duration: **0 .. 100 s (Standard: 0 s)** 0 sec = permanent operation
[ ]	Restoring a switched status of lower priority	After a higher priority signal has dropped, the drive line is returned to the status of a pending. lower priority signal again. **Example:** A ventilation signal OPEN is pending due to a temperature sensor, the windows are open. A higher priority ventilation signal CLOSE transmitted by a weather station closes the windows. If the ventilation signal of the weather station drops further and the ventilation signal of the temperature sensor is still pending, the windows open again.

8.4.4 Emergency-open for wind directions (for SHEV according to EN 12101-2)

Specifies the evaluated wind directions for which the system actuates the drive line of the DM in the event of an alarm.

[x]	N	The wind direction is evaluated according to VdS 3122. In the event of an alarm and a wind direction during which the windows should not be opened, the windows close if they have been opened by ventilation. This function guarantees a wind direction dependent actuation of SHEVs (natural smoke and heat exhaust ventilators) in the event of an alarm according to EN 12101-2.
[x]	NO	
[x]	O	
[x]	SO	
[x]	S	
[x]	SW	
[x]	W	
[x]	NW	

This function is only possible when a weather module is available and the wind direction sensor (wind direction finder) is connected. (see „WM - Weather module“)

8.4.5 Delays

Start delay	0..2,50 s **(Standard: 0 s)**	Response time to a control command (for cascading of the DMs with several drives with high switch-on peak currents) **Note:** ▫ **The switch-on delay serves to map delayed sequence control.**
Changeover delay	0..2,50 s **(Standard: 0,10 s)**	Voltage-free phase during changeover.
Drive line switch-off time	10..3600 s **(Standard: 300 s)**	Maximum operating period for a drive line following a switching command. This time applies for ventilation OPEN and CLOSE but not for an alarm. The drive line switch-off time for RESET-CLOSE cannot be set. **Note:** ▫ **When in active movement time mode the drive line switch-off time should be set greater than the movement time.**

8.4.6 Movement time mode

[ ]	Movement time	The maximum ventilation stroke can be limited with this option activated („gap ventilation“). A „Ventilation open“ command activates the drive line in open direction. The line stops automatically after the set „opening time“. A further „Ventilation open“ command is then ignored. Operation can also be stopped during movement. A further open command then only activates the line for the residual time. The movement time is ignored in the alarm case.
	Movement time in OPEN direction:	0..6000 s **(Standard: 60 s)** 0 s – Drives are not actuated (line blocked)
[ ]	Venting duration	If „Venting duration“ ... „drives close after“ is activated, the ventilation line automatically switches to „close“ after the set time.
	Drives close after:	0..6000 min **(Standard: 0 min)** 0 min – Drives never close (permanently open)

- ▫ The movement time mode is only available in the operating mode „standard motor“.
- ▫ If „Movement time in OPEN direction“ has been activated, the drive line of the DM is initially automatically actuated to „close“ (initialisation). The ventilation „open“ commands are blocked for the double time so that the drives can move to „close“ in a defined manner.
- ▫ The movement time functions are inactive for alarm. After „reset close“ the ventilation commands are blocked for the double movement time again.

8.4.7 LEDs

The function of the LEDs on the RWA button are shown here.
If „alternative function“ is selected, the display of the LEDs depends on the function of the status contacts.

8.4.8 Status contacts

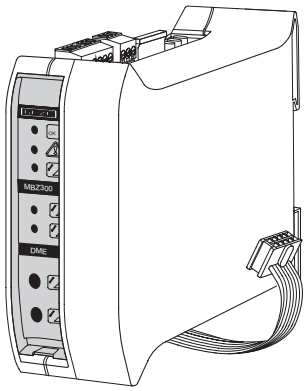
The status contacts of DM and DME are not available in the PC software 2.8.

9 DME drive module - extended version

9.1 Purpose

- Actuation of 24V drives for RWA and/or ventilation purposes.
- Evaluation of ventilation signals and status contacts.
- Monitoring of the drive cable (see MBZ 300 installation instructions).

9.2 Electrical properties



Max. drive current	20 A
Input switching voltage:	24 V DC

9.3 Status - DME

(see „Status - DM“)

9.4 Properties - DME and configuration possibilities

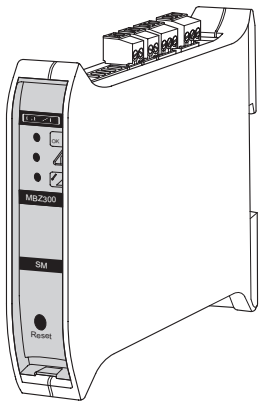
(Partner level)
Cf. DM: „Configuration possibilities“

10 SM Sensor module

10.1 Purpose

- Evaluation/monitoring of manual detectors.
- Evaluation/monitoring of automatic fire alarms or external alarm contacts.
- Evaluation of ventilation signals.
- Provision of a potential-free contact (signal relay).

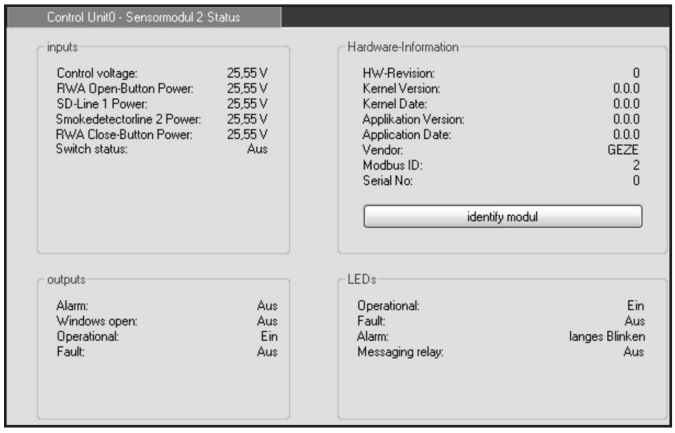
10.2 Electrical properties



Alarm voltage	24 V DC
Input switching voltage	24 V DC
Load bearing capacity signal relay	0,5 A, SELV

10.3 Status - SM

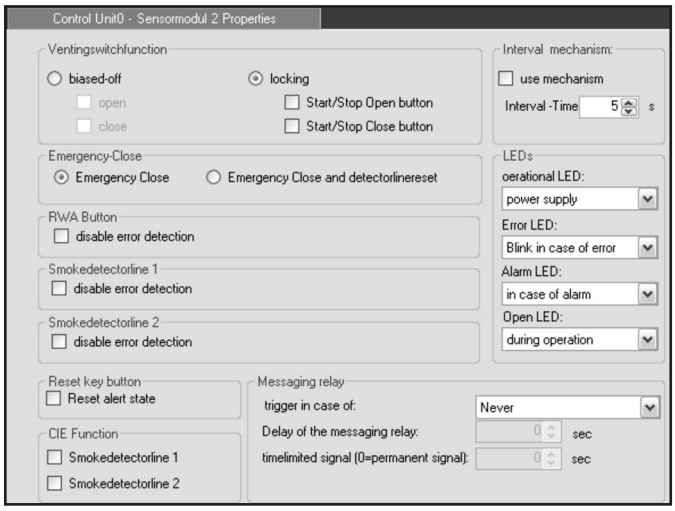
The current status can be compared with the target value table shown below to evaluate the condition.



10.3.1 Target value table SM

Inputs	Minimum value	Standard value	Maximum value
Control voltage	22 V	25,3 V	28 V
RWA Open-Button Power	900 µA (standby)	1250 µA (standby)	3000 µA (standby)
Smoke detector line 1 Power	1000 µA (standby)	2550 µA (standby)	6000 µA (standby)
Smoke detector line 2 Power	1000 µA (standby)	2550 µA (standby)	6000 µA (standby)
RWA Close-Button Power	1000 µA (standby)	1250 µA (standby)	3000 µA (standby)
Push button status	Depending on the switched status NA (not actuated), OPEN, CLOSE or STOP		

10.4 Properties – SM



In the standard configuration the SM forms a new smoke zone. All the following DMs (up to the next SM) are assigned to this smoke zone.
Other smoke zone assignment (see „Smoke zones“).

