

# Gate ~ FMCU ~ Benutzerhandbuch/en

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## Introduction

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The document describes the functions and configuration options of the software **Facility Management Control Unit**.

The Facility Management Control Unit is software for access control management. It can be used in an enclosed area such as a sports or entertainment center, an airport zone, universities or security areas. The main components of the software solution are:

- An automated passage control with two-part door and signal lighting
- Barcode (or/and RFID) scanners that read identification data from the customer's ticket or card
- Tracking cameras observing the passage of customers
- Info screens showing inbound and outbound information to the customer
- One or more external speakers
- One or more additional monitors with content tailored to customer needs

The main features are:

- Opening access control upon successful ticket validation
- Interaction with customer in response to various events through:
  - Light effects
  - Voice prompts through internal or external speakers
  - Acoustic confirmation of the reading process from barcode scanners
  - Visual content displayed on an info screen
  - Safe opening and closing of the swing doors by monitoring the passage area

Supported operating modes:

- Normal
- Service
- Fire alarm
- Emergency

The variants of Entry Tickets:

- Single entry ticket with closing of access control after passage of one person
- Multiple entry ticket with permanent access control
- Adjustable time intervals
- Consideration of additional conditions about potential-free contacts

## Initial Configuration

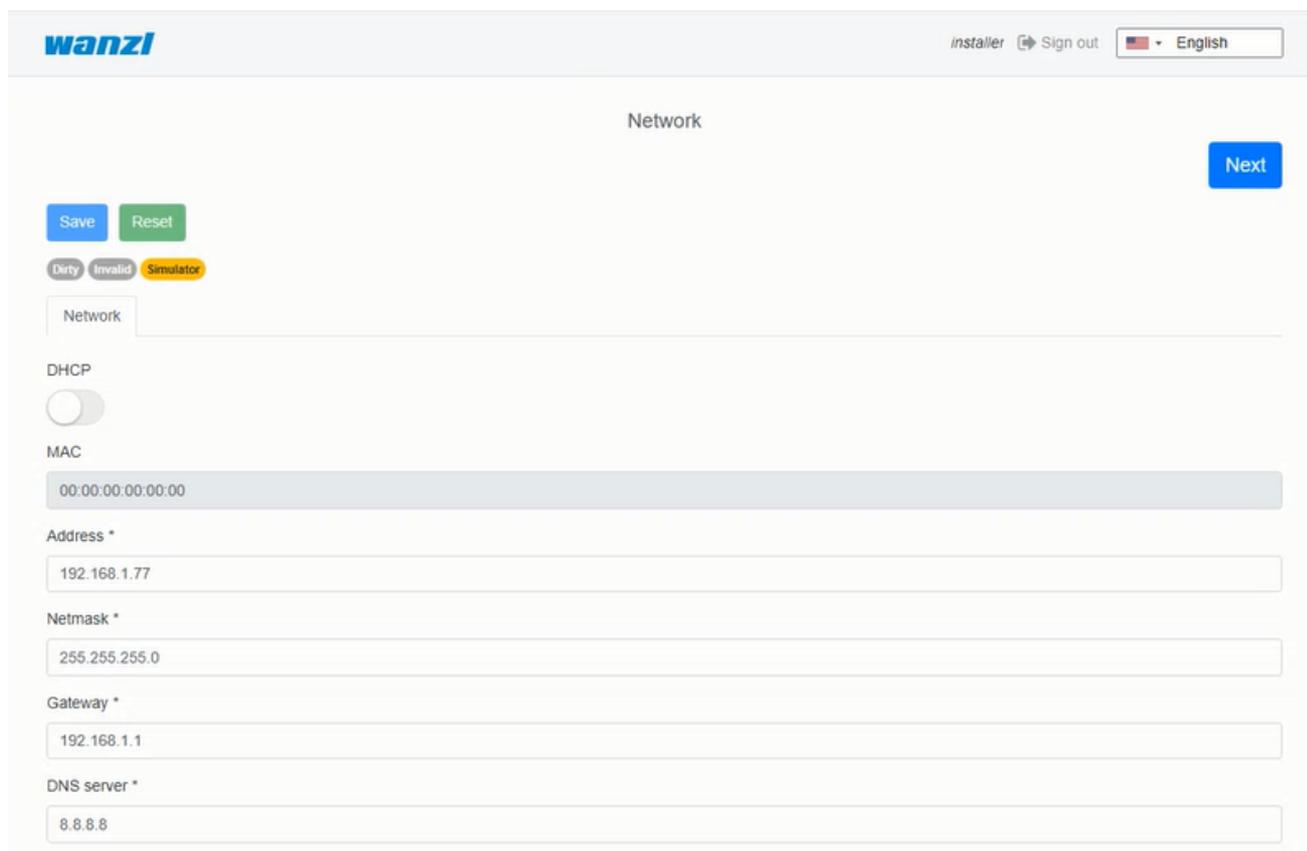
---

After the software has been downloaded and transferred to the eMMC card according to the documented procedure, see also here [Galaxy Gate Inbetriebnahme/en](#), the login screen appears after the first start. After logging in with the user *Installer*, configuration wizard will be started.

## Network

---

First step is the network settings configuring



**wanzi** installer Sign out English

Network Next

Save Reset

Dirty Invalid Simulator

Network

DHCP

MAC

00:00:00:00:00:00

Address \*

192.168.1.77

Netmask \*

255.255.255.0

Gateway \*

192.168.1.1

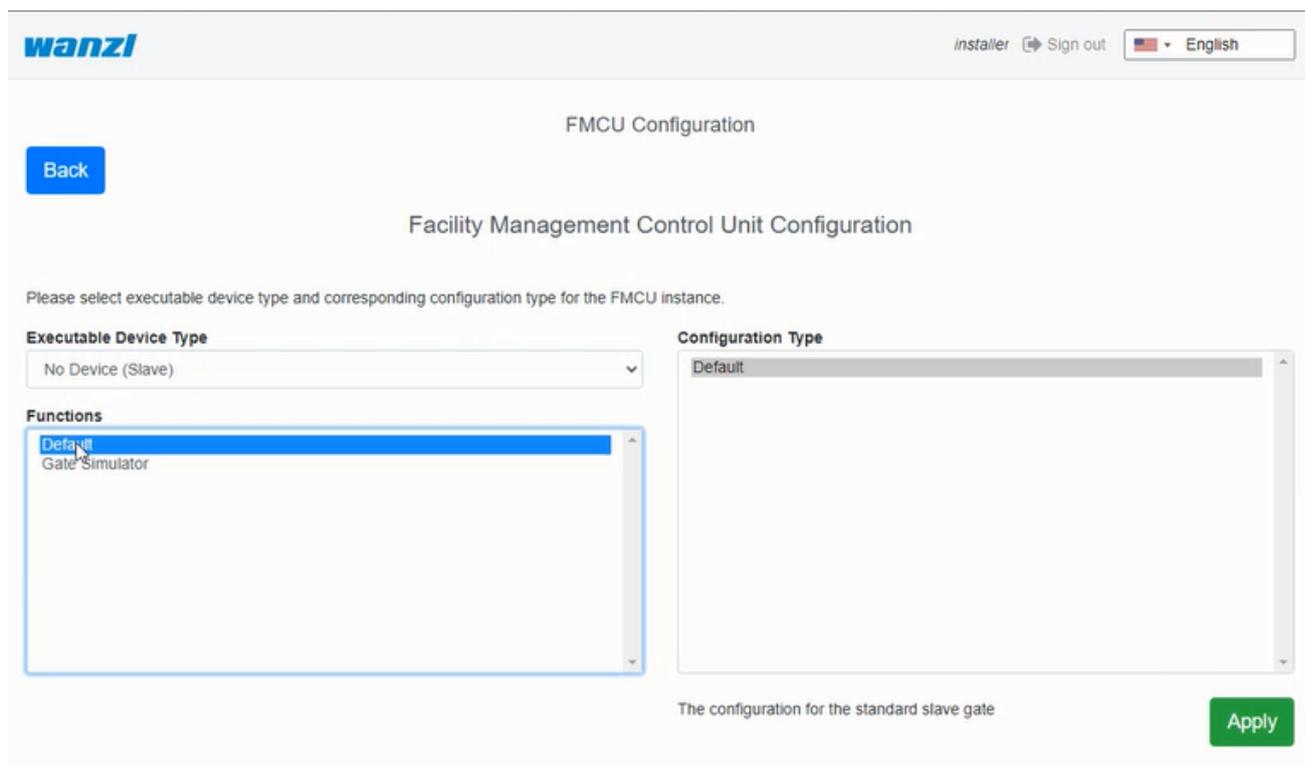
DNS server \*

8.8.8.8

| Parameter  | Description                    | Default Value |
|------------|--------------------------------|---------------|
| Address    | IP-Address of access control   | 192.168.1.100 |
| Mask       | Network-Mask                   | 255.255.255.0 |
| Gateway    | Gateway-Address                | 192.168.1.1   |
| DNS-Server | DNS-Server for name resolution | 192.168.1.1   |

