

## Description

Swing door mSwing

MHTM™ FlowMotion®

**Control unit MGC**



Control unit MGC

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# 1 Notices on the document

## 1.1 Purpose and contents of this description

This document describes the control unit MGC from the programme versions listed below.

Software number (software #) and software version (SW version) are displayed in the menu "Module info".

Designation	Software #	SW version
Gate Controller	4915,1006	2.0
MHP2 motor	4915,4003	1.0
Safety Controller	4915,3014	1.0
mSwing Connect	4910,5052	V1.0.0

Table 1: Programme versions control unit MGC



### IMPORTANT!

For information on design and function, for technical data, installation and assembly, electrical connection, commissioning and cleaning and maintenance, see the separate operating instructions "Swing door mSwing MHTM™ FlowMotion® (Doc.ID: 5817,0032)".

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## 1.2 Symbols and illustrations used in this document



### 1.2.1 Warning notes and notes


Warning notes are characterised by pictograms in these operating instructions. A warning note starts with a signal word that expresses the extent of the hazard.


It is absolutely essential to observe the warning notes and to proceed with caution in order to prevent accidents as well as bodily injuries and property damage.

#### Warning Notes

 <b>DANGER</b>	
	The signal word DANGER points to an immediately dangerous situation, which leads to death or severe injuries if it is not avoided.

 <b>WARNING</b>	
	The signal word WARNING points to a potentially dangerous situation, which can lead to death or severe injuries if it is not avoided.

 <b>CAUTION</b>	
	The signal word CAUTION points to a potentially dangerous situation, which can lead to minor injuries if it is not avoided.

<b>NOTICE</b>	
	The signal word NOTICE points to a potentially harmful situation, which leads to property damage if it is not avoided.

## Notes and recommendations



### IMPORTANT!

The signal word IMPORTANT highlights useful notes and recommendations as well as information for an efficient and trouble-free operation.

## 1.3 Target group


### 1.3.1 Personnel – activities and qualifications

All work on the control unit may only be carried out by technicians and Magnetic MHTM™ FlowMotion® service experts with the following qualifications.

Designation	Qualification
Technician	<ul style="list-style-type: none"><li>› Has completed training as a plant mechanic, plant fitter, assembly mechanic, assembly fitter or has a comparable technical education.</li><li>› Has completed training as an electrical safety expert.</li><li>› Has additional knowledge and experience.</li><li>› Knows the associated technical terms and regulations.</li><li>› Can assess the work assigned to her/him, recognises possible dangers and take suitable safety measures.</li></ul>
Magnetic MHTM™ FlowMotion® service expert	<ul style="list-style-type: none"><li>› Meets all requirements of the technician.</li><li>› Trained and authorised by Magnetic.</li></ul>

Table 2: Qualification of the personnel – control unit MGC

## 2 Digital inputs, digital outputs and relay outputs



**⚠ WARNING**

**Improper wiring and parameterisation of the control unit!**

Improper wiring and parameterisation of the control unit can lead to undesired functions and thus to injuries.

- › Only MHTM™ FlowMotion® service experts or skilled technicians or electrical safety experts may wire up and parameterise the control unit.
- › The electrical connection of the signal transmitters to the IN1 to IN8 inputs must fit the parameterisation.

Parameterisation: ➤ Page 15, chapter 3.

### 2.1 Digital inputs

Definition of "Left" and "Right": ➤ Page 58, chapter 7.1.

By parameterising the inputs, you assign certain functions to the inputs. For example, if you parameterise the "Illumination off" function for input IN7, you must connect a illumination to this input.

If the function is marked with "|", the input is inverted (Fail Safe).

The following functions are assigned to the inputs as default settings:

Clamp	Description	Function
IN1	Digital input 1	Emergency open
IN2	Digital input 2	Open from left
IN3	Digital input 3	Open from right
IN4	Digital input 4	–
IN5	Digital input 5	Confirm warnings
IN6	Digital input 6	Close (Inhibit opening)
IN7	Digital input 7	Illumination off
IN8	Digital input 8	–

Table 3: Factory settings "Digital inputs"

**Digital inputs, digital outputs and relay outputs**

Function	Descriptions
–	Inputs that you assign this function "–" to are being deactivated.
Emergency open	<p>Emergency situation (Fail Safe)</p> <p>Connect fire brigade switches, emergency opening contacts, etc. to this input. This input has the highest priority. As soon as +24 V DC are applied to this input, the pedestrian gate is in operation.</p> <p>If the signal drops, the pedestrian gate is opened and the passage is released. The opening direction for emergency open is set via the "Emergency behaviour" parameter.</p> <p>This input function is high priority to all other input functions.</p>
Confirm warning messages	<p>Confirm warnings</p> <p>A pulse at this input confirms the "Warning" output function. The output is reactivated the next time a warning occurs.</p> <p>The number of the warning message remains stored in the event list until the control unit is rebooted.</p>
Open from left	<p>Opening pulse for passage from left</p> <p>If the signal is present for longer than 3 seconds, permanent open is activated. ↗ Page 48, chapter 6.2.2, Parameter "Permanent open".</p> <p>If several opening pulses are applied, they are counted and stored, and the hold-open time is added up. If the pedestrian gate is already opened for passage from right, there is no motor movement. Only the hold-open time is extended.</p>
Open from right	<p>Opening pulse for passage from the right</p> <p>If the signal is present for longer than 3 seconds, permanent open is activated. ↗ Page 48, chapter 6.2.2, Parameter "Permanent open".</p> <p>If several opening pulses are applied, they are counted and stored, and the hold-open time is added up. If the pedestrian gate is already opened for passage from left, there is no motor movement. Only the hold-open time is extended.</p>
Close (Inhibit opening)	<p>Close the pedestrian gate</p> <p>Use this input to close the pedestrian gate in both passage directions. In the case of permanent signal, no more opening signals are accepted. Input IN1 "  Emergency open" remains superordinated. This means that the pedestrian gate can also be opened via input IN1 when the pedestrian gate is closed.</p>
Illumination off	<p>Switching the illumination off and on</p> <p>As soon as +24 V DC are applied to this input, the floor illumination and the frame illumination are switched off. As soon as there is no signal at this input, the illumination is switched on.</p>

Table 4: Function digital inputs

## 2.2 Digital outputs and relay outputs

Definition of "Left" and "Right": ↗ Page 58, chapter 7.1.


By parameterising the outputs, you assign certain functions to the outputs. For example, if you parameterise the "Buzzer/Siren (alarm)" function for output NO2, you must connect an acoustic signal transmitter to this output.

If the function is marked with "|", the output is inverted (Fail Safe).

The following functions are assigned to the outputs as default settings:

Clamp	Description	Function
DO1	Digital output 1	Floor illumination
DO2	Digital output 2	Buzzer/Siren (alarm)
DO3	Digital output 3	Locking
DO4	Digital output 4	–
NO1	Relay output 1	LED strip red
NO2	Relay output 2	LED strip green
NO3	Relay output 3	–
NO4/NC4	Relay output 4	Passage clear Left
NO5/NC5	Relay output 5	Passage clear Right
NO6/NC6	Relay output 6	Closed

Table 5: Factory setting digital outputs and relay outputs

NOTICE	
	<p><b>Changing the assignment of the terminals DO1, DO2, DO3, NO1, NO2 and NO3 and the factory default functions!</b></p> <p>By default, the terminals are wired for the listed factory settings. A change will cause the pedestrian gate to malfunction.</p> <p>› Do not change the assignment of the listed terminals.</p>

Function	Description
–	Outputs that you assign this function "–" to are deactivated.
Error	When the control unit recognises a "Safety-relevant error" or an "Error", the output with this function is deactivated (fail safe). ↗ Page 63, chapter 8.3.
Warning	When the control unit recognises any "Warning", the output with this function is deactivated (fail safe). ↗ Page 63, chapter 8.3.
Gate ready	<p>Pedestrian gate is ready for operation</p> <p>This output is activated as soon and as long as the pedestrian gate is ready for operation.</p>

**Digital inputs, digital outputs and relay outputs**

Function	Description
Passage clear Left	<p>Display for passage direction left free</p> <p>With a free passage to the left, a permanent signal is emitted via this output. You can also use this output to lock a pulse encoder, e.g. a card reader, for passage to the right if passage to the left is cleared.</p>
Passage clear Right	<p>Display for passage direction right free</p> <p>With a free passage to the right, a permanent signal is emitted via this output. You can also use this output to lock a pulse encoder, e.g. a card reader, for passage to the left if passage to the right is cleared.</p>
Closed	<p>Blocking element in position "Closed"</p> <p>As long as the blocking element is in the position "Closed", a permanent signal is issued via this output.</p>
Opening	<p>Blocking element in opening movement</p> <p>As long as the blocking element is making an opening movement, this output is active.</p>
Closing	<p>Blocking element in closing movement</p> <p>As long as the blocking element is making a closing movement, this output is active</p>
Vandalism	<p>Vandalism feedback</p> <p>If the blocking element is moved from the "Closed" position without validation, this output is activated until the pedestrian gate is ready for operation again.</p>
Buzzer/Siren (alarm)	<p>Acoustic signal transmitter</p> <p>An acoustic signal transmitter is connected to this output.</p>
Obstacle detection	<p>Obstacle detection during the movement</p> <p>As soon as an obstacle is detected during movement, this output is activated. An obstacle could be, for example, a stopping user or a trapped piece of luggage.</p>
Service mode active	<p>Pedestrian gate in service mode</p> <p>As soon as the service mode is activated via the service switch on the MGC control unit, this output is activated. ↗ Page 46, chapter 5.9.</p>
LED strip red	<p>Connection for LED illumination strip red</p> <p>Connect the LED illumination strip red to this output.</p>
LED strip green	<p>Connection for LED illumination strip green</p> <p>Connect the LED illumination strip green to this output.</p>
LED strip blue	<p>Connection for LED illumination strip blue</p> <p>Connect the LED illumination strip blue to this output.</p>
Floor illumination	<p>Connection for floor illumination</p> <p>Connect the floor illumination to this output. You can switch the floor illumination on and off via the "Illumination off" input.</p>

**Digital inputs, digital outputs and relay outputs**

Function	Description
Locking (internal use)	Connection of the locking via the brake booster The locking via the brake booster is connected to this output in the factory.

Table 6: Function digital outputs and relay outputs

**2.3 Illumination**

You can order the swing door with the following optional illuminations:

- › Hood illumination
- › Wing illumination
- › Floor illumination

The hood illumination and the wing illumination signal the following events:

Colour	Description
Red	› Pedestrian gate closing.
Flashing red	› An obstacle has been detected. › Vandalism detected. › There is an error.
Green	› Pedestrian gate is closed. › Pedestrian gate is open. › Pedestrian gate opens.
Flashing yellow	› The pedestrian gate performs homing. › The target positions "Closed", "Left" and "Right" are aligned.

Table 7: Description signalling illumination

### 3 Parameterising mSwing

The swing door is parameterised at the factory for applications with an opening angle of  $2 \times 90^\circ$ .

You have the following possibilities to parameterise the control unit MGC:

- › Directly at the control unit MGC
- › Via the "mSwing Connect" programme.

The "mSwing Connect" programme also allows you to test the function of the swing door.

#### 3.1 Parameterisation directly at the control unit

The control unit is only accessible when the blocking element, the hood and the outer tube have been removed.

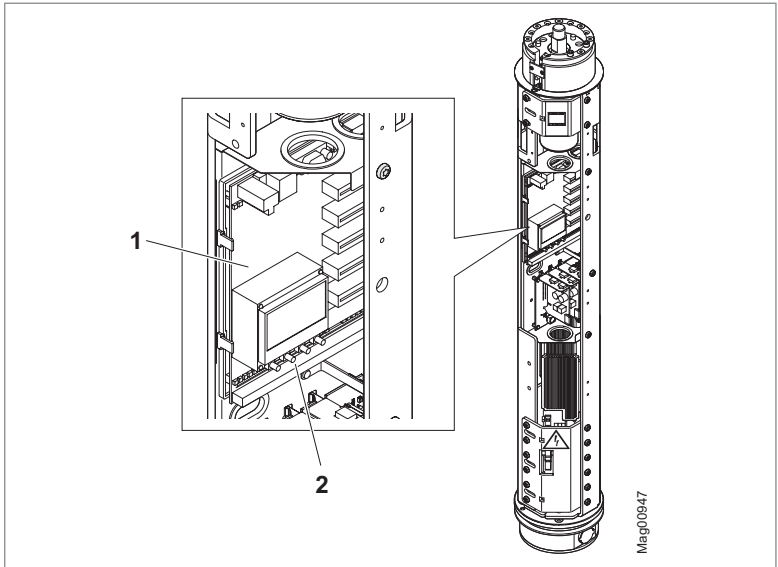


Fig. 1: Position control unit in the mSwing

- 1 Control unit MGC
- 2 Control unit operating keys (4 pieces)



#### IMPORTANT!

For access to the control unit, see separate operating instructions "Swing door mSwing MHTM™ FlowMotion® (Doc.ID: 5817,0032)".