10.5 Configuration possibilities

(Partner level)

10.5.1 Vent switch function

In the standard configuration the push button input of the sensor module in a venting group is linked with all the drive modules in this smoke zone. This venting group has a higher priority than the push buttons connected directly to the drive modules (= central push button for the smoke zone). Other venting group assignment (see „Venting groups“).

Function setting			Behaviour with button OPEN pressed	Behaviour with button CLOSE pressed	Stop by
[ ]	Dead-man		**Note:** Always select OPEN and / or CLOSE in addition. Without this definition the push button continues to be in self-locking mode.		
	[ ]	open	The DMs switch to "open" as long as the button is pressed. If the button is released, the DMs switch off again.	If "CLOSE" is not set to biased-off, the DMs switch to the "close" direction of travel permanently.	In biased-off direction: Release the push button If only one is active, the other is in self-locking mode STOP = both push buttons at the same time
	[ ]	close	If "OPEN" is not set to biased-off, the DMs switch to the "open" direction of travel permanently.	The DMs switch to "close" as long as the button is pressed. If the button is released, the DMs switch off again.	
[•]	**Self-locking**		Modules switch permanently to "open" direction of travel.	Modules switch permanently to "close" direction of travel.	Press both push buttons at the same time
	[ ]	Start/stop open push button	Modules switch permanently to „open“ direction of travel. Pressing the button again switches the lines off again (stop).	Modules switch permanently to „close“ direction of travel. Stop = Press both push buttons at the same time	If both directions are activated: Stop = Press the same button again
	[ ]	Start/stop close push button	Modules switch permanently to „open“ direction of travel. Stop = Press both push buttons at the same time	Modules switch permanently to „close“ direction of travel. Pressing the button again switches the lines off again (stop).	
	Note: If the function „stop through same push button“ is desired: Check OPEN and CLOSE so that the ventilation push button function makes sense.				

„Permanently“ means the set „drive line switch-off time“ at maximum

10.5.2 Automatic step control

[ ]	Use mechanism	When this option is activated the drives are only actuated in the „OPEN“ direction for the time step set. This function must be combined with the ventilation push button function „self-locking“. This has no influence on the RWA function.
Interval time:	0 .. 120 s **(Standard: 5 s)**	Movement interval of the interval time.

Pressing the push button again during movement increases the overall interval time by the respectively set interval time.
(Example: First time push button pressed = 5 s, second time = 10 s, third time = 15 s etc.)

10.5.3 Emergency-close

(Concerns the green push button „CLOSE/RESET“ in the connected RWA button)

[•]	**Emergency-close**	When the emergency-close push button of the manual detector is actuated, all DMs of the smoke zone are switched to „close“ and the alarm status in the control unit is reset. If a smoke detector reset should be necessary, this must be carried out directly at the module via the „RESET“ push button.
[ ]	Emergency-close and detector line reset	When the emergency-close push button of the manual detector is actuated, all DMs of the smoke zone are switched to „close“ and the alarm status in the control unit is reset. The smoke detectors are also reset.

Note: „Emergency-close“ always has the effect of triggering a „CLOSE“ movement and (partly) resets the alarm status, no matter whether alarm signals (e.g. fire alarm system) are pending or not. All pending alarm signals must be removed for complete alarm reset.

10.5.4 RWA button

[ ]	Error detection (line monitoring) of the RWA button line is thus deactivated. Line break and short-circuit are no longer recognised! This means setting a terminating resistance is superfluous.

10.5.5 Smoke detector line 1

[ ]	Disable error detection	Error detection (line monitoring) of the smoke detector line 1 is thus deactivated. Line break and short-circuit are no longer recognised! This means setting a terminating resistance is superfluous.

10.5.6 Smoke detector line 2

[ ]	Disable error detection	Error detection (line monitoring) of smoke detector line 2 can be deactivated, line break and short-circuit are no longer recognised! This means setting a terminating resistance is superfluous.

10.5.7 Reset button

(Concerns the reset key button directly on the SM module)

[ ]	Reset alarm status	As standard, brief confirmation of the push button only resets the smoke detector of the smoke detector lines of the smoke zone (smoke detector reset -> see „Operating parameters“(GEZE internal All Licence)) . When the option is activated, the alarm is also reset in the assigned smoke zones and all the drive modules are actuated to „close“.

- Please check how meaningful this function is if the module detector lines are used for different smoke zones.
- If „Reset alarm status“ is activated, the alarm status is only reset when all pending alarm signals have been removed.

10.5.8 CIE function

Automatic remote resetting of the alarm status via fire alarm system.

[ ]	Smoke detector line 1	When this option is activated, opening the fire alarm system status contact to smoke detector line 1 will automatically reset the control unit.
[ ]	Smoke detector line 2	When this option is activated, opening the fire alarm system status contact to smoke detector line 2 will automatically reset the control unit.

- The fire alarm system function covers resetting the alarm status and CLOSING the drives.
- If „Emergency-close and detector line reset“ is activated in combination with the fire alarm function, the smoke detector lines are switched voltage-free for the time set under „Smoke detector reset period“ (see „Operating parameters“) when the fire alarm signal is no longer received.

10.5.9 Messaging relay

Selection of the message which leads to the messaging relay switching.

Trigger in case of:	Never	No reaction. Or alternative function (see CM „Operating parameters“: Setting „Collective fault“)
	Fault within the group	The messaging relay switches when there is a fault within the group (concerns faults on modules which are assigned to the smoke zones of the SM).
	General group alarm	The messaging relay switches when there is an alarm within the group (smoke zone). **Note: Changeover contact NC/NO is inverted!**

Delay for messaging relay:	0..0 sec	Currently disabled.
Time-limited signal	0..0 sec	Currently disabled.

10.5.10 LEDs

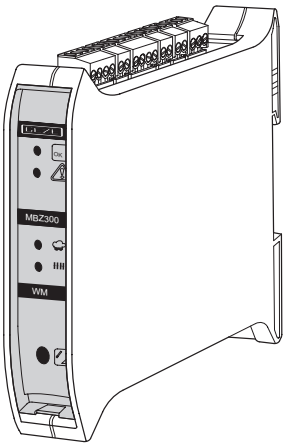
The function of the LEDs on the RWA button are shown here.
If „alternative function“ is selected, the display of the LEDs depends on the special system functions set.

11 WM - Weather module

11.1 Purpose

- Evaluation of weather sensors.
- Evaluation/monitoring of the main wind direction

11.2 Electrical properties

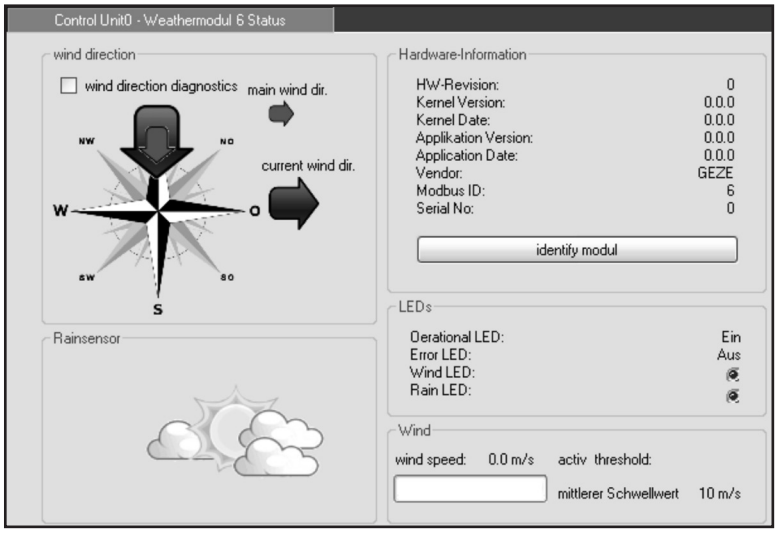


Switching voltage inputs / outputs	24 V DC
Load bearing capacity signal relay	0,5 A, SELV