## FMCU Configuration

Next step is selecting FMCU Configuration



**i NOTE**

The configuration always starts with the "Slave" side of the Galaxy Gate. This selection is preset in the assistant "No Device Slave".

As a type, you can basically make this selection in the assistant.

**Configuration of the Facility Management Control Unit**

| Selection                   | Description  |
|-----------------------------|--|
| No Device Slave             | Slave Unit (Default Selection)                     |
| Galaxy Gate (Modbus Serial) | Master-Unit mit serieller Verbindung zu Slave-Unit |
| Galaxy Gate (Modbus TCP)    | Master-Unit with network connection to Slave-Unit  |
| Galaxy Port (Modbus Serial) | Unit with serial connection to Slave-Unit          |
| Galaxy Port (Modbus TCP)    | Unit with network connection to Slave-Unit         |

**Functions**

| Function            | Description   |
|---------------------|---|
| AEA                 | Configuration for Boarding Gates                                |
| Immediate Closure   | Closing the swivel arms without swivel range monitoring         |
| Multiple Opening    | Swivel arms remain open when multiple input signals are present |
| Personal Protection | Closing the swivel arms with swivel area monitoring             |

|                  |   |
|------------------|---|
| One-time opening | Single pass even when several input signals are present |
| Trolley Case     | Support of trolley case without alarm                   |
| Wheelchair       | Assistance from wheelchair without alarm                |

After the function has been selected, the combination of functions results in corresponding configuration types. The function selection is a filter for the resulting configuration type.

### Configuration type from combination of functions

| Configuration Type                   | Description   |
|--------------------------------------|---|
| AEA                                  | Configuration for Boarding Gates  |
| One-time opening Personal Protection | Closing the swivel arms with swivel area monitoring                             |
| One-time opening Immediate Closure   | Closing the swivel arms without swivel range monitoring                         |
| One-time opening Trolley Case        | Single passage with trolley case even when several input signals are present    |
| One-time opening Wheelchair          | Single passage with a wheelchair even if several input signals are present      |
| Multiple opening personal protection | Closing the swivel arms with swivel area monitoring                             |
| Multiple opening instant closure     | Closing the swivel arms with swivel area monitoring                             |
| Multi-opening trolley case           | Swivel arms remain open when several people with wheeled suitcases pass through |
| Multiple opening wheelchair          | Swivel arms remain open when several people with wheeled suitcases pass through |