## 3.2 Parameterisation via the "mSwing Connect" programme

The programme "mSwing Connect" is available on the Magnetic website in the download center. You can also download the programme with the programme for the Service Module SM01 "SM-Downloader".

Additionally required components:

- › Laptop
- › Magnetic Service Module "Service Module SM01"
- › USB cable A plug to B plug
- › RJ-45 patch cable, with a maximum length of 3 meters.

System requirements laptop:

- › Windows 7 or higher
- › .NET Framework 4 or higher
- › USB connection

### 3.2.1 Establishing connection

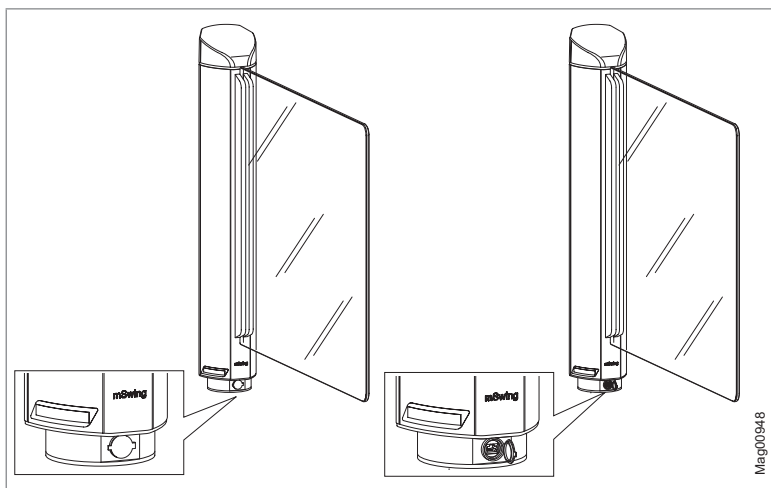


Fig. 2: RJ-45 socket mSwing

1. Open the cover of the RJ-45 socket.
2. Connect Service Module SM01 to the mSwing.
3. Connect Service Module SM01 to the PC.

4. Start the "mSwing Connect" programme on the laptop.
  - ✓ The connection is established between the swing door and the "mSwing Connect" programme.
5. If the connection is not established automatically, click the "Connect" button.
  - ✓ The following view is displayed:

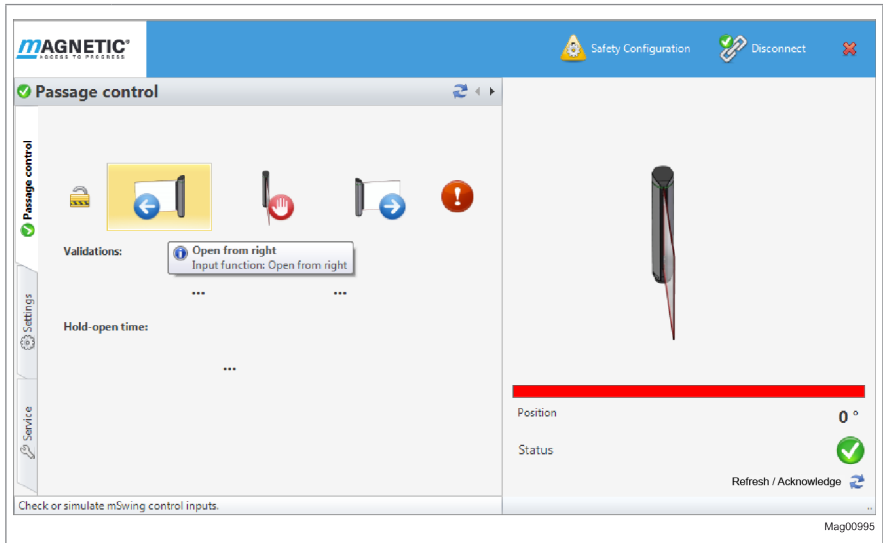


Fig. 3: Programme "mSwing Connect", connection is established

Button	Description
	There is <b>no connection</b> between the swing door and the "mSwing Connect" programme. If the connection via the Service Module SM01 exists and you click on the button, the connection is established.
	There is a <b>connection</b> between the swing door and the "mSwing Connect" programme. If you click on the button, the connection is interrupted.

Table 8: Description of the buttons "Connect" and "Disconnect"

### **3.2.2 Checking and updating software version "mSwing Connect"**

#### **Prerequisite**

- › Programme "mSwing Connect" is installed.
  - › Laptop is connected to the Internet.
- 
1. Start the "mSwing Connect" programme on the laptop.
  2. Wait about 10 seconds.
    - ✓ If an update is available, a respective message is displayed.
  3. Download update.
  4. Install the update.

### 3.2.3 Updating control unit MGC

#### Prerequisite

- › The latest firmware is installed on the Service Module SM01.
  - › The latest software for mSwing is copied on the Service Module SM01.
1. Start the "mSwing Connect" programme on the laptop.
  2. Open the "Service" tab. ↗ Page 30, chapter 4.6.1.
  3. Select the "Update" field.
  4. Select package.
  5. Confirm the "Start update" button.
- ✓ The update is performed for the control unit MGC.

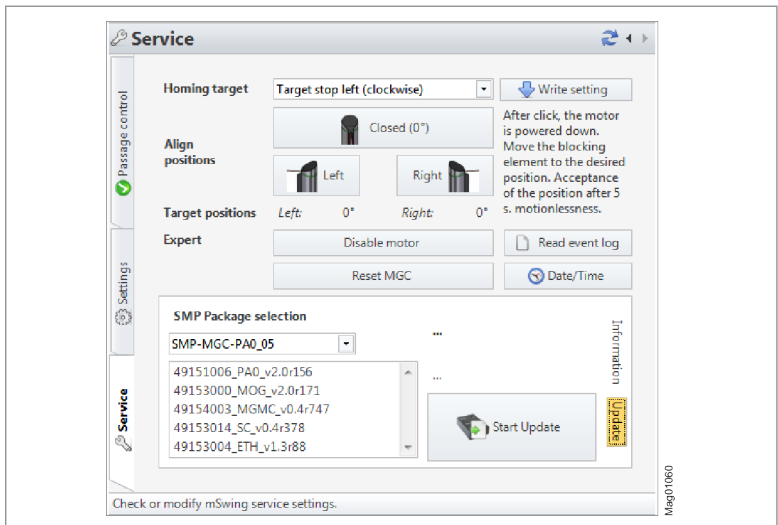


Fig. 4: "Service" tab – "Update" field

## 4 Description "mSwing Connect" programme

### 4.1 Overview

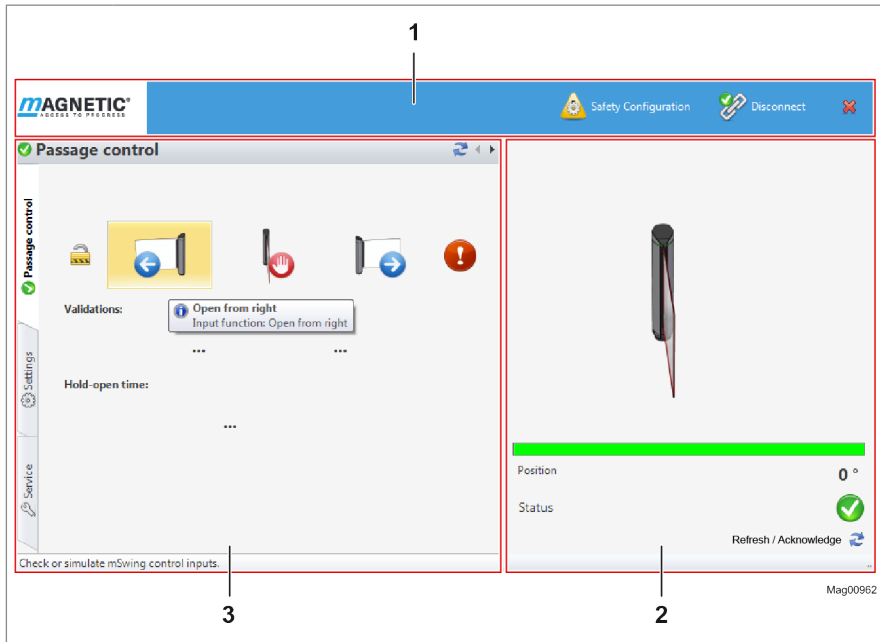


Fig. 5: Example "mSwing Connect" view

- 1 Headline: Display of connection status and "Safety configuration" button
- 2 Left side: Tabs and parameters
- 3 Right side: Swing door mSwing status view

## 4.2 Swing door mSwing status view

The status view shows the current position of the blocking element, signals certain events and shows the current status of the swing door.

In the "Closed" position the value is 0°. When turning to the left, the value is negative. When turning to the right, the value is positive.

Information on signalling: ↗ Page 14, chapter 2.3.

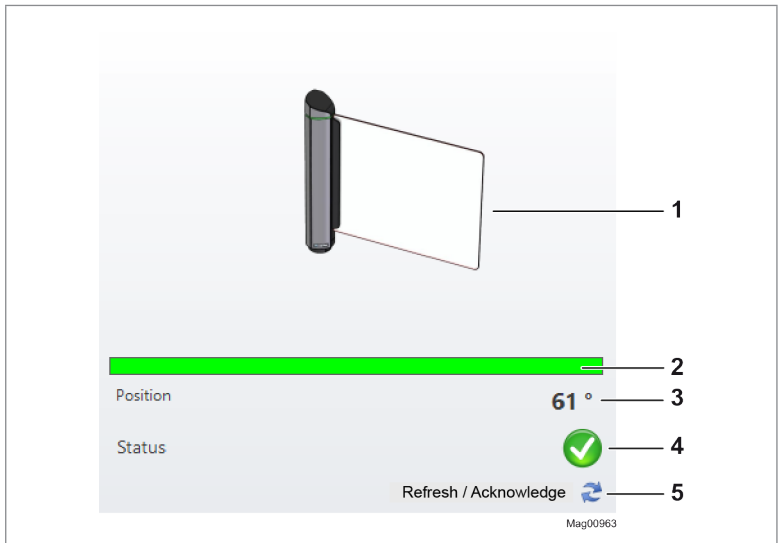


Fig. 6: Status view swing door mSwing, example status "OK"

- 1 Graphical illustration of the current position of the blocking element
- 2 Signalling of certain events, signalling corresponds to the optional hood illumination and wing illumination
- 3 Current position of the blocking element
- 4 Current status of the swing door such as "OK", WARNING, ERROR
- 5 Refresh the display and, if available, confirm the pending warning

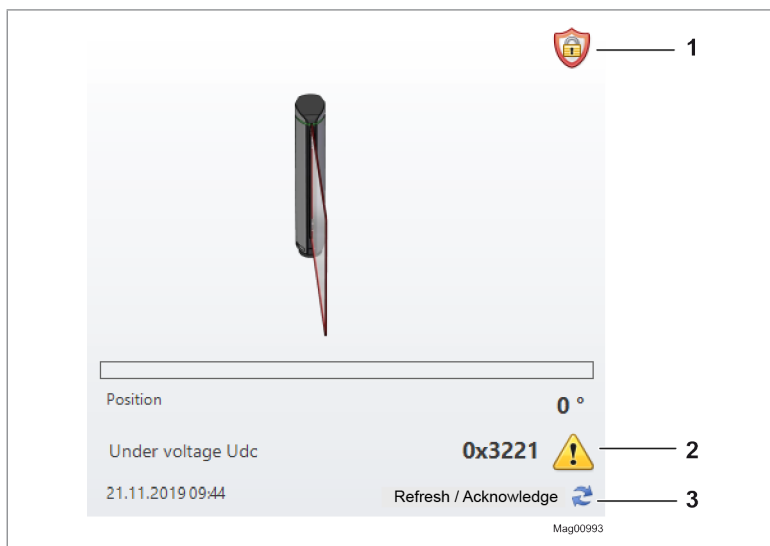
**Description "mSwing Connect" programme**

Fig. 7: Status view swing door mSwing, example status "WARNING"

- 1 Locking active
- 2 Status WARNING and warning message
- 3 Confirm pending warning and update display






Symbol	Description
	OK No warning and no error is pending.
	WARNING A warning is pending. If you click the "Refresh / Acknowledge" button, the warning is confirmed and the display is updated.
	ERROR There is an error.
	Locking active For the parameter "Safety" either the option "High security" or "With locking" has been selected.
	The swing door has detected an attempted vandalism.