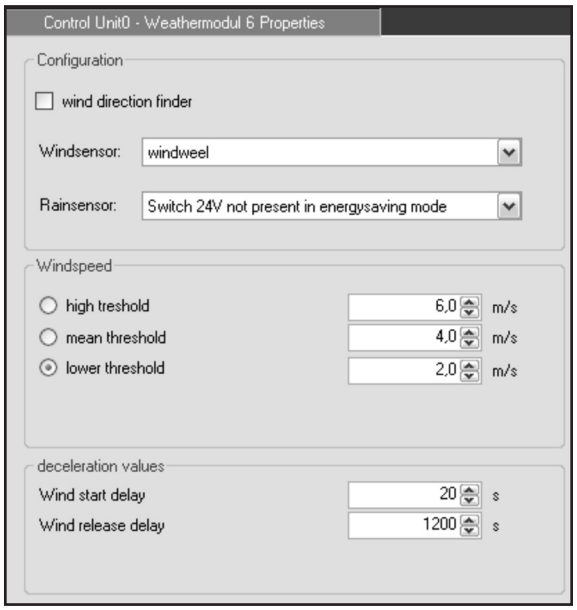
11.3 Status – WM

The following is displayed under the weather module tab:

- the evaluated current wind direction
- the evaluated main wind direction (average over 10 min!) The control unit only reacts depending on the wind direction when the red arrow is visible (depending on DM settings see „Emergency-open for wind directions (for SHEV according to EN 12101-2)“)
  - The position of the wind vane can be adjusted correctly by activating the „wind direction diagnostics“. The averaging of main wind direction is still active – it is necessary to wait for this average for a test
- Rain / no rain
- Current wind speed and set threshold.



11.4 Properties – WM



If a weather module is installed, a weather group is automatically generated which contains all the DMs in the control unit. (see „Weather groups“)

11.5 Configuration possibilities

(Partner level)
The type of evaluation can be defined in the configuration.

11.5.1 Configuration

[ ]	Wind direction finder	Activate when the wind direction finder is used. Deactivates the configuration fields since the set of sensors to be used for wind direction dependent actuation is pre-defined. (See installation instructions for MBZ 300.)

Wind sensor:	none	When the "Wind direction finder" option is active.
	Switching contact closer	When on-site sensors or the GEZE weather station are connected. Potential-free contact required.
	Windwheel	Connection of the MBZ 300-specific sensors (see installation instructions for MBZ 300)

Rain sensor:	**Switching contact 24 V, power-saving mode**	The rain sensor is not heated in the event of a power failure.
	Switching contact 24 V, permanently	Rain sensor is supplied with 24 V DC constantly. **Caution: Battery back-up time is impaired.**

11.5.2 Wind speed (for ventilation)

Specifies the threshold for the wind speed from which the windows are closed in the ventilation case.

[ ]	high threshold value	0,0..20,0 m/s **(Standard: 6,0 m/s)**
[ ]	medium threshold value	0,0..20,0 m/s **(Standard: 4,0 m/s)**
[•]	**lower threshold value**	0,0..20,0 m/s **(Standard: 2,0 m/s)**

The threshold values can also be freely set. The default setting is „lower threshold value“ in order to guarantee maximum possible protection from wind damage.

11.5.3 Delay values (for ventilation)

Is used to delay the switching reaction to wind. E.g. in gusty wind conditions constant opening and closing is avoided.

Wind switch-on delay	0..300 s **(Standard: 20 s)**
Wind switch-off delay	0..3600 s **(Standard: 1200 s)**

Notes on testing Depending on the sensors connected there can be a changeover delay time. Rain sensors in particular have a pre-set drying time which may vary depending on the rain duration/intensity

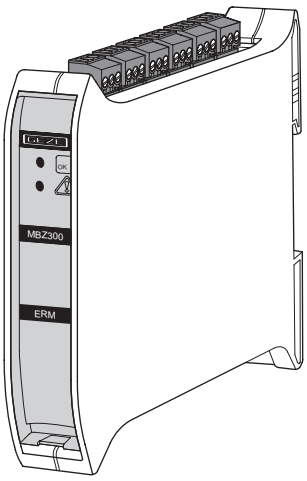
12 ERM relay module

12.1 Purpose

- Provision of six potential-free contacts for which parameters can be set
- Faults, alarm signals and ventilation signals (vent switch actuation) can be reported
- The relays are bistable. Pulses are not possible and there is no reset in case of a disconnection of supply voltage.

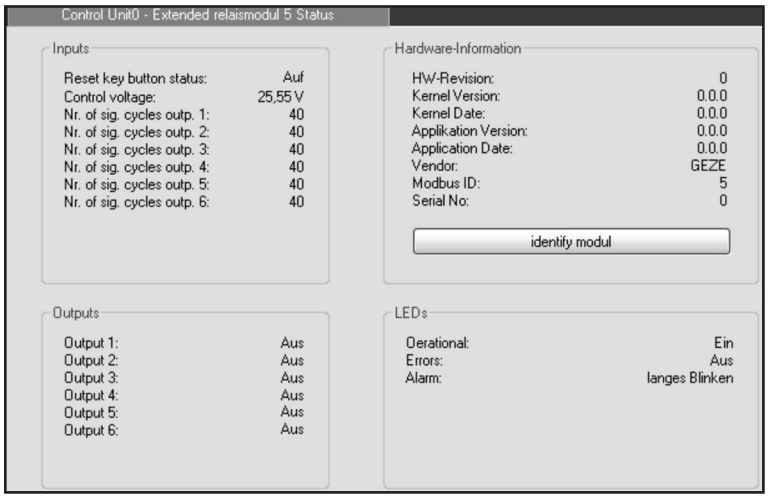
12.2 Electrical properties

Load bearing capacity signal relay	0,5 A, SELV



12.3 Status – ERM

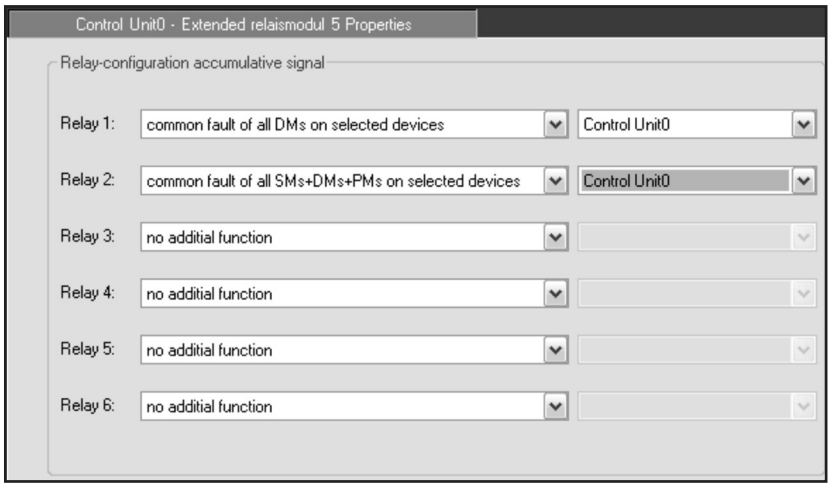
The current status can be compared with the target value table shown below to evaluate the condition



12.3.1 Target value table ERM

Inputs	Minimum value	Standard value	Maximum value
Push button status		NA	
Control voltage	22 V	25,3 V	28 V
No. cycles output 1 – 6		Counts how often the relays have been switched.	

12.4 Properties – ERM



12.5 Configuration possibilities

(Partner level)

The actual configuration of the relay module is carried out in smoke zones, venting groups and weather groups. In the properties, collective faults which are displayed by the relays can be configured. This makes the multiple assignment of relay signals possible.

12.5.1 General relay configuration

Ventilation and weather groups, smoke zone and faults can be signalled at the same time by a relay. It must be noted that the signalling of smoke zones takes priority over ventilation/weather groups.

- If the function of a relay is redefined by software, the relay remains in its current switched position until a switching signal occurs. This means that an incorrect state can be displayed before this first switching takes place.
- With multiple assignment of a relay please note that the functions are prioritised automatically (alarm signal > ventilation / weather > fault).