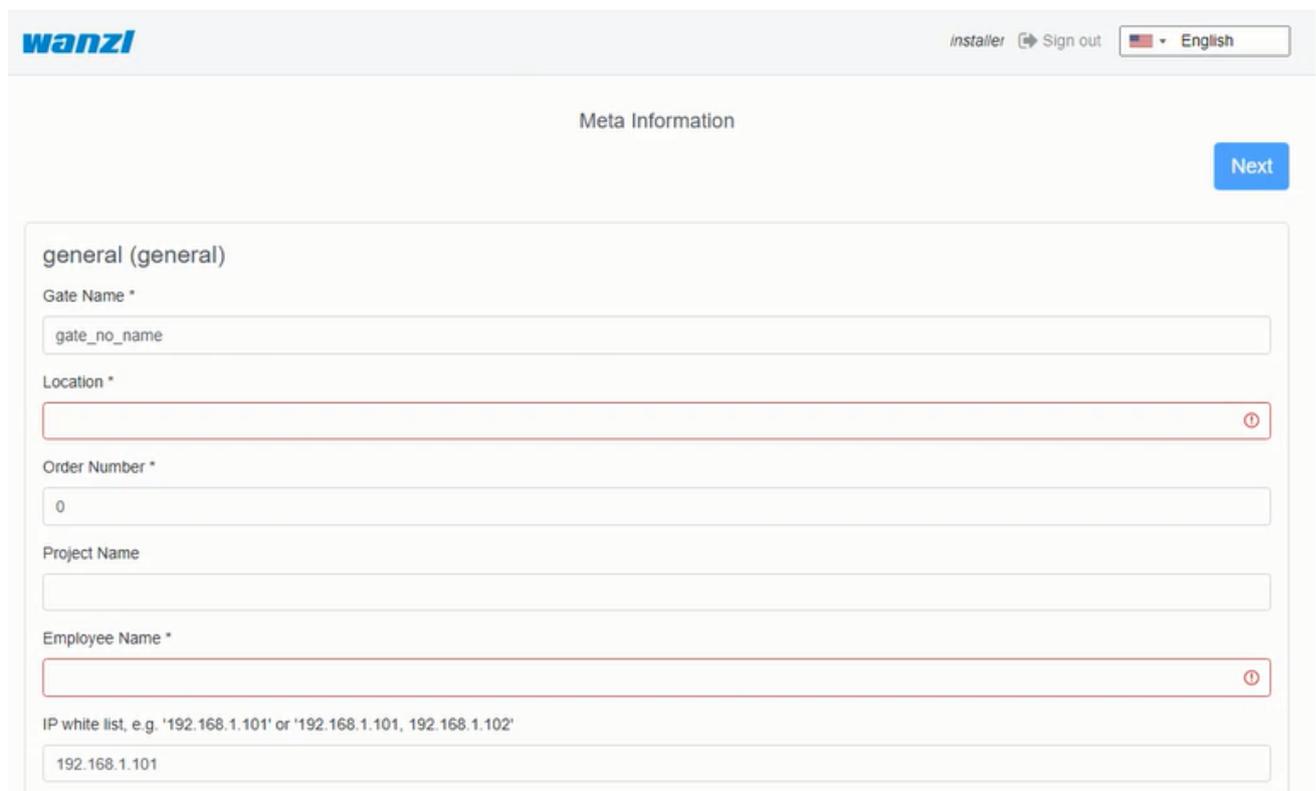
After choosing from the three lists, click on **Apply**, the application will be restarted, you have to wait for the start-up process to be completed. After logging in again, this screen appears.

#### NOTE

If you adjust the IP address in the configuration, you must also align the URL in the browser to the new IP address.