Table 9: Status view – Description symbols

Information on WARNING and ERROR: ➔ Page 63, chapter 8.3.

### 4.3 "Passage control" tab

Use the "Passage control" tab to test the behaviour of the swing door.

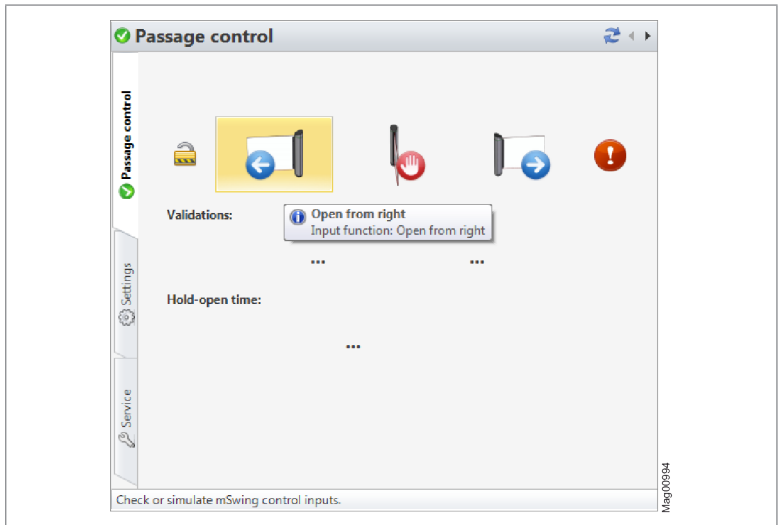







Fig. 8: "Passage control" tab

The view offers the following options:

Button / parameters	Description
	Switch to the permanent open mode.
	Test input function "Open from left". Open the swing door for a passage from left.
	Test input function "Close (Inhibit opening)". Close swing door.
	Test input function "Open from right". Open the swing door for a passage from right.
	Test input function "Emergency open".
Validation	Display of the pending opening pulses for passage from left and for passage from right.

**Description "mSwing Connect" programme**

Button / parameters	Description
Hold-open time	Display of the current hold-open time still available. If several opening pulses are present, the total hold-open time is not displayed. The hold-open time is counted down again from the set value with each opening pulse.

Table 10: "Passage control" tab – Description buttons and parameters

Input functions: ↗ Page 10, chapter 2.1.

Hold-open time: ↗ Page 48, chapter 6.2.1.

**4.4 "Settings" tab**

Use the "Settings" tab to check and adjust the settings.

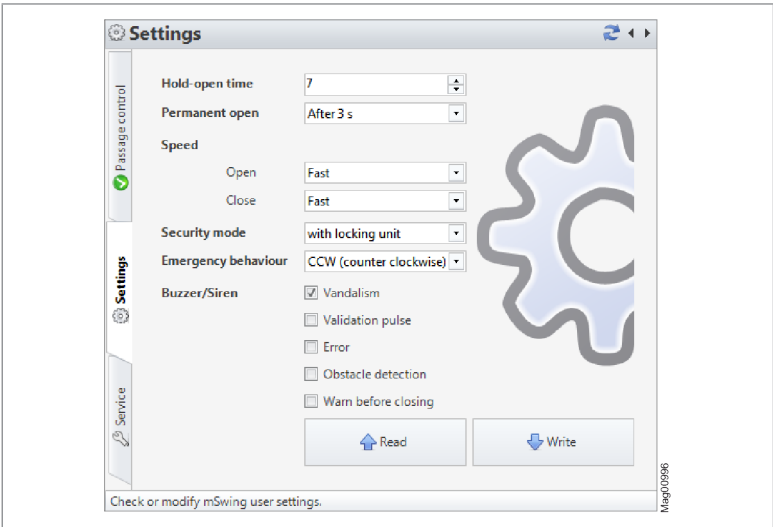


Fig. 9: "Settings" tab

## Description "mSwing Connect" programme



Button / parameters	Description
Hold-open time	↗ Page 48, chapter 6.2.1.
Permanent open	↗ Page 48, chapter 6.2.2.
Speed	↗ Page 49, chapter 6.2.3.
Security mode	↗ Page 50, chapter 6.2.4.
Emergency behaviour	↗ Page 50, chapter 6.2.4.
Buzzer/Siren	↗ Page 51, chapter 6.2.5.
 Reading	Read current settings from the control unit MGC into the "mSing Connect" programme.
 Writing	Transfer settings from the "mSing Connect" programme to the control unit MGC.

Table 11: "Settings" tab – Description buttons and parameters

## 4.5 "Service" tab

Use the "Service" tab to select the target stop and set the 3 target positions "Closed (0°)", "Left" and "Right".

The target stop is the stop that is approached during homing. The target stop should correspond to the "Open" position.

In the case of homing, the blocking element is first moved to the "Open" position and then to the "Closed" position (home position).

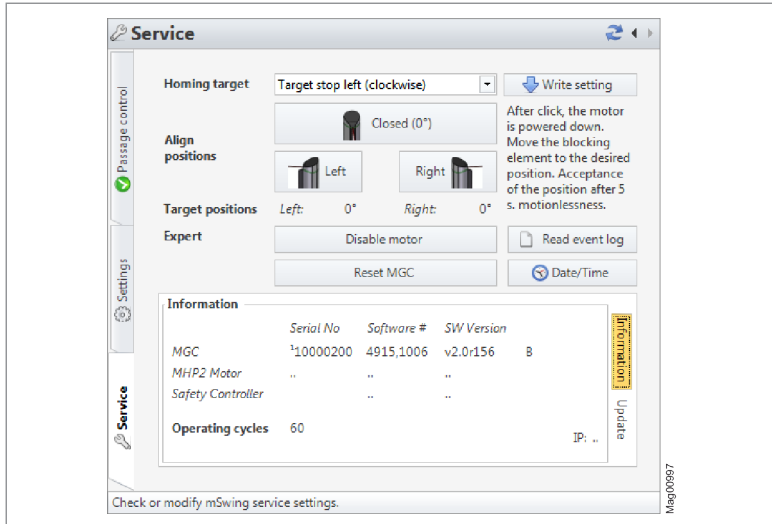


Fig. 10: "Service" tab – "Information" field

### 4.5.1 Selecting target stop and setting target positions

#### Prerequisite

- › The mechanical end stops are set. The mechanical end stops must be set at least 3° behind the respective target position. If, for example, the target stop for the right is to be 90°, the mechanical end stop must be set to at least 93°.
- › After setting the mechanical end stops, a reset and thus a homing was performed. Reset: ↗ Page 71, chapter 8.4.



#### IMPORTANT!

For setting the mechanical end stops, see separate operating instructions "Swing door mSwing MHTM™ FlowMotion® (Doc.ID: 5817,0032)".

**IMPORTANT!**

After each change of the mechanical end stops you must check the target positions and readjust them if necessary.

---

**Procedure**

1. Determine target stop if necessary.
2. Set target position "Closed (0°)". The set position corresponds to 0°.
3. Set target positions "Left" and "Right".

**Setting target stop**

1. Select the desired target stop for the "Homing target" parameter.
2. Click the "Write setting" button.
  - ✓ The changes are accepted.
  - ✓ Taught-in target positions "Closed (0°)", "Left" and "Right" are reset to the factory setting.

**Setting target positions**

There are the 3 target positions "Closed (0°)", "Left" and "Right". First you have to set the target position "Closed (0°)". Then you can set the two target positions "Left" and "Right". During the setting process you must move the blocking element to the desired target position.

The set target position "Closed (0°)" corresponds to 0°. The degrees for the target positions "Left" and "Right" are determined by the "Closed (0°)" position. The value for the target position "Left" is negative. The value for the target position "Right" is positive.

---

**IMPORTANT!**

After you have clicked one of the 3 buttons, you have 10 seconds to move the blocking element. The remaining time is displayed in the "Align positions" area between the buttons.

---

**Description "mSwing Connect" programme**

1. Click the "Closed (0°)" button.
  - ✓ The motor is de-energised. The setting mode is indicated by flashing in yellow.
2. Move the blocking element to the desired target position.
  - ✓ After 5 seconds the target position "Closed (0°)" is accepted. The position corresponds to 0°.
  - ✓ The swing door automatically switches to normal operation. If a buzzer is installed, a short tone will sound.
3. Click the "Left" or "Right" button.
  - ✓ The motor is de-energised. The setting mode is indicated by flashing in yellow.
4. Move the blocking element to the desired target position.
  - ✓ After 5 seconds the target position is accepted. The set value is displayed in the "Target positions" field.
  - ✓ The swing door automatically switches to normal operation. If a buzzer is installed, a short tone will sound.
5. Select remaining target position "Left" or "Right". To do this, repeat steps 3 and 4.
  - ✓ The 3 target positions are set.

**4.5.2 Description of the buttons and parameters**



Button / parameters	Description
Homing target	Select the target stop for homing. <ul style="list-style-type: none"> <li>› Target stop left (clockwise)</li> <li>› Target stop right (counterclockwise)</li> </ul>
Write setting	Changes for the target stop are accepted. Set target positions "Closed (0°)", "Left" and "Right" are reset to the factory setting.
Align positions	Set target positions "Closed (0°)", "Left" and "Right". The set target position "Closed (0°)" corresponds to 0°. After you have clicked one of the 3 buttons, you have 10 seconds to move the blocking element. The remaining time is displayed in the "Align positions" area between the buttons.
Target positions	Display of the current positions for the right and left target stop.
Experte – Deactivate motor	Disconnect the motor from mains. You can move the blocking element freely and check the result in the status view.

**Description "mSwing Connect" programme**

Button / parameters	Description
Expert – Reset MGC	Perform reset.
Read Event-Log	Export and display event list.
Date/Time	Set the date and time.
Information	Display of serial number, software # and software versions
Operating cycles	Display of the current cycle counter reading of the swing door. The counter reading cannot be changed.

Table 12: "Service" tab – Description buttons and parameters

## 4.6 "Safety settings" tab

 <b>WARNING</b>	
	<p><b>Entering values that do not fit the blocking element!</b></p> <p>Entering values that do not fit the installed blocking element can lead to increased speed and incorrect torque, and thus to injuries.</p> <ul style="list-style-type: none"> <li>› Only MHTM™ FlowMotion® service experts may enter the values for safe operation.</li> <li>› The entered values must fit the installed blocking element.</li> </ul>

Use the "Safety" tab to enter the parameters for safe operation in low-energy mode according to DIN EN 17352 for the swing door.

The values to be entered depend on the installed blocking element.

### 4.6.1 Activating "Safety" tab and entering safety parameters

#### Prerequisite

- › The latest version of the "mSwing Connect" programme is installed on the laptop. ↗ Page 18, chapter 3.2.2.
- › The latest software is installed on the control unit MGC. ↗ Page 19, chapter 3.2.3.

#### Activating "Safety" tab

The "Safety" tab is not displayed by default.

1. Click on the "Safety configuration" button in the header.
  - ✓ The dialog box for entering the password is opened.
2. Enter "Service Password".
  - ✓ The "Safety" tab is displayed.

### Entering safety parameters

The values to be entered for the safety parameters can be found on a label that is attached to the blocking element. If you shorten the bracket, the values on the label are no longer valid. ↗ Page 33, chapter 4.6.2.

1. Enter values "S", "T" and "C" according to the label in the "Safety parameter" area.
  - ✓ The entered values are checked. If the values are incorrect, the field "C" is displayed in red. If the values are correct, the field "C" is displayed in green.
2. Click the "Write safety parameters" button.
  - ✓ The entered values are written to the control unit.