12.5.2 Relay configuration collective fault

Relay 1 to 6	No additional function	No collective fault function is assigned to the relay.	Control unit 0-control unit x (in the case of control units networked via CAN)
	Collective fault of all DMs on selected control units	Faults of all drive modules at selected control units are displayed.	
	Collective fault of all SMs on selected control units	Faults of all sensor modules* at selected control units are displayed.	
	Collective fault of all DMs+SMs on selected control units	Faults of all drive and sensor modules* at selected control units are displayed.	
	Collective fault of all PMs on selected control units	Faults of all power modules at selected control units are displayed.	
	Collective fault of all DMs+PMs on selected control units	Faults of all drive and power modules at selected control units are displayed.	
	Collective fault of all SMs+PMs on selected control units	Faults of all sensor* and power modules at selected control units are displayed.	
	Collective fault of all SMs+PMs+DMs on selected control units	Faults of all sensor*, drive and power modules at selected control units are displayed.	

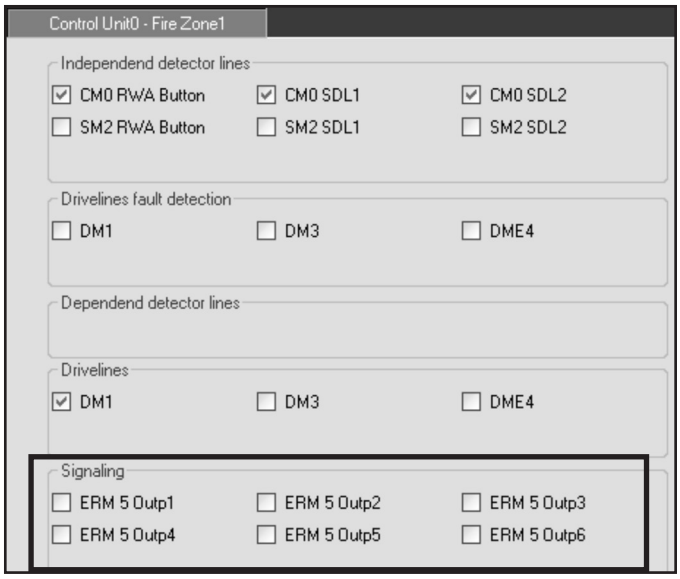
* The „SM sensor modules“ include the control module.

For a collective fault to be outputted, at least one control unit must be selected, even if it is a single control unit.

The collective fault can be assigned to a relay as a single or additional function. The additional function has a lower priority than the display of smoke zones, ventilation and weather groups. This means: If a collective fault is parameterised for a relay which displays the actuation of a smoke zone, for example, resetting the smoke zone switches the relay off even if a fault is still pending.

12.5.3 Alarm relay configuration (smoke zones)

As soon as a relay module is integrated in a control unit, additional configuration possibilities appear in the smoke zones.

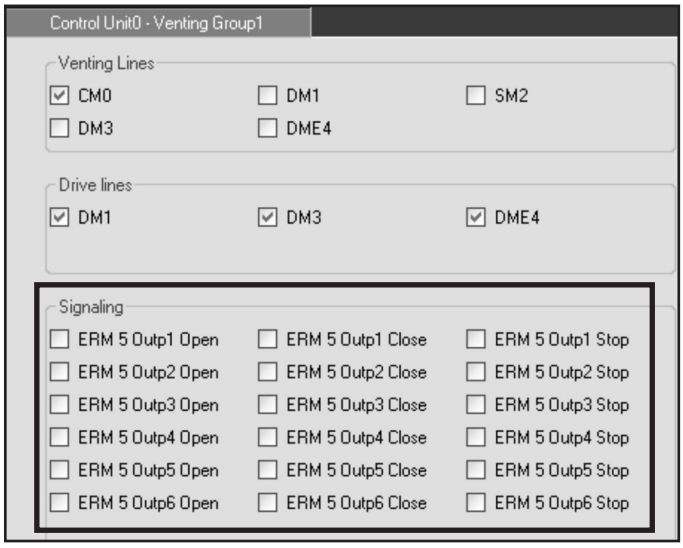


Here, selection can be made of the relays which are to be switched when an alarm occurs for this smoke zone. A relay can also be assigned to different smoke zones.
In higher-order smoke zones relay modules are available for all control units.
With the aid of higher-order smoke zones the alarm of another control unit can be displayed on a relay module, for example.

CAUTION:
A multiply assigned relay is switched off as soon as one of the smoke zones is reset, even if other smoke zones are still actuated.

12.5.4 Signalling ventilation signals (venting groups)

As soon as a relay module is integrated in a control unit, additional configuration possibilities appear in the venting groups.



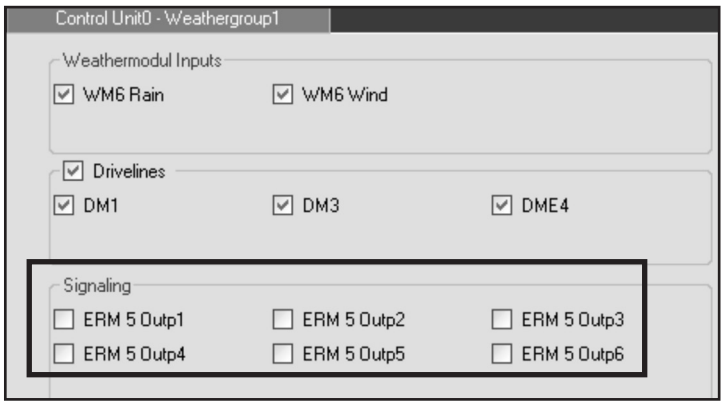
Here, the statuses of the ventilation can be assigned to the relays. „Open“, „Close“ and „Stop“ are available for each relay. If parameters are set for a relay to display Open or Close, then Open or Close is active until there is either a change in direction of movement or a „Stop“ signal is issued. The stop signal is only pending when the system is stopped manually, i.e.

- Stop by pressing the Open/Close push buttons at the same time,
- Stop by active function „Start/Stop Open/Close push button“ or
- Stop by active biased-off function

- Automatic switch-off by the drive is not registered as „Stop“.
- **Important note:** This is an indicator of ventilation signals – not window statuses! Only the vent switch signals are shown. The opening of windows by alarm or closing by alarm resetting is not shown.
- **Tip:** A real window position can only be mapped by end position contacts (e.g. Reed contacts).

12.5.5 Signalling of weather groups

The signalling of weather groups takes place analogue to the smoke zones.



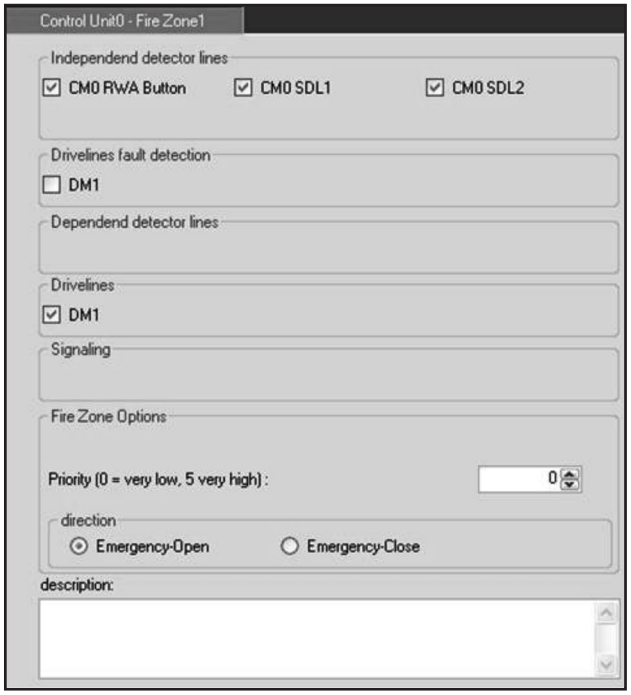
13 Smoke zones

The term smoke zone (or „alarm group“) is used in the context of the MBZ 300 for a group which is activated by specific alarm signals.

13.1 Smoke zones

Add	Smoke zones are added by clicking this button.
Edit	The smoke zone to be edited must be selected from the list. When this button is clicked, the program jumps to the view of the smoke zone selected.
Delete	The smoke zone to be deleted is selected from the list and deleted by clicking the button.