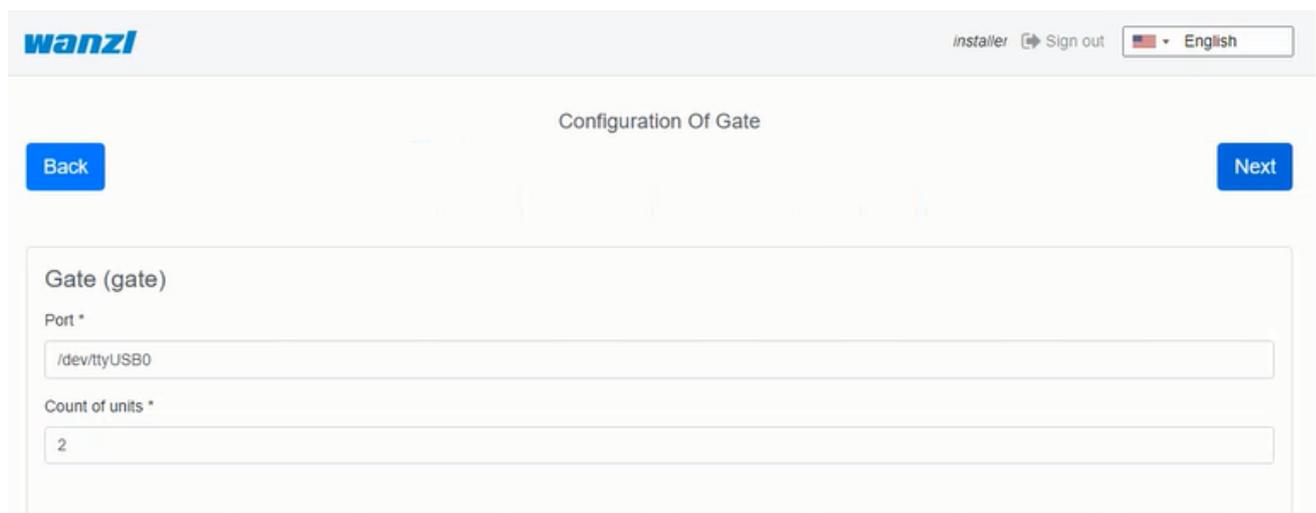
## Meta information

Next step is filling meta information about FMCU



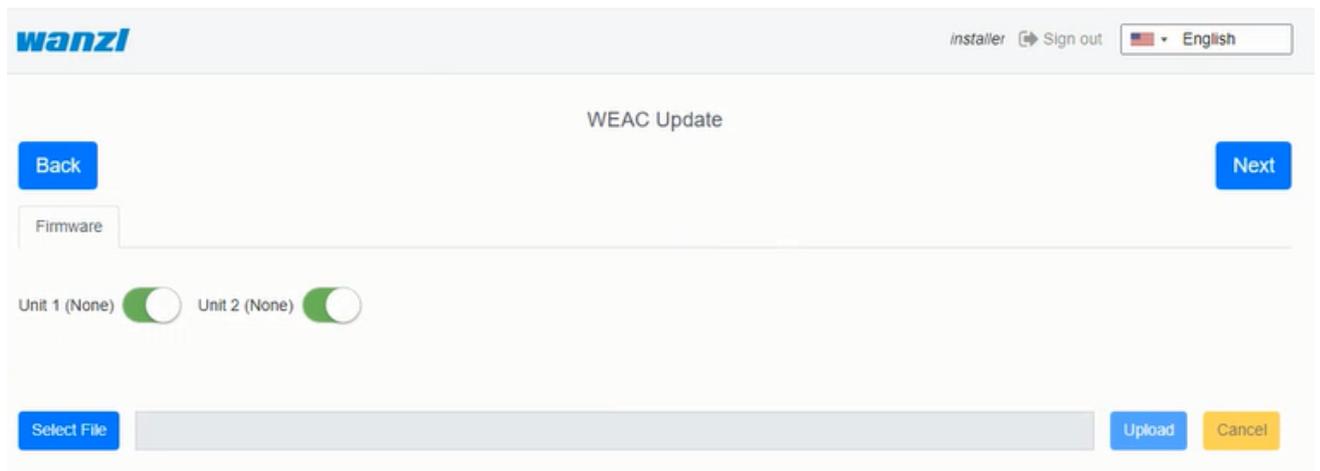
After the input fields have been filled in, you can click on **Next** to reach the next page of the wizard.