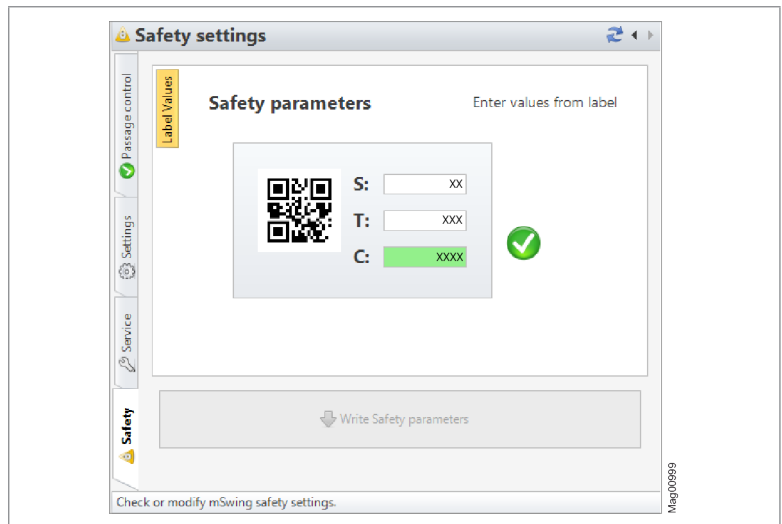


Fig. 11: "Safety" tab, example input of correct values, field "C" is green

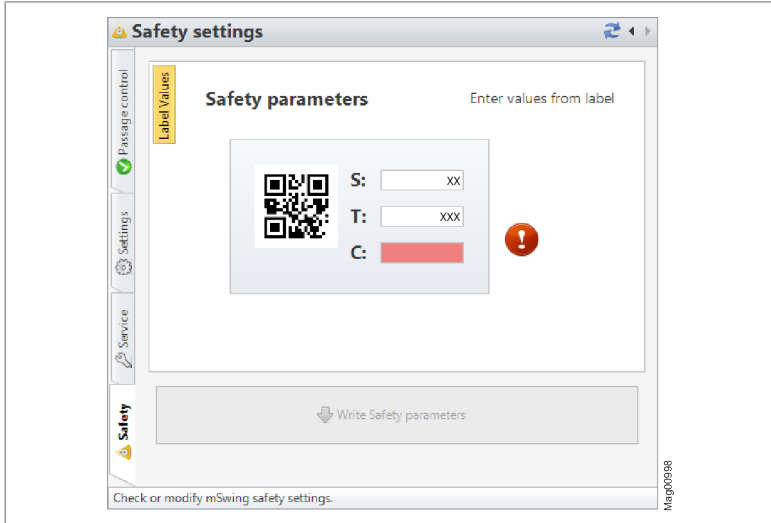


Fig. 12: "Safety" tab, example input of wrong values, field "C" is red

- ✓ The written values are read back. The written values are displayed in a dialog box together with the check values.

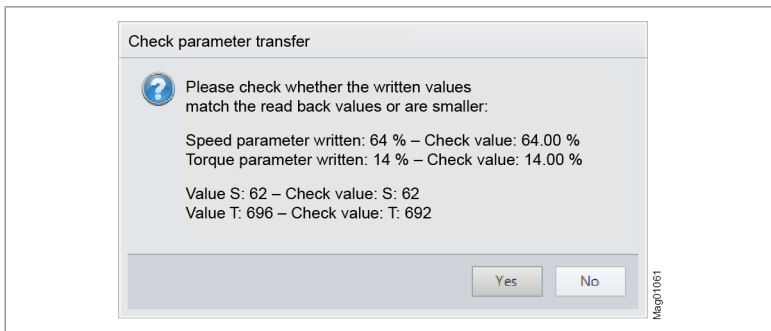


Fig. 13: Check parameter transfer (example)

3. Check written values for matching the check values.
  4. If the written values are identical with the check values, click the "Yes" button.
- ✓ The values are accepted. The speeds and torque are configured for the mounted blocking element.

#### 4.6.2 Safety parameters for shortened blocking elements "bracket"

You can shorten the supplied blocking element "bracket" by sawing it off. In this case the safety parameters on the label are no longer valid.

According to the blocking element length "L" you must enter the following values for "S" and "T".

Blocking element length "L" [mm]	Blocking element height "H" [mm]	S [0.1 / min]	T [0.1 Nm]	C
500	390	322	424	1264
600	390	257	491	1750
700	390	212	558	1287
800	390	179	625	1837
900	390	154	692	371
905	390	153	696	362
1000	390	135	759	914
1055	390	126	796	1490
1100	390	119	826	535
1200	390	106	893	1044
1300	390	96	960	578
1400	390	87	1027	172
1500	390	79	1094	773
1600	390	73	1161	1247
1700	390	67	1228	871
1755	390	64	1265	358

Table 13: Safety parameters for shortened blocking elements "bracket"

## 5 Parameterisation directly at the control unit MGC

### 5.1 Changing menu language

The default setting in the MGC control unit is the menu language "English".

Change the menu language as follows:

The operational view is displayed.

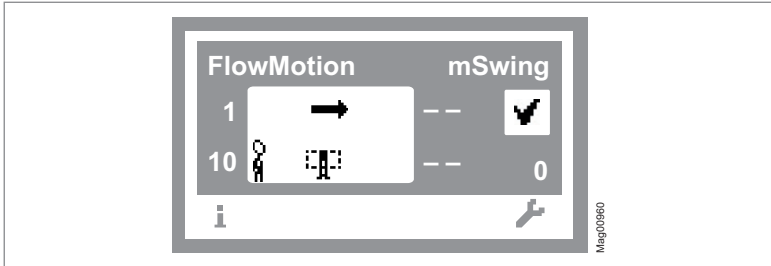



Fig. 14: Example "Operational view"

1. Press right operating button «».
2. Access to parameterisation can be password-protected. If password protection was activated, you are asked to enter a password.

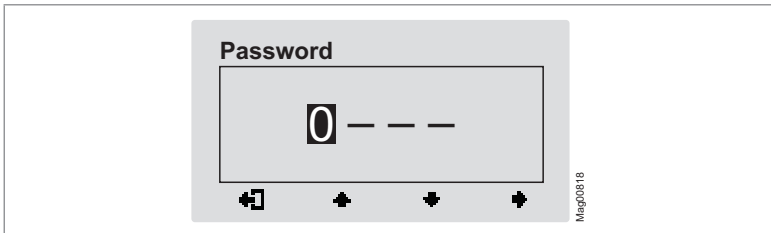


Fig. 15: "Enter password" view

3. The "Main menu" menu is displayed. The "Settings" menu has a dark background and is thus selected.

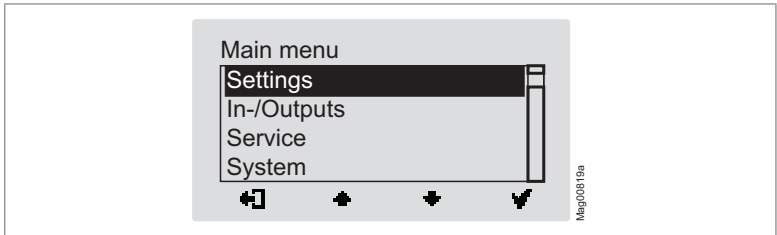




Fig. 16: "Main menu – Settings" view

4. Select the "System" menu with the two middle buttons «», «».

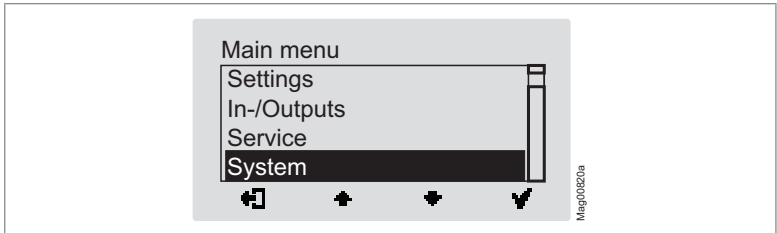



Fig. 17: "Main menu – System" view

5. Confirm selection with the right control button «». The following view is displayed. The menu "Language" is chosen.

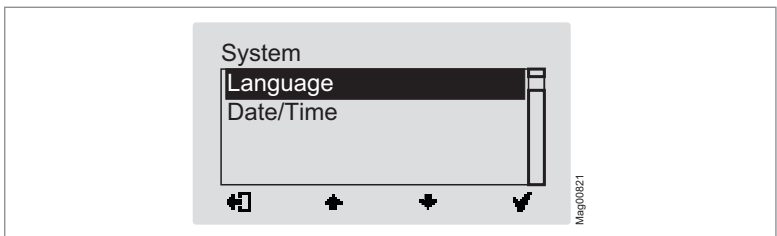



Fig. 18: "Language" view

**Parameterisation directly at the control unit MGC**

6. Confirm selection with the right button «». The following view is displayed. The menu language "English" is chosen.

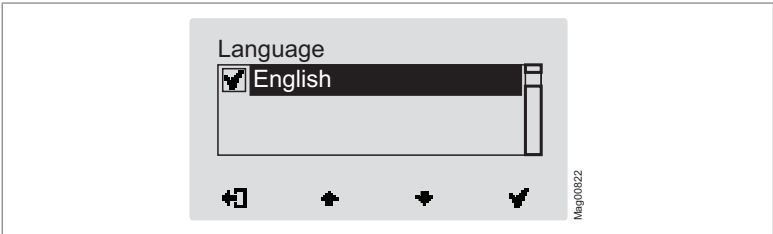




Fig. 19: "Language – English" view

7. Select the language "German" with the two middle buttons «», «». The language "German" has a dark background.

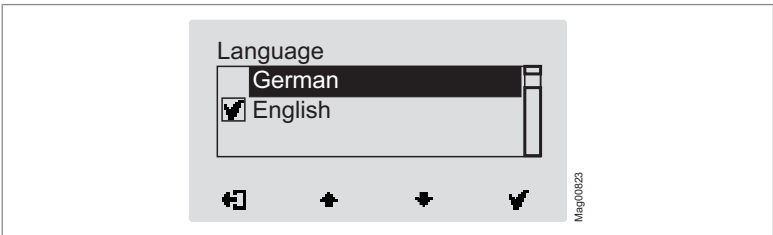




Fig. 20: "Language – German" view

8. Use the right button «» to select the new menu language. Your selection is marked with the symbol «».

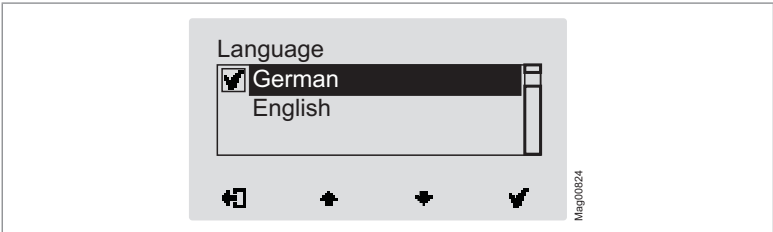



Fig. 21: "Language – German, step 2" view

9. Use the left button «» to leave the "Language" menu. The safety prompt "Save changes?" appears.

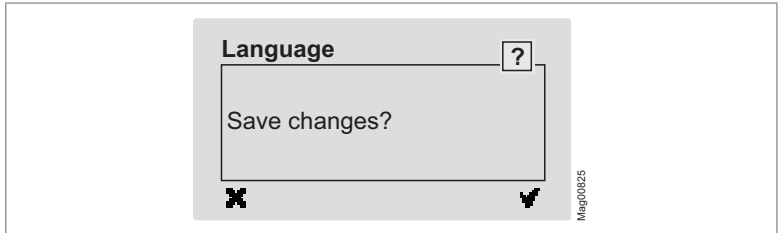


Fig. 22: "Safety prompt – Save changes?" view




10. Push the left button «» if you do not want to save the changes. The menu language "English" remains active.
11. Confirm safety prompt with the right button «». The new menu language "German" is activated. The following view is displayed:



Fig. 23: View "System" menu – Menu language "German" is activated

12. Press the left button «» repeatedly until the operational view is displayed again. ➔ Page 34, Fig. 14.

## 5.2 Entering password

You need to enter a password in the following cases:

- › You would like to change parameters in the control unit and the password protection was activated.
- › You would like to reset the parameters to factory settings.

If a password is required, the following view is displayed:

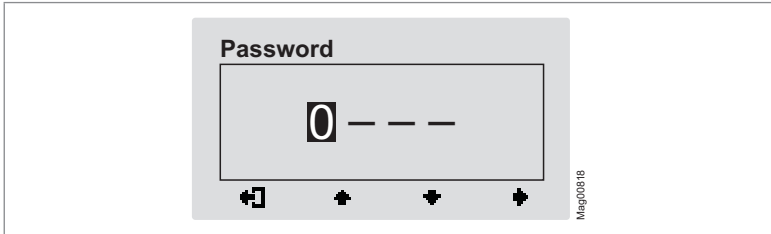





Fig. 24: "Password" view

1. Use the two middle buttons «», «» to enter the first digit of the password.
2. Use the right button «» to select the second digit of the password. The following view is displayed:

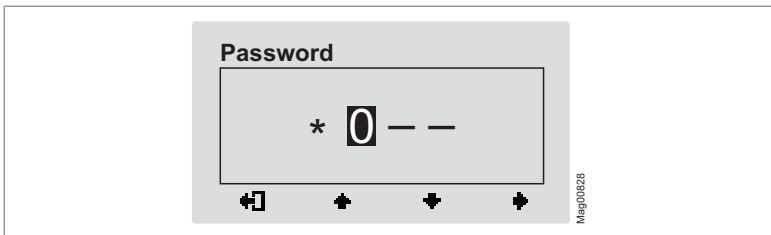








Fig. 25: "Enter second digit of the password" view

3. Use the two middle buttons «», «» to enter the second digit of the password.
4. Use the right button «» to select the third digit of the password.
5. Use the two middle buttons «», «» to enter the third digit of the password.