13.2 Smoke zone details



The smoke zones can be formed flexibly.

13.2.1 Independent detector lines

You can select which detector lines are to lead to actuation.

[ ]	CM/SM RWA push button	RWA push button leads to the alarm being triggered
[ ]	CM/SM RMI1	Smoke detector line 1 leads to the alarm being triggered
[ ]	CM/SM RMI2	Smoke detector line 2 leads to the alarm being triggered

Caution: A detector line may only occur in a maximum of one group! Multiple use is not possible, otherwise behaviour is not predictable.

13.2.2 Drive line faults

Here you can select which drive lines are to trigger a smoke zone if a fault occurs (analogue to detector lines).

13.2.3 Drive lines

Here you can select which drive lines are assigned to this smoke zone.

13.2.4 Smoke zone options

The priority is used to define which smoke zone is to be triggered with the highest priority. If a DM is integrated in two smoke zones with contradictory settings, the function of the higher priority smoke zone is executed if both smoke zones are triggered.

Priority	0 .. 5	Setting the priority. 0 = very low, 5 = very high.

The priority of the smoke zones is always higher than that of the venting groups / weather groups. In other words, the priority 0 ... 5 can be understood as priority 10 ... 15.

13.2.5 Direction of travel

[•]	**Emergency-open**	The drives connected move open in the event of an alarm
[ ]	Emergency-close	The drives connected move closed in the event of an alarm

13.2.6 Description

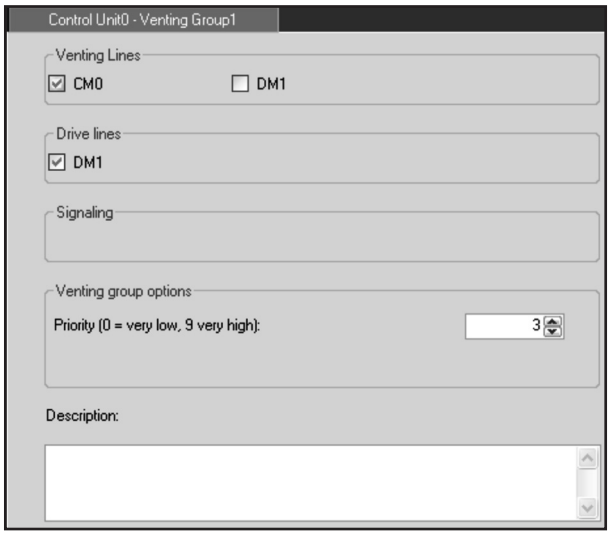
A text describing the smoke zone can be entered.

14 Venting groups

14.1 Venting groups

Add	Venting groups are added by clicking this button.
Edit	The venting group to be edited must be selected from the list. When this button is clicked, the program jumps to the view of the venting group selected.
Delete	The venting group to be deleted is selected from the list and deleted by clicking the button.

14.2 Details of venting group



The venting groups can be formed flexibly.

14.2.1 Venting lines

Which venting lines are to be used to trigger the group can be defined here.

[ ]	CM	Vent switch input on the CM.
[ ]	DM	Vent switch input on the DM.

Each vent switch input should be activated in one venting group.

CAUTION:
A venting line may only occur in a maximum of one group! Multiple use is not possible, otherwise behaviour is not predictable.

14.2.2 Drive lines

Here you can select which drive lines are assigned to this venting group.

14.2.3 Venting group options

The priority is used to define which venting signal is to be treated with the highest priority.

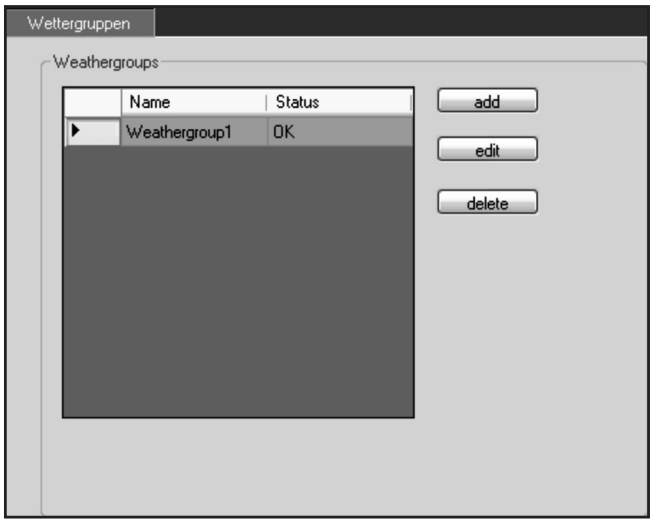
Priority	0 .. 9	Setting the priority. 0 = very low, 9 = very high.

Same priority level as weather group

14.2.4 Description

A text describing the venting group can be entered.

15 Weather groups

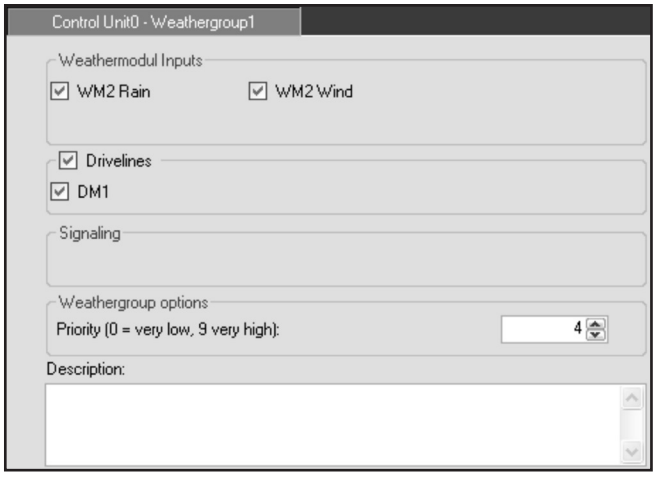


The weather group is only applicable for ventilation.

15.1 Weather groups

Add	Weather groups are added by clicking this button.
Edit	The weather group to be edited must be selected from the list. When this button is clicked, the program jumps to the view of the weather group selected.
Delete	The weather group to be deleted is selected from the list and deleted by clicking the button.

15.2 Weather group details



15.2.1 Weather module inputs

Which inputs are to be used to trigger the group can be defined here.

CAUTION:
An input may only occur in a maximum of one group! Multiple use is not possible, otherwise behaviour is not predictable.

15.2.2 Drive lines

Here you can select which drive lines are assigned to this weather group.

15.2.3 Weather group options

The priority is used to define which weather input is to be treated with priority.

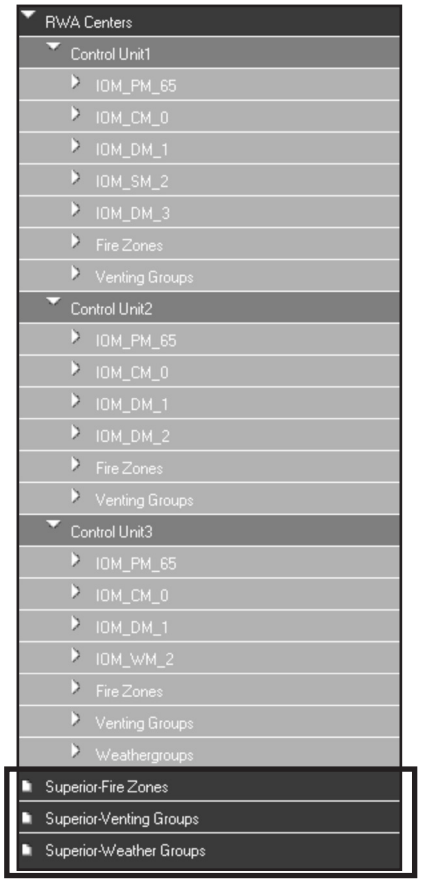
Priority	0 .. 9	Setting the priority. 0 = very low, 9 = very high.

Note: Same priority level as venting group.