6. Use the right button «» to select the fourth digit of the password. The following view is displayed:

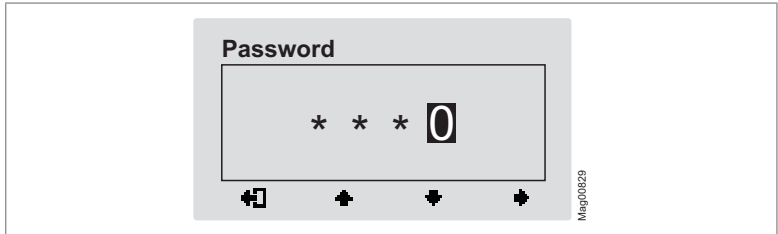





Fig. 26: "Enter fourth digit of the password" view

7. Use the two middle buttons «», «» to enter the fourth digit of the password.
8. Confirm the password with the right control button «».

### 5.3 Control unit elements

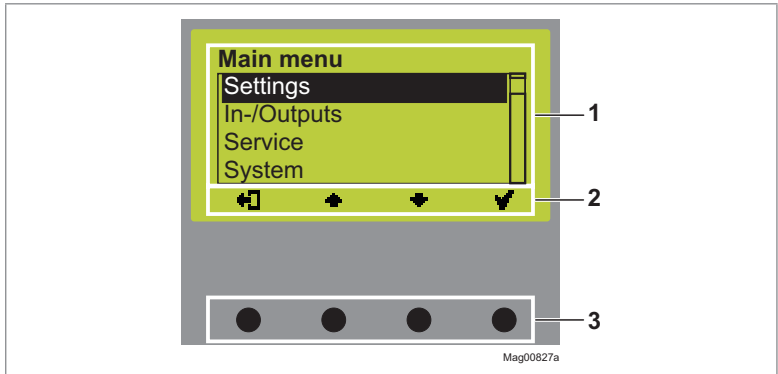


Fig. 27: Control unit elements MGC

- 1 Menu
- 2 Current function of the 4 control buttons
- 3 Control buttons

## 5.4 Displays of the control unit

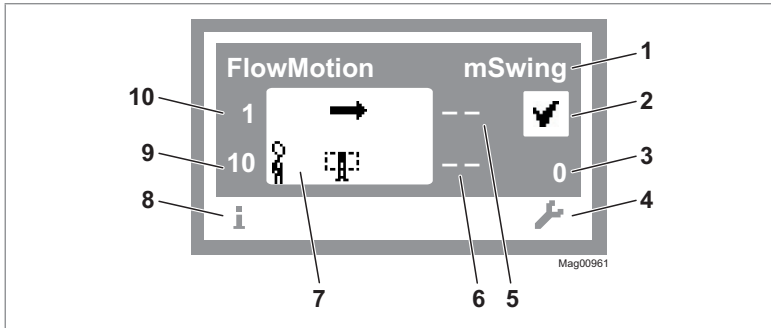


Fig. 28: Example "Operational view"

- 1 Type pedestrian gate, here mSwing
- 2 Status display, here ready for operation
- 3 Angle of rotation, here 0
- 4 Current function of the right control button, here accessing menu "Main menu"
- 5 Validations (opening pulses) for passage from left, here blocked
- 6 Hold-open time for passage from left, here blocked
- 7 Operating display, here passage from left is released
- 8 Current function of the left control button, here accessing menu "Information"
- 9 Hold-open time for passage from right, here 10 seconds
- 10 Validations (opening pulses) for passage from right, here 1

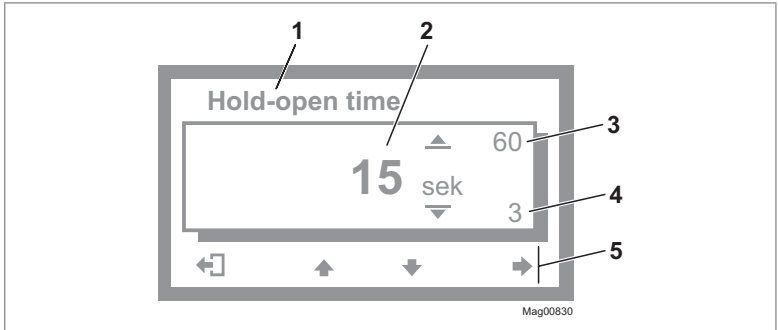


Fig. 29: Example "Screen Change Value"

- 1 Parameter
- 2 Current value
- 3 Possible upper value
- 4 Possible lower value
- 5 Current functions of the control buttons

## 5.5 Symbols in the display

### 5.5.1 Control button functions

The control unit is equipped with 4 control buttons. The function of the control buttons change depending on the current view in the display. The current functions are shown in the display.

Function	Description
	<ul style="list-style-type: none"> <li>› Access "Information" menu.</li> <li>› Scroll "Information" menu.</li> </ul>
	Access "Main menu" menu. In the "Main menu" menu you can make all settings.
	Leave current menu level. The next-higher menu level is displayed.
	<ul style="list-style-type: none"> <li>› Access next-lower menu level.</li> <li>› Select desired option or desired value. When the desired option was selected, the symbol  is displayed.</li> </ul>
	Option was selected but not yet stored.
	<ul style="list-style-type: none"> <li>› Within one menu level: Move cursor (market) upwards.</li> <li>› For setting value: Increase figure.</li> </ul>
	<ul style="list-style-type: none"> <li>› Within one menu level: Move cursor (market) downwards.</li> <li>› For setting value: Decrease figure.</li> </ul>
	Move cursor one position to the right.
	<ul style="list-style-type: none"> <li>› Delete error message.</li> <li>› When changing settings: Cancel changing process.</li> </ul>

Table 14: Control button functions

### 5.5.2 Further symbols












Function	Description
	Wrong password entered. Access denied.
	Reset values to factory settings. To do this, you must enter the password "0000".
	There is information. Check the "Information" menu. To do this, press the left operating button.
	There is a warning. Check the "Information" menu. To do this, press the left operating button.
	There is an error. Check the "Information" menu. To do this, press the left operating button.
	The passage direction from left is released.
	The passage direction from right is released.

Table 15: Further symbols

## 5.6 Setting display contrast

The display contrast of the control unit is adjustable after activation while the logo is still displayed. The logo is displayed for 3 seconds.

If you push one of the middle buttons «», «», the display time of the logo extends by 2 seconds per push. You can thus extend the time to set the display contrast.

- › Increase contrast, display grows darker: Press the «» button.
- › Reduce contrast, display grows lighter: Press the «» button.

The set display contrast is saved automatically.

## 5.7 Protecting parameterisation from access















You can apply the access to the main menu with password protection.




➤ Page 51, chapter 6.3.1.

## 5.8 Parameterising value

### Example: Changing hold-open time

The operational view is displayed. ➤ Page 40, Fig. 28.

1. Press the right button «».  
 ✓ The "Main Menu" menu is displayed.
2. Select the "Settings" menu with the two middle buttons «», «».
3. Confirm the selection with the right button «».
4. The "Hold-open time" parameter has a dark background and is thus selected. If necessary, use the two middle buttons «», «» to select the "Hold-open time" parameter.
5. Press the right button «».  
 ✓ The current hold-open time value is displayed. The cursor flashes on the first digit.
6. Use the middle buttons «», «» to set the desired digit.
7. Use the right button «» to move the cursor to the right.  
 ✓ The cursor flashes on the second digit.
8. Use the middle buttons «», «» to set the desired digit.
9. Press the right button «».
10. Use the left button «» to leave the "Hold-open Time" parameter.  
 ✓ The safety prompt "Save changes?" appears.

11. If the changes are to be saved, press the right button «». The new hold-open time is activated.  
If the changes are not to be saved, press the left button «». The previous hold-open time remains active.  
✓ The "Settings" menu is displayed.
12. Press the left button «» repeatedly until the operational view is displayed again.

## 5.9 Switching the "Service" mode on and off



### IMPORTANT!

The service switch is located on the control unit. The control unit is only accessible when the blocking element, the hood and the outer tube have been removed. ↗ Page 15, Fig. 1.

Before installing the outer tube, make sure that the "Service" mode is switched off.

### Switching the "Service" mode on

Switch the "Service" switch for the "Service" mode. The LED lights red. The display backlighting flashes.

### Switching the "Service" mode off

After the service work, the switch "Service" must be switched. The LED must light green.

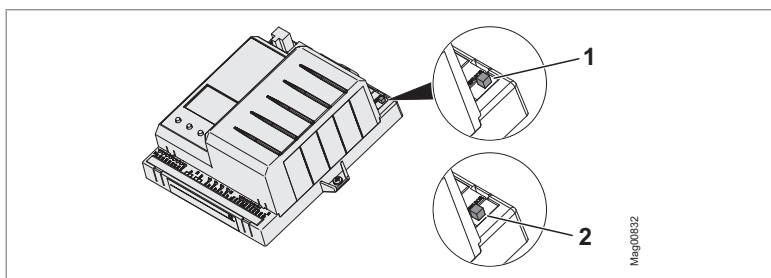


Fig. 30: Service switch





- 1 Mode "Service" on
- 2 Mode "Service" off

## 6 Description of menus and parameters

### 6.1 "Information" menu

#### Accessing and navigating

The operational view is displayed. ↗ Page 40, Fig. 28.

1. Press left button «».
2. Use the left button «» to scroll within the menu.
3. The "Information" menu can be left as follows:
  - › press the left button «» repeatedly until the operational view is displayed again or
  - › press the right button «».



Operational view > Information	
Parameter	Description
Error, warning or event messages	Display of the error, warning or event messages that occurred since the last voltage reset, including date and time. Use the «  » and «  » buttons to navigate through the messages. If no messages are present, the menu is not displayed.
Inputs	Displays the current settings for the digital inputs IN1 to IN8.
Outputs	Displays the current settings for the digital outputs DO1 to DO4 and the relay outputs NO1 to NO3 and NO/NC4 to NO/NC6.
Module info	Display of the software numbers (software #) and software versions (SW version) of the control unit and plugged-in plug-in modules.

Table 16: "Informationen"

## 6.2 "Settings" menu

### 6.2.1 Hold-open time

Operational view > Main menu > Settings > Hold-open time	
Parameter	Description
Hold-open time	<p>Set the hold-open time.</p> <p>The hold-open time is started by an opening pulse by a control device, such as a card reader. A passage should take place within the set hold-open time. If there is no passage within the hold-open time, the pedestrian gate is closed.</p> <p>With the setting 0 seconds the pedestrian gate remains open until a closing command is given.</p> <p><b>Setting range</b></p> <ul style="list-style-type: none"><li>› 0 to 60 s</li></ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"><li>› 12 s</li></ul>

Table 17: Hold-open time

### 6.2.2 Permanent open

Operational view > Main menu > Settings > Permanent open	
Parameter	Description
Permanent open	<p>You use this parameter to specify whether and after what time the permanent open is activated for a permanent signal at the "Open from left" or "Open from right" inputs.</p> <p><b>Example "After 3 s" option</b></p> <p>If the signal is present at the "Open from left" or "Open from right" input for 3 seconds, the system switches to the "Permanent open" operating mode. As soon as the signal is no longer present at the entry, the pedestrian gate is closed again.</p> <p><b>Options</b></p> <ul style="list-style-type: none"><li>› Deactivated</li><li>› After 3 s</li><li>› After 10 s</li></ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"><li>› After 3 s</li></ul>

Table 18: Permanent open

### 6.2.3 Speed

Operating view > Main menu > Settings > Speed	
Parameter	Description
Close	<p>Select the speed of the closing movement for the blocking element.</p> <p><b>Options</b></p> <ul style="list-style-type: none"> <li>› Slow</li> <li>› Medium</li> <li>› Fast</li> </ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"> <li>› Fast</li> </ul>
Open	<p>Select the speed of the opening movement for the blocking element.</p> <p><b>Options</b></p> <ul style="list-style-type: none"> <li>› Slow</li> <li>› Medium</li> <li>› Fast</li> </ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"> <li>› Fast</li> </ul>

Table 19: Speed

## 6.2.4 Safety/Security

Operational view > Main menu > Settings > Safety/Security	
Parameter	Description
Security mode	<p>Select the security mode, i.e. the behaviour of the locking.</p> <p><b>Options</b></p> <ul style="list-style-type: none"> <li>› Without locking Select the "Without locking" option if no locking is connected or if the swing door should never lock mechanically. The blocking element is only held in position by the motor power.</li> <li>› With locking Select the "With locking" option if the swing door is to lock via the tooth coupling. As soon as an attempt is made to push the blocking element out of the closed position, the locking is immediately activated. After a waiting period, the locking is released again and the blocking element is moved to the "Closed" position.</li> <li>› High security With the "High security" option, the swing door is permanently locked in the "closed" position. With an opening pulse the locking is released and then the movement is executed. As this setting is only intended for special cases, please consult Magnetic for this setting.</li> </ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"> <li>› With locking</li> </ul>
Emergency behaviour	<p>Select the behaviour of the blocking element when the signal at the "Emergency open" input disappears.</p> <p><b>Options</b></p> <ul style="list-style-type: none"> <li>› –: Blocking element remains in the "Closed" position.</li> <li>› Clockwise (CW): Blocking element is moved clockwise</li> <li>› Counterclockwise (CCW): Blocking element is moved counterclockwise</li> </ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"> <li>› Counterclockwise (CCW)</li> </ul>

Table 20: Safety/Security

## 6.2.5 Signalling

Operational view > Main menu > Settings > Signalling	
Parameter	Description
Buzzer/Siren	<p>Activate events for which an acoustic signal is to be triggered. Connect the acoustic signal to the "Buzzer/Siren (alarm)" output.</p> <p>An acoustic signal is possible for the following events:</p> <ul style="list-style-type: none"> <li>› Vandalism</li> <li>› Validation pulse</li> <li>› Error</li> <li>› Obstacle detection</li> <li>› Closing warning (warn before closing)</li> </ul> <p><b>Options</b></p> <ul style="list-style-type: none"> <li>› Deactivated [ <input type="checkbox"/> ]</li> <li>› Activated [ <input checked="" type="checkbox"/> ]</li> </ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"> <li>› Vandalism [ <input checked="" type="checkbox"/> ]</li> </ul>

Table 21: Signalling

## 6.3 "Inputs/Outputs" menu

### 6.3.1 Inputs

➤ Page 10, chapter 2.1.

### 6.3.2 Outputs

➤ Page 12, chapter 2.2.

## 6.4 "Service" menu

This menu is only intended for Magnetic's service and only accessible with a password.

### 6.4.1 Gate HW

Use the "Gate HW" menu to select the target stop and set the 3 target positions "Closed", "Left" and "Right".

The procedure corresponds to the "Service" tab of the "mSwing Connect" programme. ↗ Page 26, chapter 4.5.

1. Set the target stop using the "Homing direction" parameter.
2. Set target position "Closed" via the parameter "Align home position". The set position corresponds to 0°.
3. Set target positions "Left" and "Right" via the parameters "Align pos. left" and "Align pos. right".

Operational view > Main menu > Service > Gate HW	
Parameter	Description
Align home position	<p>Set target position "Closed".</p> <p>You start the process via the "Activated [ X ]" option. The motor is disconnected from the power supply. Within 10 seconds you can move the blocking element to the desired target position. The new target position is accepted after 5 seconds.</p>
Align posion left	<p>Set target position "Left".</p> <p>You start the process via the "Activated [ X ]" option. The motor is disconnected from the power supply. Within 10 seconds you can move the blocking element to the desired target position. The new target position is accepted after 5 seconds.</p>
Target position left	<p>Check and adjust the angle of rotation of the blocking element.</p> <p>Observe the position of the mechanical end stops. If necessary, the mechanical end stops must be reset.</p> <p><b>Setting range</b></p> <p>› 0° ... –120°</p> <p><b>Factory setting</b></p> <p>› –90°</p>
Align posion right	<p>Set target position "Right".</p> <p>You start the process via the "Activated [ X ]" option. The motor is disconnected from the power supply. Within 10 seconds you can move the blocking element to the desired target position. The new target position is accepted after 5 seconds.</p>

## Description of menus and parameters

Operational view > Main menu > Service > Gate HW	
Parameter	Description
Target position right	<p>Check and adjust the angle of rotation of the blocking element.</p> <p>Observe the position of the mechanical end stops. If necessary, the mechanical end stops must be reset.</p> <p><b>Setting range</b></p> <ul style="list-style-type: none"> <li>› 0° ... +120°</li> </ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"> <li>› 90°</li> </ul>
Homing direction (Homing target)	<p>Select the direction of rotation for the blocking element during homing.</p> <p>The swing door performs a homing after each switch on. In the case of homing, the blocking element is first moved to the "Open" position and then to the "Closed" position (home position).</p> <p>If you change the setting for the "Homing direction" parameter, the parameters "Align home position", "Target position left" and "Target position right" are reset to the factory setting.</p> <p><b>Options</b></p> <ul style="list-style-type: none"> <li>› Clockwise (CW)</li> <li>› Counterclockwise (CWW)</li> </ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"> <li>› Clockwise (CW)</li> </ul>

Table 22: Gate HW

**Description of menus and parameters**

**6.4.2 Further parameters**

Operational view > Main menu > Service	
Parameter	Description
Cycles	Display of complete passage procedures.
Lifetime	Display operating hours counter. The operating hours counter records the time, during which the pedestrian gate is supplied with electrical power.
System time	Displays the internal date and the internal clock.
Main menu password	<p>Activate and deactivate password protection for the main menu. To activate a change of the settings, either access the operational view or switch the voltage supply on or off.</p> <p><b>Options</b></p> <ul style="list-style-type: none"><li>› Inactive: You can change the main menu without entering a password.</li><li>› Active: You can change the main menu only after entering a password. The password is identical with the one for the "Service" menu.</li></ul> <p><b>Factory setting</b></p> <ul style="list-style-type: none"><li>› Inactive</li></ul>

Table 23: Service – Further parameters

**6.5 Menu "System"**

Operational view > Main menu > System	
Parameter	Description
Language	<p>Select menu language.</p> <p><b>Factory setting</b></p> <ul style="list-style-type: none"><li>› English</li></ul>
Date/Time	Correct date and time of the control unit MGC.

Table 24: System

## 6.6 "Information" menu

Operational view > Main menu > Information	
Parameter	Description
Serial No.	Displays the serial number of the control unit
Hardware Version	Displays the present hardware version
Software #	Displays the present software number
SW Version	Displays the present software version
Temperature	Displays the current temperature in the control unit
Logic voltage	Display of the logic voltage, from hardware version E
X20-EN	Display of the analogue voltage 0–10 V at the terminal "X20-EN", from hardware version E onwards
PSU-FB	Feedback signal of the mains unit (for future expansions), from hardware version E onwards

Table 25: Information

## 6.7 "Motor MHP2" menu

Operating view > Main menu > Motor MHP2	
Parameter	Description
Motor temperature	Display of the current motor temperature.
Information	Display of information about the "MHP2 Motor" module: Serial number (Serial No.), hardware version, software # and software version.

Table 26: Motor MHP2

## 6.8 "Safety Controller" menu

Operating view > Main menu > Safety Controller	
Parameter	Description
Safety parameter	Display of the parameters for safe operation.
Information	Display information about the "Safety Controller" module: Software # and software version.

Table 27: Safety Controller

## 6.9 "Factory settings" menu



### IMPORTANT!

The parameters of the control unit are stored in the three memory areas "Default settings", "Factory settings" and "User settings".

The default settings are identical to the factory settings in these operating instructions. The default settings are firmly stored in the firmware and cannot be changed.

The factory setting can be assigned factory- or product-specific settings.

The user settings are the operating parameters.

---

### Options in the "Factory settings" menu






The menu "Factory setting" offers the following options:





- › Restore factory settings: The stored parameters in the memory area "Factory settings" are accepted as operating settings.
- › User settings as factory settings: The current parameter settings are stored as factory settings. These factory settings can be used to receive project-specific settings.
- › Default settings as factory settings: The factory settings are overwritten by the default settings.

If you would like to accept the default settings as operating settings and the factory settings were overwritten first, you need to use the option "Default settings as factory setting" and then the option "Restore factory setting".

### "Restore factory setting" option












The operational view is displayed. ↗ Page 40, Fig. 28.

1. Press the right button .
- ✓ The "Main Menu" menu is displayed.
2. Select the menu "Factory setting" with the two middle buttons , .
3. Confirm selection with the right control button .
4. Enter password "0 0 0 0".
5. Confirm password with the right control button .
- ✓ The message "Reset to factory settings" appears.

6. Press the right button «».
  - ✓ The safety prompt "Save changes?" appears.
    - › If the changes are to be saved, press the right button «». The current settings are reset to factory settings. A restart is performed.
    - › If the changes are not to be saved, press the left button «».
7. Press the left button «» repeatedly until the operational view is displayed again.

### Via service password for all options

The operational view is displayed. ↗ Page 40, Fig. 28.

1. Press the right button «».
  - ✓ The "Main Menu" menu is displayed.
2. Select the menu "Factory setting" with the two middle buttons «», «».
3. Confirm selection with the right control button «».
4. Enter "Service Password".
5. Confirm password with the right control button «».
  - ✓ The message "Reset to factory settings" appears.
6. Select the desired option with the two middle buttons «», «».
7. Confirm selection with the right control button «».
  - ✓ The safety prompt "Save changes?" appears.
    - › If the changes are to be saved, press the right button «». The current settings are reset to factory settings. A restart is performed.
    - › If the changes are not to be saved, press the left button «».
8. Press the left button «» repeatedly until the operational view is displayed again.

## 7 Function description

### 7.1 Definition of "left" and "right"

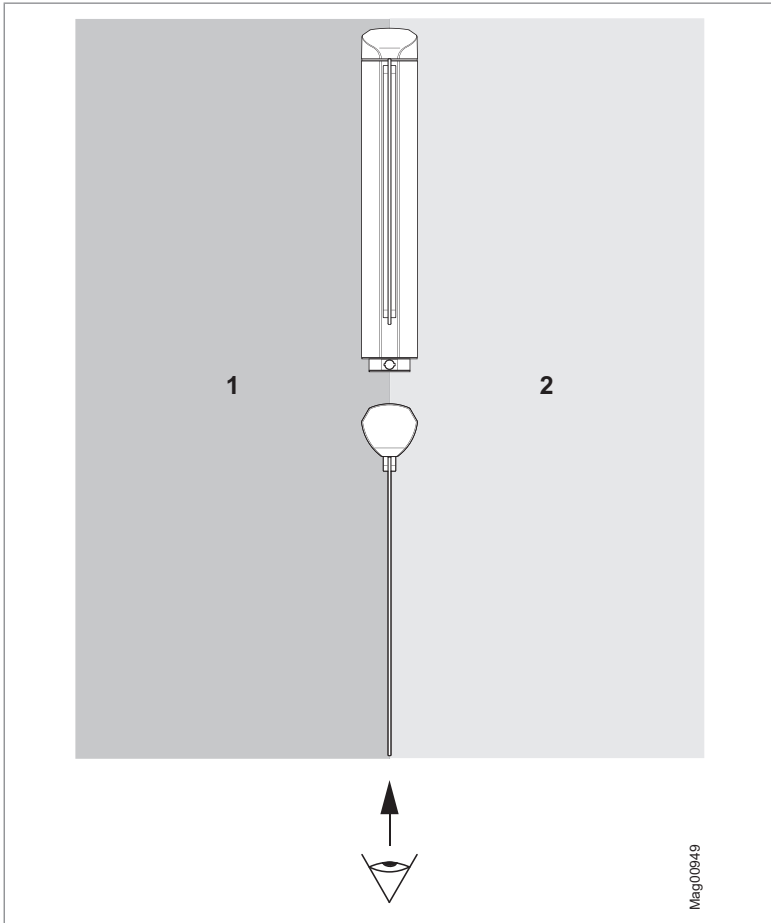


Fig. 31: Definition of "left" and "right"

- 1 Left (function "Open from left" for a passage from left)
- 2 Right (function "Open from right" for a passage from right)

## **7.2 Start-up and regular movement sequence**

### **7.2.1 Power-off state**

The motor is not energized in the power-off state. The locking is released. The blocking element can be moved freely.