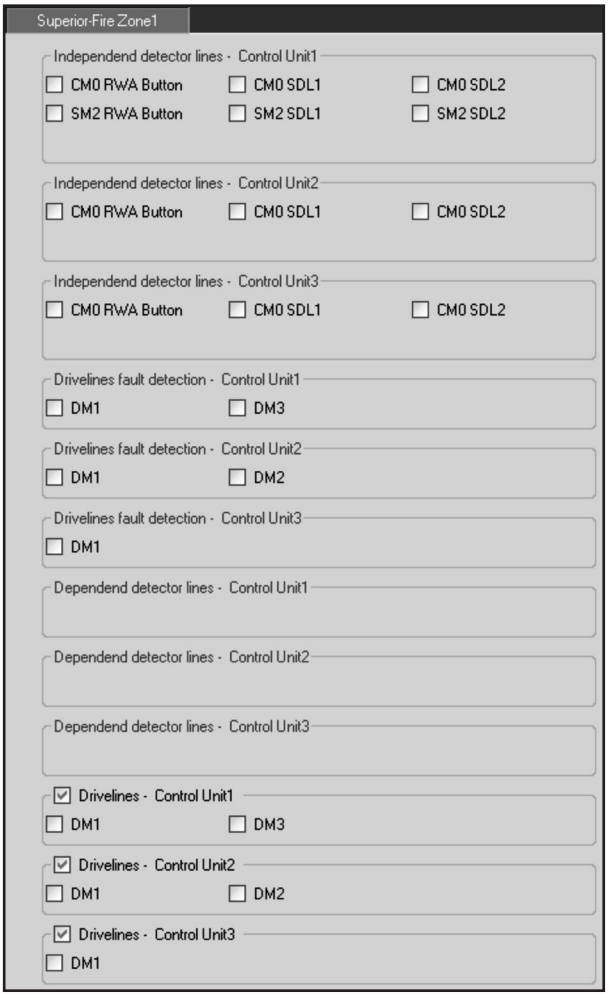
15.2.4 Description

A text describing the weather group can be entered.

16 Higher-order smoke zones / venting groups / weather groups



Example:



If several control units are networked via CAN, higher-order groups are available.
Here, inputs and drive lines from several control units can be summarised in groups.
(See chapter „Smoke zones“ / „Venting groups“ / „Weather groups“)

CAUTION:
An input signal (detector line, venting line or weather signal) may only occur in a maximum of one group! Multiple use is not possible, otherwise behaviour is not predictable. Please check the local groups for the individual control units and delete if necessary!

17 General information

17.1 Settings by software and VdS

Some settings which can be made by software lead to the VdS certificate no longer being valid in the broadest sense, since monitoring functions which represent requirements according to VdS can be switched off specifically through configuration.
Please consider this when carrying out customised configuration of the MBZ 300.
Settings affected:

- VdS post cycle control
- Line monitoring of the detector lines (deactivation of fault evaluation)

17.2 Cabling: Several smoke zones, networking and inter-control unit functions

CAN networking allows smoke zones to be defined where individual or several control units are assigned to several functional sections, in other words: the installation site of the control unit and the detector and drives may be distributed in different areas. This local distribution may lead to the basic requirement according to the guideline for circuit systems (MLAR) for monitoring the emergency power control unit no longer being given. If this is the case, suitable compensatory measures must be taken (e.g. E30 cabling).

18 Testing the system

The configured MBZ 300 must be tested in such a way that neither people nor the technical equipment are endangered.
Please confirm the commissioning / functional test and regular maintenance testing in the test log (GEZE material number 102060 (GB)).

19 FAQs

19.1 Sequence for commissioning and configuration by software

see „Procedure for configuration of a control unit“

19.2 What to do if...?

19.2.1 The USB port driver is missing after installation.

If the driver is not installed automatically, it can be installed later from the directory „...\Programme\GEZE\MBZ300\Driver“ when an MBZ 300 control unit is installed.

19.2.2 The control unit is not shown correctly in the software (modules missing etc.)

- Keep the reset push button on the CM pressed for 20s (until all modules are flashing - not longer!). This ensures the modules are addressed correctly. This process is essential when the hardware (modules and order) has been changed.
- Connect USB cable to CM and connect to the laptop.
- Start the software „Individual control unit“ (please make sure you always use the current version (see Software installation)
- Check the firmware version of the control unit to make sure it is up-to-date
- Carry out firmware update if necessary (see „Firmware update“)
- Load the default settings (see System configuration)

CAUTION:
all previous settings are deleted!

- Adapt battery size and number of PMEs (see Battery settg)
- Set the individual configuration
- Transmit to the control unit

19.2.3 The software cannot be started completely. / The software „crashes“ during loading of the control unit.

- Terminate the program using the task manager if necessary.
- Remove the USB cable
- Check the USB cable and the USB connection. If the cable or connection is faulty the connection cannot be established properly and the software cannot load the configuration completely.
- Please also check your computer load capacity and the assignment of the correct driver (re-assign if necessary see „Software installation“).
- Reboot the software and connect the USB cable again.

19.3 Does the module sequence matter?

The software allows numerous different settings; nevertheless we recommend setting up the modules as closely as possible to standard configuration (better overview):

- A new smoke zone begins with CM / SM
- Do not set SM at the end
- WM in last position

19.4 Trouble shooting where several control units are in one CAN network

- „Divide and rule“: Only connect the local with the nearest control unit (check CAN clamps!).
  - terminate this section
  - disconnect all other CAN connections
  - open the „networked control units“ software
  - check whether both control units are available
- The points must be repeated accordingly for the other sections.

19.5 How long are the motor follow-up times of the MBZ 300?

During the motor follow-up time the LEDs flash on the module and on the connected push buttons (with standard settings)

<table>
<tr><td>If the following is set on an MBZ 300:</td><td colspan="3">Alarm</td><td colspan="2">Ventilation</td></tr>
<tr><td>-> the follow-up time of the motor is as follows:</td><td>OPEN
(with VdS post cycle control)</td><td>OPEN
(without VdS post cycle control)</td><td>CLOSE (reset)</td><td>OPEN</td><td>CLOSE</td></tr>
<tr><td>Drive lines switch-off time = X (Standard: 300s)
Follow-up time limit OPEN for ventilation = not active
Automatic step control = not active</td><td rowspan="3">every 2 min for a total of 30 min:
3s CLOSE - OPEN</td><td rowspan="3">120s</td><td rowspan="3">X
(300s)</td><td>X
(300s)</td><td rowspan="3">X
(300s)</td></tr>
<tr><td>Drive lines switch-off time = X (Standard: 300s)
Follow-up time limit OPEN for ventilation = Y (e.g. 40s)</td><td>Y
(40s</td></tr>
<tr><td>Drive lines switch-off time = X (Standard: 300s)
Automatic step control = Z (e.g. 10s)</td><td>every time Z
(10s)</td></tr>
</table>

20 Meaning of the log entries

see „RealTime_Log - control unit“
All possible log entries are listed here. During operation, only a limited selection of these will actually occur. The list also includes the logging level from which this type of message can occur. The logging levels are classified as follows. A lower (or finer) logging level automatically includes the higher-order logging level entries. In other words: Error entries are always included in the log when this is set to alarm. Here are the possible logging levels in order from the lowest to the highest.

LOG_FINE	The finest logging level: almost everything is logged. This provides a precise overview of the processes in the system, but the high memory requirements mean that the log does not extend far into the past.
LOG_INFO	Somewhat more details are reported about switching processes in the system.
LOG_ALARM	Faults and alarm states and their triggering are reported.
LOG_ERROR	Only faults and errors are recorded.
%d	stands for any number, this is usually the module ID which this log entry refers to
SM %d	SM_0 is the CM. CM and SM are equated here.