Ensure that the swing door can take up operation unhindered. The movement path of the blocking element must be free and limited by setting the mechanical end stops.

### **7.2.2 Homing**

After switching on, the swing door automatically performs a reference run (homing).

In the case of homing, the blocking element is first moved to the "Open" position and then to the "Closed" position (home position). The "Open" position corresponds to the parameterised target stop. During homing, the illumination flashes yellow.

You can use the "Homing target / homing direction" parameter to adjust the direction of rotation of the blocking element.

### **7.2.3 Regular movement process**

After receiving an opening pulse in one direction, the swing door is opened in the passage direction. The hold-open time expires immediately. If the hold-open time is 0 seconds and no further opening pulses are present, the swing door closes. Via the "Close (Inhibit opening)" input, the hold-open time and all pending opening pulses are deleted. The control unit accepts a maximum of 3 opening pulses.

### **7.2.4 Permanent open**

Via the parameter "Permanent open" you either select the required signal duration or deactivate the function.

A continuous signal at the "Open from left" input or at the "Open from right" input opens the swing door until the signal is no longer present.

### **7.3 Pulse operation in both directions with vend count**

In pulse operation, a maximum of 3 opening pulses per side are accepted. If several opening pulses are received, the hold-open time is added up and counted down. If opening pulses are present in both directions, there is no motor movement or movement of the blocking element. The swing door remains open in the direction in which it was first opened.

### **7.4 Special cases within the motion sequence**

#### **7.4.1 Turning back during the closing movement**

If an attempt is made to turn the blocking element back during the closing movement, the behaviour of the swing door depends on the setting of the parameter "Security mode". ↗ Page 50, chapter 6.2.4.

If the option "With locking" is selected, the locking is activated. After a waiting period, the locking is released again and the movement continues. If the option "Without locking" is selected, the blocking element is held only by the motor power.

#### **7.4.2 Vandalism attempt**

If a user tries to push the blocking element from the "closed" position, the swing door tries to prevent this process by locking or with the motor power.

If the option "With locking" is selected, the locking is activated. After a waiting period, the locking is released again and the movement continues. If the option "Without locking" is selected, the blocking element is held only by the motor power. ↗ Page 50, chapter 6.2.4.

#### **7.4.3 Obstacle detection**

If an obstacle is detected during the movement, e.g. a user does not continue to walk or a piece of luggage is jammed, the movement is stopped. After a delay of 3 seconds, the movement continues at reduced speed. After 3 consecutive opening attempts with obstacle detection, the swing door closes.

#### **7.4.4 Emergency**

If the "Emergency situation" input is interrupted during operation, the swing door switches to the "Permanent open" operating mode. The behaviour of the blocking element depends on the setting of the "Emergency behaviour" parameter. ↗ Page 50, chapter 6.2.4.

## 8 Corrective action

### 8.1 Safety in troubleshooting



#### Qualification of personnel

- › Technician
  - › Magnetic MHTM™ FlowMotion® service expert
- Page 9, chapter 1.3.1.

#### Personal protective equipment

Wear the following personal protective equipment:

- › Work clothes
- › Protective gloves
- › Safety shoes.

 <b>WARNING</b>	
	<p><b>Inappropriate troubleshooting!</b></p> <p>Inappropriate troubleshooting can cause severe injuries.</p> <ul style="list-style-type: none"><li>› Observe possible movements of the blocking element. Defective control may lead to inadvertent movement of the blocking element.</li><li>› In case of damaged components, take the pedestrian gate out of operation.</li><li>› Use only original spare parts.</li><li>› After completion of troubleshooting, ensure that all covers are correctly mounted.</li></ul>

This chapter describes possible causes of malfunctions and troubleshooting tasks.

Contact your dealer or customer service if you are unable to rectify the malfunctions due to the following descriptions.

## 8.2 Malfunctions pedestrian gate

Malfunction: Display is difficult or impossible to read.

Possible cause	Corrective action	Removal by
Display contact set too light or dark.	Correct display contact. ↗ Page 44, chapter 5.6.	Technician

Malfunction: The blocking element does not open.

Possible cause	Corrective action	Removal by
Power supply is not connected.	<ul style="list-style-type: none"> <li>› Switch on power supply.</li> <li>› Check power supply.</li> </ul>	Technician
Error present. The corresponding error message is displayed.	Depending on error message, check components, wiring, etc.	MHTM™ FlowMotion® service expert
Power supply is present. Control unit display does not light up.	Control unit defective. Replace the control unit.	MHTM™ FlowMotion® service expert
Locking signal present.	Remove locking signal.	MHTM™ FlowMotion® service expert

## 8.3 Event, warning and error messages in the display

The control unit differentiates between events, warnings and errors. The corresponding message is displayed.

### Event messages "INFO"

Event messages inform about events. The pedestrian gate continues to operate normally. Event messages do not influence the outputs of the control unit.

### Warning messages "WARNING"

Faults that could be reset by the control unit are displayed as warnings. Operation of the pedestrian gate is not or only briefly impaired.

If the function "Warning" has been chosen for an output, this output is deactivated at pending warnings (fail safe).

**Error messages "ERROR"**

Faults that cannot be reset by the control unit are displayed as errors. The pedestrian gate is put out of service.

If the function "Error" has been chosen for an output, this output is deactivated at pending errors (fail safe).

The fault must be rectified and a reset carried out by a MHTM™ FlowMotion® service expert so that the pedestrian gate can be put back into operation.

For the required qualification of the MHTM™ FlowMotion® service expert:

➤ Page 9, chapter 1.3.1.

**IMPORTANT!**

With some messages, the control unit tries to reset the cause of the message. If the attempt was successful, the message is displayed as WARNING. If the attempt failed, the message is displayed as ERROR.

**8.3.1 Event, warning and error messages – Logic control (control unit)**

Number	Designation	Possible cause	Corrective action
3120 ERROR	Mains voltage fluctuations	Short-term mains failure has been recognised.	Check supply voltage and mains quality.
5112 WARNING	24 V logic voltage too low	Under voltage	<ul style="list-style-type: none"> <li>› Reduce load.</li> <li>› Check mains unit.</li> </ul>
5530 ERROR	EEPROM checksum	Checksum of parameters not correct.	<ul style="list-style-type: none"> <li>› Reset parameters to factory settings.</li> <li>➤ Page 56, chapter 6.9.</li> </ul>
6000 ERROR	Module update failed	Firmware update was not performed correctly.	<ul style="list-style-type: none"> <li>› Restart the control unit.</li> <li>› If the error continues to be present, perform the update again via the service module.</li> </ul>
6101 ERROR	Software error: VS	Software error	<ul style="list-style-type: none"> <li>› Perform software update.</li> </ul>
6102 ERROR	Software error: System bus	Within the control, an error is pending in communication.	<ul style="list-style-type: none"> <li>› Check SW versions of all plug-in modules. If necessary, update via the service module.</li> <li>› If all FW versions are up to date, contact service.</li> </ul>

Number	Designation	Possible cause	Corrective action
6103 WARNING	FW default values recovered	After a software update or after configuration of the gate type.	<ul style="list-style-type: none"> <li>› Perform reset.     ➤ Page 71, chapter 8.4.</li> <li>› If the error occurs repeatedly, replace the control unit MGC.</li> </ul>
6104 WARNING	Unexpected motor state	Error in motor control	<ul style="list-style-type: none"> <li>› Perform reset.     ➤ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Check wiring.</li> </ul>
6105 ERROR	Homing failed	The pedestrian gate could not execute a homing.	<ul style="list-style-type: none"> <li>› Check mechanical end stops.</li> <li>› Check ease of movement.</li> <li>› Perform reset.     ➤ Page 71, chapter 8.4.</li> </ul>
6110 ERROR	Safety Controller: SW update required	MHP2 motor detected. A software package with the firmware Motor GW is installed in the control unit. The Firmware Safety Controller is required.	<p>Perform the software update as follows:</p> <ul style="list-style-type: none"> <li>› Execute package PREPARE_MHP2.</li> <li>› Install the latest firmware package for pedestrian gates SMP-MGC-PA0.</li> </ul>
6110 ERROR	Motor GW: SW update required	No motor detected. Firmware Motor GW is required for the selected product.	<ul style="list-style-type: none"> <li>› Check setting for gate type.</li> </ul> <p>Perform the software update as follows:</p> <ul style="list-style-type: none"> <li>› Execute package PREPARE_MHP1.</li> <li>› Install the latest firmware package for pedestrian gates SMP-MGC-PA0.</li> </ul>
6130 ERROR	Safety Controller: Configuration faulty	The configuration of the safety controller is not consistent.	<ul style="list-style-type: none"> <li>› Reset parameters to factory settings. ➤ Page 56, chapter 6.9. Then enter safety parameters.     ➤ Page 30, chapter 4.6.</li> </ul>
7530 WARNING	Motor MPH2: Communication faulty	<ul style="list-style-type: none"> <li>› No motor connected.</li> <li>› Cables and / or plugs to the motor interrupted.</li> <li>› Power supply to the motor interrupted.</li> </ul>	<ul style="list-style-type: none"> <li>› Check connections.</li> <li>› Check CAN termination and correct if necessary. See separate electrical wiring diagram.</li> </ul>

**Corrective action**

Number	Designation	Possible cause	Corrective action
8130 WARNING	Heartbeat error	Communication to a plug-in module was interrupted.	<ul style="list-style-type: none"> <li>› Check whether all plugged in modules are listed in the main menu.</li> <li>› Perform reset.</li> <li>➤ Page 71, chapter 8.4.</li> </ul>
FF20 WARNING	Emergency open	0 V or no signal is present at the "Emergency open" input.	<ul style="list-style-type: none"> <li>› Check input signal.</li> <li>› If not used, deactivate the input function.</li> </ul>

Table 28: Event, warning and error messages – Logic control (control unit)

**8.3.2 Event, warning and error messages – Motor MHP2**

Number	Designation	Possible cause	Corrective action
2220 WARNING	Over current	Overcurrent was detected	<ul style="list-style-type: none"> <li>› Check mains unit.</li> <li>› Check wiring.</li> </ul>
3210 ERROR	Over voltage Ucc	Overvoltage has been detected. Vandalism or mains unit defective.	<ul style="list-style-type: none"> <li>› Check mains unit.</li> </ul>
3211 ERROR	Over voltage Udc	Overvoltage has been detected. Vandalism or mains unit defective.	<ul style="list-style-type: none"> <li>› Check wiring.</li> <li>› Check mains unit.</li> </ul>
3220 WARNING	Under voltage Ucc	Under voltage has been recognised	<ul style="list-style-type: none"> <li>› Disconnect additional loads from the MGC control unit.</li> <li>› Check mains unit.</li> </ul>
3221 WARNING	Under voltage Udc	Under voltage has been recognised. Mains unit overloaded. The message can occur in case of vandalism and deactivated locking.	<ul style="list-style-type: none"> <li>› Disconnect additional loads from the MGC control unit.</li> <li>› Check mains unit.</li> <li>› Perform the following test: Deactivate locking. Check the holding time by pressing on the blocking element while the passage is blocked. If the holding time is shorter than 1 s, replace the mains unit.</li> </ul>

Number	Designation	Possible cause	Corrective action
4210 ERROR	Over temperature	A high temperature was detected. Motor overloaded or blocked.	<ul style="list-style-type: none"> <li>› Check the motor temperature via the "Motor MHP2" menu. The temperature must be below 100 °C.</li> <li>› Reduce load.</li> <li>› Reduce speed.</li> </ul>
4211 ERROR	Over temperature PCB	Motor overloaded or blocked.	<ul style="list-style-type: none"> <li>› Reduce load.</li> <li>› Reduce speed.</li> </ul>
4220 WARNING	Derating	The power consumption of the motor is reduced to prevent a further rise in temperature. Motor overloaded or blocked.	<ul style="list-style-type: none"> <li>› Remove inadmissible attachments.</li> <li>› Reduce load.</li> <li>› Reduce speed.</li> </ul>
4221 ERROR	Under temperature PCB	Ambient temperature too low.	<ul style="list-style-type: none"> <li>› Install heating.</li> </ul>
5010 ERROR	Motor HW	–	<ul style="list-style-type: none"> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Replace motor.</li> </ul>
5020 ERROR	Encoder	–	<ul style="list-style-type: none"> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Replace motor.</li> </ul>
5030 ERROR	Hardware: I2C	–	<ul style="list-style-type: none"> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Replace motor.</li> </ul>
5040 ERROR	Hardware: SPI	–	<ul style="list-style-type: none"> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Replace motor.</li> </ul>
6150 ERROR	Selftest failed	EMC interference, motor control or microcontroller defective.	<ul style="list-style-type: none"> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Replace motor.</li> <li>› If the error occurs repeatedly, replace the control unit MGC.</li> </ul>
6170 ERROR	Configuration faulty	–	<ul style="list-style-type: none"> <li>› Perform reset.</li> <li>› Perform software update.</li> </ul>

**Corrective action**

Number	Designation	Possible cause	Corrective action
FFA1 ERROR	Trajectory	–	<ul style="list-style-type: none"> <li>› Perform reset. ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Check Motor.</li> </ul>
FFA4 WARNING	Vandalism	An unauthorised passage was detected.	<ul style="list-style-type: none"> <li>› Check locking.</li> <li>› Confirm warning via input.</li> </ul>
FF30 WARNING	Impact detection	Blocking element has hit an obstacle or end stops are set incorrectly.	<ul style="list-style-type: none"> <li>› Remove obstacle from swivel range.</li> <li>› Check setting of end stops.</li> <li>› Check safety parameter. ↗ Page 30, chapter 4.6.</li> </ul>
FF32 ERROR	HW-Enable test failed	–	<ul style="list-style-type: none"> <li>› Check target positions and readjust if necessary. ↗ Page 30, chapter 4.6.</li> <li>› Perform reset. ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> </ul>

Table 29: Event, warning and error messages – Motor MHP2

### 8.3.3 Event, warning and error messages – Safety Controller

Number	Designation	Possible cause	Corrective action
6150 ERROR	Selftest failed	EMC interference, motor control or microcontroller defective.	<ul style="list-style-type: none"> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› Replace motor.</li> <li>› If the error occurs repeatedly, replace the control unit MGC.</li> </ul>
6170 ERROR	Configuration faulty	–	<ul style="list-style-type: none"> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Reset parameters to factory settings.     ↗ Page 56, chapter 6.9.</li> <li>› Check safety parameter.     ↗ Page 30, chapter 4.6.</li> <li>› Perform software update.</li> </ul>
FFB1 WARNING	Emergency stop	The speed or torque has been exceeded during movement, e.g. due to vandalism or motor overload.	<ul style="list-style-type: none"> <li>› Check safety parameter.     ↗ Page 30, chapter 4.6.</li> <li>› Perform reset. ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> </ul>
FFB2 WARNING	Safety stop	Vandalism, safety parameter exceeded or motor overloaded.	<ul style="list-style-type: none"> <li>› Check safety parameter.     ↗ Page 30, chapter 4.6.</li> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> </ul>
FF32 WARNING	HW-Enable test failed	–	<ul style="list-style-type: none"> <li>› Check wiring.</li> <li>› Perform reset.     ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> </ul>

Table 30: Event, warning and error messages – Safety Controller

**8.3.4 Event, warning and error messages – All modules**

Number	Designation	Possible cause	Corrective action
5510 ERROR	Controller selftest failed	EMC interference, MGC control unit or microcontroller defective.	<ul style="list-style-type: none"> <li>› Perform reset. ↗ Page 71, chapter 8.4.</li> <li>› Perform software update.</li> <li>› If the error occurs repeatedly, replace the control unit MGC.</li> </ul>
5531 WARNING	EEPROM-1 checksum	After a software update	<ul style="list-style-type: none"> <li>› Perform reset. ↗ Page 71, chapter 8.4.</li> <li>› If the error occurs repeatedly, replace the control unit MGC.</li> </ul>
5532 WARNING	EEPROM-2 checksum	Perform a reset after a software update.	<ul style="list-style-type: none"> <li>› Perform reset. ↗ Page 71, chapter 8.4.</li> <li>› If the error occurs repeatedly, replace the control unit MGC.</li> </ul>
5600 WARNING	Motor/Gearbox configuration invalid	Wrong motor installed.	<ul style="list-style-type: none"> <li>› Compare the marking on the type plate of the spare part with the original motor.</li> </ul>
6010 WARNING	Watchdog reset	Software error	<ul style="list-style-type: none"> <li>› Contact service.</li> </ul>
8110 WARNING	CAN overrun	Warning	<ul style="list-style-type: none"> <li>› Contact service.</li> </ul>
8120 WARNING	CAN HW fault	Warning	<ul style="list-style-type: none"> <li>› Check the DIP switch next to the service interface (ON position).</li> <li>› If necessary, remove devices at the service interface.</li> </ul>

Table 31: Event, warning and error messages – All modules

## 8.4 Performing reset

If you use one of the following options, the control unit will perform a reset:

- › Switch of power supply and switch it on again after 10 s.
- › Press the two middle operating buttons on the control unit display for 5 s.
- › In the "mSwing Connect" programme, click on the "Service" tab and select the "Reset" button.

### NOTICE



#### **Fast restart!**

Switching the pedestrian gate on again too fast can lead to damage to the device!

- › Wait for at least 10 seconds after switching off the pedestrian gate before you switch the mains power on again.

## 9 Menu structure

## 9.1 Menu structure directly on the control unit MGC

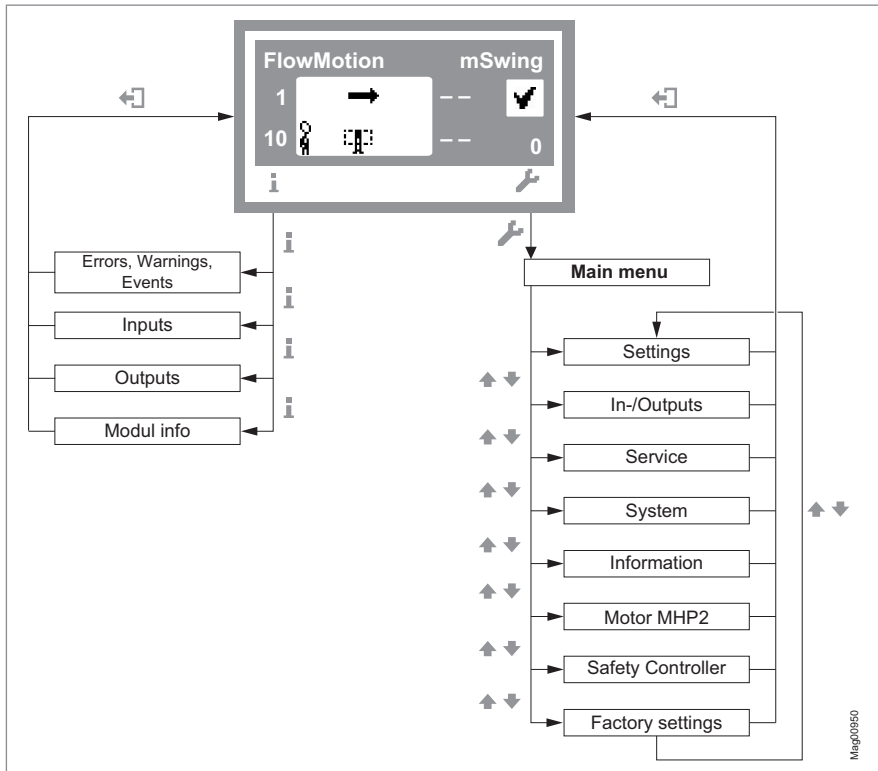


Fig. 32: "Information" and "Main menu"

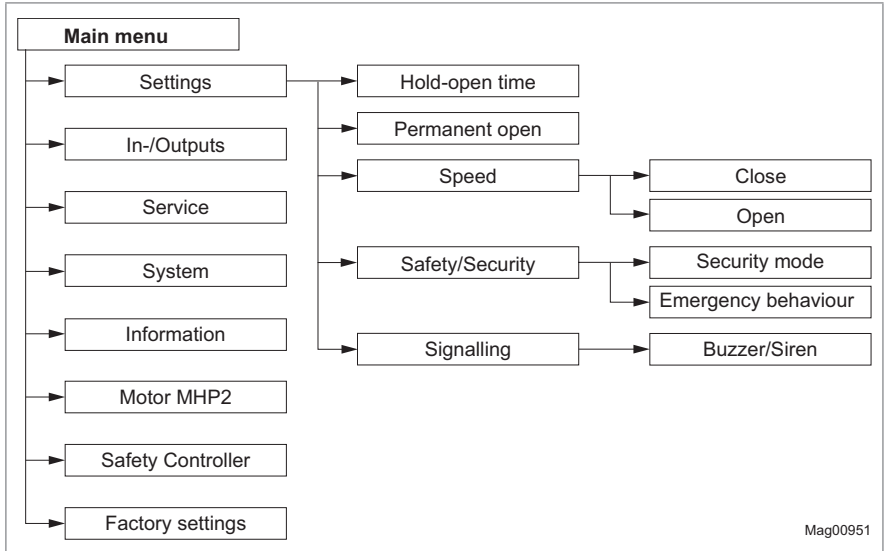
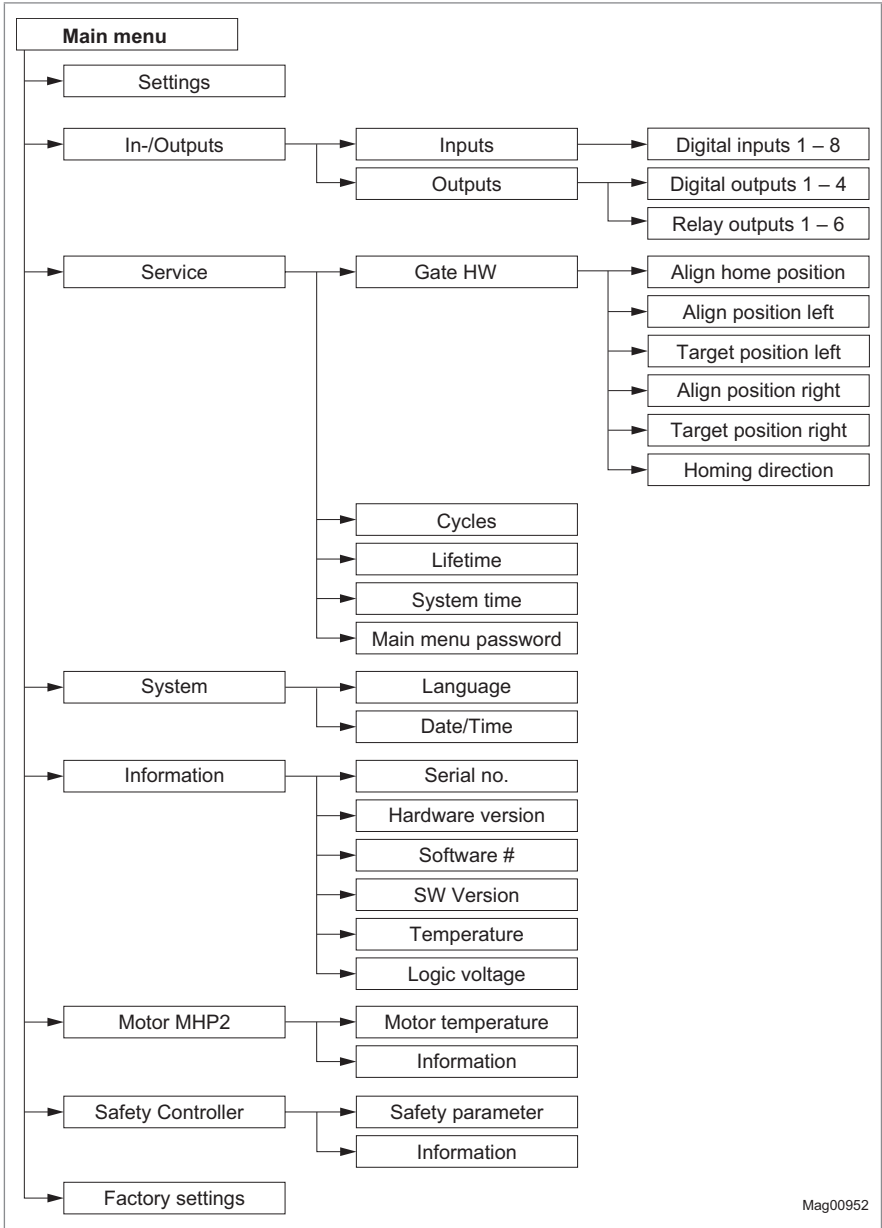


Fig. 33: "Settings" menu

Menu structure



Mag00952

Fig. 34: Menu "Inputs/outputs", "Service", "System", "Information", "Motor MHP2", "Safety Controller" and "Factory settings"

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