Log entry	Granularity	Fault pattern	Note
Bus Fault Exception, System HALT!	LOG_ERROR	A fault occurred during access to the system bus.	Hardware fault? Replace CM.
CAN Main: CAN-SendMsg() Error!	LOG_ERROR	The CAN interface of this control unit could not send a message.	Check the CAN module
CAN XmitQueue: Error %d!	LOG_ERROR	This control unit could not transmit a CAN message	Check the CAN module
CAN: buff emptied!	LOG_ERROR	Attempt is being made to transmit something that isn't there.	Reboot CM
CAN: kfg fkt mismatch!	LOG_ERROR	A command has not been received completely.	Is compensated.
CAN: MBOX_CAN buffer full	LOG_ERROR	The control unit cannot keep up with transmission.	Has the CAN system been configured properly, are there any "meaningless" rules?
CAN: mbusb, buffer processing problem!	LOG_ERROR	Buffer is overflowing during remote servicing of a control unit via CAN.	If one of the control units does not react, reboot this and start the configuration process again.
CAN: mbusb, eval_cmd buffer problem!	LOG_ERROR	This control unit does not understand a command that came via CAN.	Do all the control units have the same firmware version?
CAN: mbusb, timeout!	LOG_ERROR	A message on the CAN has not been answered	Loose wire? Terminators inserted on the CAN modules?
CAN: Modbus communication failure %d!	LOG_ERROR	CAN cannot be read properly.	CAN module OK?
CAN: rec array overflow!	LOG_ERROR	Can only occur when someone actively interferes with data transfer.	Do all the control unit have the same firmware version, what else is attached to the CAN cable?
CAN: rec queue full!	LOG_ERROR	Too many different commands have been sent to this control unit.	Has the CAN system been configured properly, are there any "meaningless" rules?
CAN: reception while processing!	LOG_ERROR	Unknown data were received during CAN command processing.	Do all the control units have the same firmware version?
canf_mbm_writeread(): resending...	LOG_ERROR	A message is being sent again.	Is not really a fault in the strict sense, since it is compensated. If it occurs often, however, it is a sign that there is something wrong with the CAN.
canf_mbm_writeread(): too many resends!	LOG_ERROR	A message has been repeated too often without an answer being received.	Is a control unit switched off, disconnected? (Cable?)

canf_xmit_konf(): CAN-SendMsg timeout!	LOG_ERROR	A message could not be sent in time, possible data loss.	Should not occur, if it happens during a storage process - repeat this.
canfi_eval_cmd, requesting resend...	LOG_ERROR	The command has not been received completely and is being requested again.	Is not really a fault in the strict sense, since it is compensated. If it occurs often, however, it is a sign that there is something wrong with the CAN.
canfi_mbusb_received(): MBOX_CAN error %d!	LOG_ERROR	An unexpected error has occurred during reception of a CAN message.	Check the CAN module
CANSendMsgQ(): Queue full!	LOG_ERROR	This control unit could not send a CAN message due to buffer status.	Check the CAN module
Clock Source failure (Clock Security System)!!!	LOG_ERROR	The clock is faulty.	Hardware fault? Replace CM.
CM IWDG-RESET!!!	LOG_ERROR	If the system "crashes" or the watchdog thinks this is the case, it triggers a reboot.	Should not occur. Firmware update, otherwise replace DM.
cmb.msg[0]: %d	LOG_ERROR	This unknown message has been received.	Do all the control units have the same firmware version?
Creating autoKonfig, eepCfg ver.> 3...	LOG_INFO	After the start an unknown configuration was found in the EEPROM, a new configuration which matches the modules found is being created and used.	...
Creating autoKonfig...	LOG_INFO	After the start a new configuration which matches the modules found is being created and used.	...
DM %d: Alarm AUF	LOG_ALARM	This DM is opening due to an RWA case.	...
DM %d: ALARM bei deaktiviertem DG!	LOG_ALARM	Alarm was/was to be triggered at this DM, but since the pressure gas actuator was deactivated this did not work.	The pressure gas actuator should have been activated.
DM %d: Alarm reset bei deaktiviertem DG!	LOG_ALARM	The alarm status of a DM has been reset. But the pressure gas actuator connected to the DM is still deactivated.	Switch the pressure gas actuator on.
DM %d: Alarm reset, DG spannungslos	LOG_ALARM	The alarm status of a DM has been reset. But the pressure gas actuator connected to the DM is still voltage-free.	Connect the pressure gas actuator to the power supply.
DM %d: Alarm ZU	LOG_ALARM	This DM is being emergency-closed due to an RWA case.	...
DM %d: ALARM, DG aktiviert	LOG_ALARM	The pressure gas actuator on this DM has been activated.	...
DM %d: ALARM, DG aktiviert	LOG_ALARM	This DM activates the pressure gas actuator.	Analogue to opening a window.
DM %d: ALARM, HM freigegeben	LOG_ALARM	The magnetic clamp on this DM has been released (i.e. voltage supply interrupted)	...
DM %d: ALARM, HM freigegeben	LOG_ALARM	The alarm status of a DM has been reset. But the pressure gas actuator connected to the DM is still deactivated.	Switch the pressure gas actuator on.
DM %d: Alarm-Reset	LOG_LOG_ ALARM	With this DM the alarm status has been cancelled, it is open and can be moved closed by the ventilation.	...
DM %d: AUF	LOG_INFO	This DM is now opening.	...
DM %d: AUF (LZM)	LOG_INFO	If this DM is not permitted to open further and its maximum open running time has been reached (follow-up time limit).	...
DM %d: AUF (LZM)	LOG_INFO	If this DM is not permitted to open further and its maximum open running time has been reached (follow-up time limit).	...
DM %d: Auto-ZU	LOG_INFO	A DM closes automatically.	...
DM %d: HM aktiviert	LOG_INFO	This DM was activated due to an RWA case.	...

DM %d: HMinit AUF	LOG_INFO	A timer has been started for this DM.	...
DM %d: ist schon AUF	LOG_FINE	If this DM is not permitted to open further and its maximum open running time has been reached	...
DM %d: ist schon ZU	LOG_FINE	This DM is already closed and is thus not closing again.	...
DM %d: Linie spannungslos	LOG_FINE	The voltage supply for the DM drive line has been switched off (after the drive line switch-off time has expired!)	...
DM %d: LT AUF	LOG_FINE	The push button of the DM has registered pressure on the Open push button.	...
DM %d: LT STOP	LOG_FINE	The push button of the DM has registered pressure on the Stop push button.	...
DM %d: LT ZU	LOG_FINE	The push button of the DM has registered pressure on the Close push button.	...
DM %d: LZMinit ZU	LOG_FINE	The running time mode closes the DM.	...
DM %d: LZM-Stop	LOG_INFO	The running time mode has "Stop pressed" on one DM.	...
DM %d: no key	LOG_FINE	The push button of the DM has registered a push button being released.	...
DM %d: NOTAUF	LOG_ALARM	The DM moves the motor into the emergency-open position due to an RWA case.	...
DM %d: STOP	LOG_INFO	This DM is now stopping.	...
DM %d: ZU	LOG_INFO	This DM is now closing.	...
DM%d-PWR-Supply Error %d, Value 403: %d	LOG_ERROR	The voltage supply to the DM is not OK.	Measure voltage, eliminate fault, or DM faulty.
Eeprom was erased...	LOG_INFO	Indicates that the log entries found are faulty and the log thus had to be deleted.	This can happen when power supply and rechargeable battery both fail and the voltage suddenly drops severely. In other words when there is not sufficient voltage available during log writing.
Funktion existiert nicht ID %d !	LOG_ERROR	This can happen if a configuration from a too recent configuration program is used by firmware that is too old. The configuration requires that functions which are not available in the firmware should be used.	CM Firmware update.
Hard Fault Exception System HALT!	LOG_ERROR	The CPU has jumped to a position where it is not allowed to land.	Fault in the CM firmware or hardware fault.
IOM Poll Error %d/%d missing	LOG_ERROR	No communication was possible with y of x modules in one cycle.	If this occurs sporadically it is not a problem, since it is compensated, but if it occurs permanently one or more module(s) is(are) faulty.
IOM %d: couldn't reset selector!	LOG_ERROR	If this occurs often the DM is faulty.	Replace DM
IOM %d: couldn't set selector!	LOG_ERROR	If this occurs often the DM is faulty.	Replace DM
Loading Eeprom Konfig...	LOG_INFO	After the start the configuration was loaded from the EEPROM and is being used.	...
mbf_querysystem(): konfig present, %d IOM's are missing!	LOG_ERROR	Modules in the control unit have been reconnected or disconnected since the last start-up.	Re-establish the default configuration and address/ configure correctly.
Mem Manage Exception, System HALT!	LOG_ERROR	Fault in memory management:	Poor firmware memory faulty, VdS entries available?
NMI Exception	LOG_ERROR	No access to the clock.	Hardware fault? Replace CM.
PM Poll Error	LOG_ERROR	Communication with the PM not possible via the Modbus.	Hardware fault? Replace PM/CM?

PM(E): Akkufehler	LOG_ERROR	The PM is missing a rechargeable battery.	Check the rechargeable battery + cables, use the configuration software to check whether PMEs and battery capacity have been set properly. If this does not help, replace the PMEs or the PM on the basis of the values shown on the PM status page.
PM(E): Netzfehler	LOG_ERROR	The PM or the control unit is no longer drawing current from the power supply.	Check power supply, PM.
PM(E): OK	LOG_INFO	The PM has mains power and rechargeable battery again. (This message can of course only occur if one of these elements was missing.)	...
PM/IOM Poll ok!	LOG_ERROR	Only occurs in conjunction with IOM Poll Error %d/%d missing and means that the PM was OK in this context.	No error
PM: Netz und Akku fehlt	LOG_ERROR	A fault has occurred on the SM but there is no reaction on account of the energy-saving mode.	Desired behaviour...
RTC count lost!!!	LOG_ERROR	The CM no longer has the current time.	Synchronise with the PC.
Semaphore deadlock: %s, err: %d	LOG_ERROR	A resource of the CM operating system could not be released, as a result the CAN system can no longer function, for example.	Rebooting the CM can eliminate the problem.
SM %d LED Stoerung: %d	LOG_ERROR	Signals that the fault LED has been set at this DM, this can be caused by a lot of reasons. If it occurs in conjunction with "Stoerung DM %d: %d", for example, "Stoerung DM %d: %d" is the triggering element. It can also be a problem with the detector line of the SM, however. In the default configuration, setting the fault LED automatically switches the messaging relay.	If "Stoerung DM %d: %d" was logged first, please see this point, otherwise check line fault (test adapter?), if the test is negative replace the SM.
SM %d: Alarm-Reset	LOG_ALARM	Reset has been pressed and the alarm status reset on this SM.	...
SM %d: BMZ an RM1 NOT_ZU	LOG_ALARM	Emergency-CLOSE was triggered with smoke detector line 1 on this SM.	...
SM %d: BMZ an RM2 NOT_ZU	LOG_ALARM	An diesem SM wurde Not-ZU mit der Rauchmelderlinie 2 ausgelöst.	...
SM %d: BMZ an RM2 NOT_ZU	LOG_ALARM	Emergency-CLOSE was triggered with smoke detector line 2 on this SM.	...
SM %d: Linienfehler Handmelder!	LOG_ERROR	A manual detector-open line fault was detected on this SM.	Check the cable, if test negative replace the SM.
SM %d: Linienfehler Not-Zu!	LOG_ERROR	A manual detector-close line fault was detected on this SM.	Check the cable, if test negative replace the SM.
SM %d: Linienfehler RM1!	LOG_ERROR	A smoke detector 1 line fault was detected on this SM.	Check the cable, if test negative replace the SM.
SM %d: Linienfehler RM2!	LOG_ERROR	A smoke detector 2 line fault was detected on this SM.	Check the cable, if test negative replace the SM.
SM %d: LT AUF	LOG_INFO	An open pressure on the vent switch was detected on this SM.	...
SM %d: LT STOP	LOG_INFO	A stop pressure on the vent switch was detected on this SM.	...
SM %d: LT ZU	LOG_INFO	A closed pressure on the vent switch was detected on this SM.	...
SM %d: no key	LOG_INFO	A release, in other words no push button pressure in the actual sense, was detected on the vent switch of this SM.	...
SM %d: NOT_AUF HSE	LOG_ALARM	Emergency-open with the RWA button was detected on this SM.	...

SM %d: NOT_AUF RM	LOG_ALARM	Emergency-open with one of the smoke detector lines was triggered on this SM.	...
SM %d: NOT_ZU	LOG_ALARM	Emergency-close was detected on this SM.	...
SM %d: NOT_ZU (res)	LOG_ALARM	Emergency-close was detected on this SM.	...
SM%d: Mreset	LOG_INFO	The reset tester was detected on this SM.	...
STL: >>> RAM Error (March C- Run-time check)	LOG_ERROR	The self-test routines (VdS) have established a fault.	Hardware fault? Replace CM.
STL: Abnormal Clock Test routine termination	LOG_ERROR	The self-test routines (VdS) have established a fault.	Hardware fault? Replace CM.
STL: Class B variable error (clock test)	LOG_ERROR	The self-test routines (VdS) have established a fault.	Hardware fault? Replace CM.
STL: Clock Source failure (Run-time)	LOG_ERROR	The self-test routines (VdS) have established a fault on the clock.	Hardware fault? Replace CM.
STL: Control Flow Error (main loop)	LOG_ERROR	The self-test routines (VdS) have established a fault.	Hardware fault? Replace CM.
STL: Control Flow error in RAM-Test-ISR	LOG_ERROR	The self-test routines (VdS) have established a fault.	Hardware fault? Replace CM.
STL: Run-time FLASH CRC Error	LOG_ERROR	The self-test routines (VdS) have established a fault in the flash.	Hardware fault? Replace CM.
STL: Run-time FLASH CRC OK, %d cycles	LOG_FINE	The self-test routine flash check (VdS) has been carried out successfully x times.	...
STL: SRAM-Check OK, %d cycles	LOG_FINE	The self-test routine flash check (VdS) has been carried out successfully x times.	...
STL: Stack overflow	LOG_ERROR	The self-test routines (VdS) caused a fault.	Hardware fault? Replace CM.
STL: Start-up CPU Test Failure	LOG_ERROR	The CPU is no longer working properly	Hardware fault, replace CM.
STL: TOO MANY REBOOT FAILURES, LOCKING UP!!!	LOG_ERROR	For some reason the CM has rebooted very often, a fault has been established.	Hardware fault? Replace CM.
Stoerung bei PF DM %d: %d	LOG_ERROR	A fault has occurred on the DM but there is no reaction on account of the energy-saving mode.	Desired behaviour...
Stoerung bei PF SM %d: %d	LOG_ERROR	A fault has occurred on the SM but there is no reaction on account of the energy-saving mode.	Desired behaviour...
Stoerung DM %d: %d	LOG_ERROR	Indicates a fault on this DM, usually a detector line fault, with some old DMs there was another fault here which made this occur briefly, but it was not a fault.	If a line fault can be excluded and the fault only occurs briefly, we recommend a DM firmware update. If neither of these approaches was successful, the DM affected should be replaced.
Testmode initiated...	LOG_ERROR	This is not CM firmware in the actual sense. There is only a test program in the CM.	Firmware update with the boot loader.
Testmode: KonfigTask abgebrochen...	LOG_ERROR	This is not CM firmware in the actual sense. There is only a test program in the CM.	Firmware update with the boot loader.
TimerEvent %d: loest aus	LOG_FINE	If a timer triggers a subsequent action.	...
Usage Fault Exception, System HALT	LOG_ERROR	The bits did not make sense to the CPU.	Firmware OK? Flash again? Hardware fault? Replace CM.
WM %d: kein Regen	LOG_INFO	A WM has recognised that it has stopped raining.	...
WM %d: REGEN	LOG_INFO	A WM has detected rain.	...
WM %d: WIND	LOG_INFO	A WM has detected wind from a certain direction.	...
WM %d: WIND T%d	LOG_INFO	Shows that the WM has detected wind.	...

WM %d: Wind unterhalb Schwelle	LOG_INFO	The wind has fallen under the threshold on one of the WMs.	...
WM %d: WRG fehlt!	LOG_ERROR	There is a wind direction finder configured in a WM but the WM cannot detect it.	Is the sensor/WM, cable working? WM / test sensor => replace.

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