## Configuration of Gate

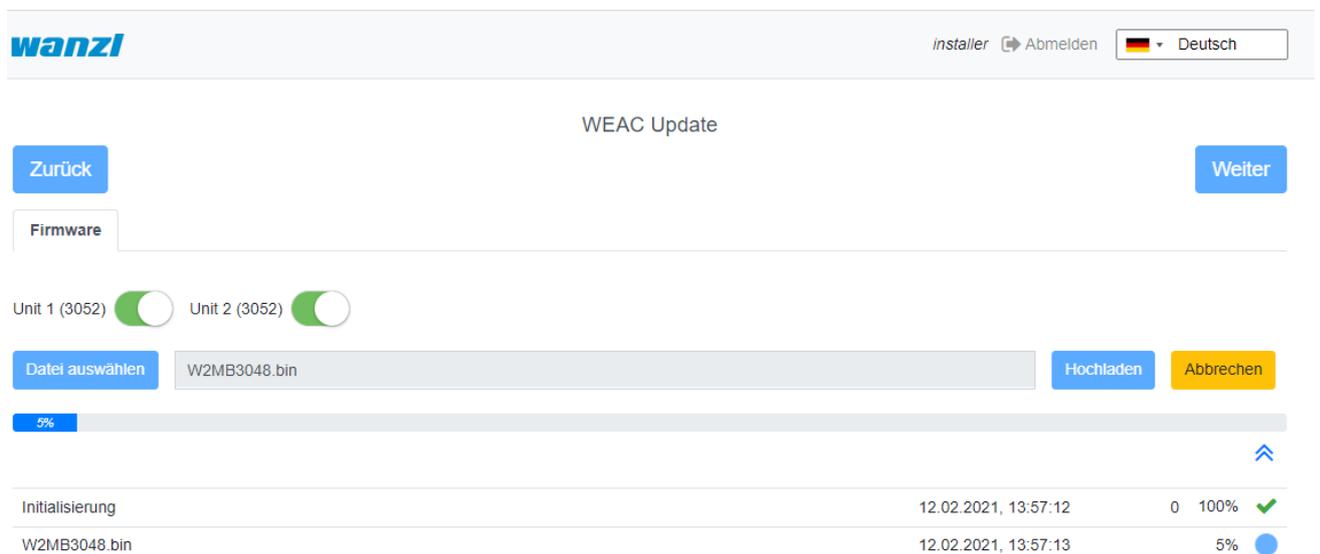


## WEAC Firmware Update

The current WEAC firmware is displayed on the next page of the wizard. If necessary, you can down or upgrade the firmware.



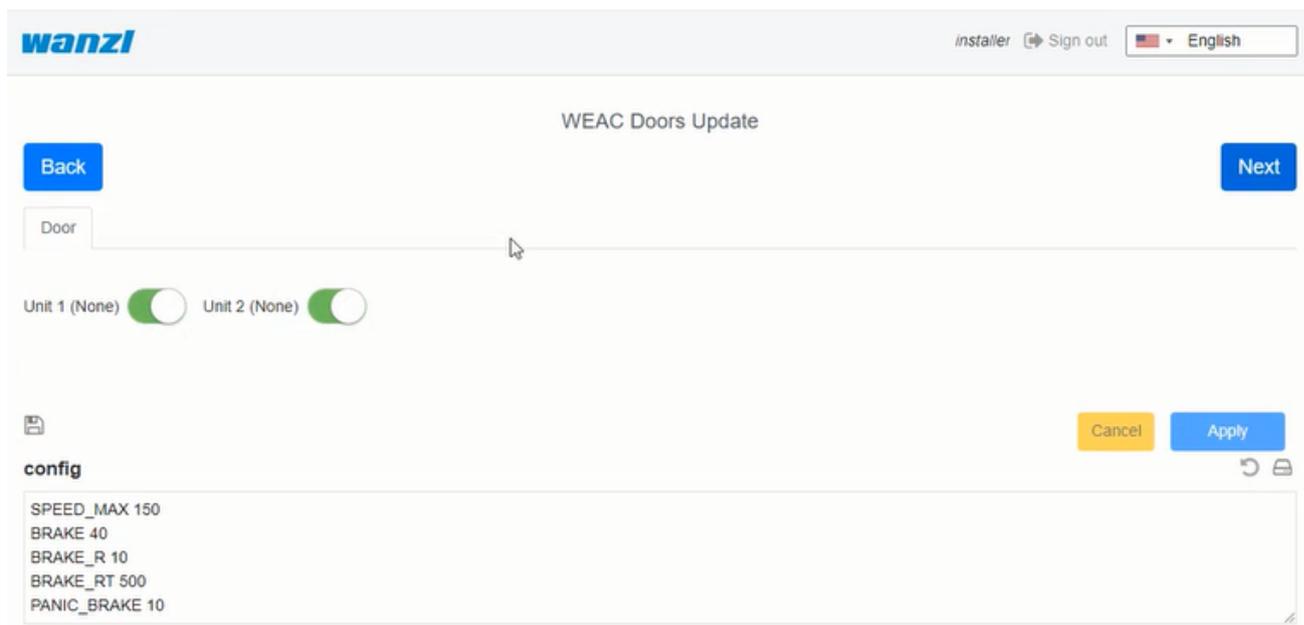
The firmware version for each unit is listed as a label next to the activation button. The navigation options are deactivated during the update process. The update process takes about 3 minutes for both units.



|                 |                      |   |      |   |
|-----------------|----------------------|---|------|---|
| Initialisierung | 12.02.2021, 13:57:12 | 0 | 100% | ✓ |
| W2MB3048.bin    | 12.02.2021, 13:57:13 |   | 5%   | ● |

After checking the WEAC firmware, the swing doors are configured. It is automatically checked whether the minimum requirements regarding the firmware are met. You will be informed on the surface if the firmware has to be updated first.

## WEAC Doors Update



**wanzl** installer [Sign out](#) English

WEAC Doors Update

Back Next

Door

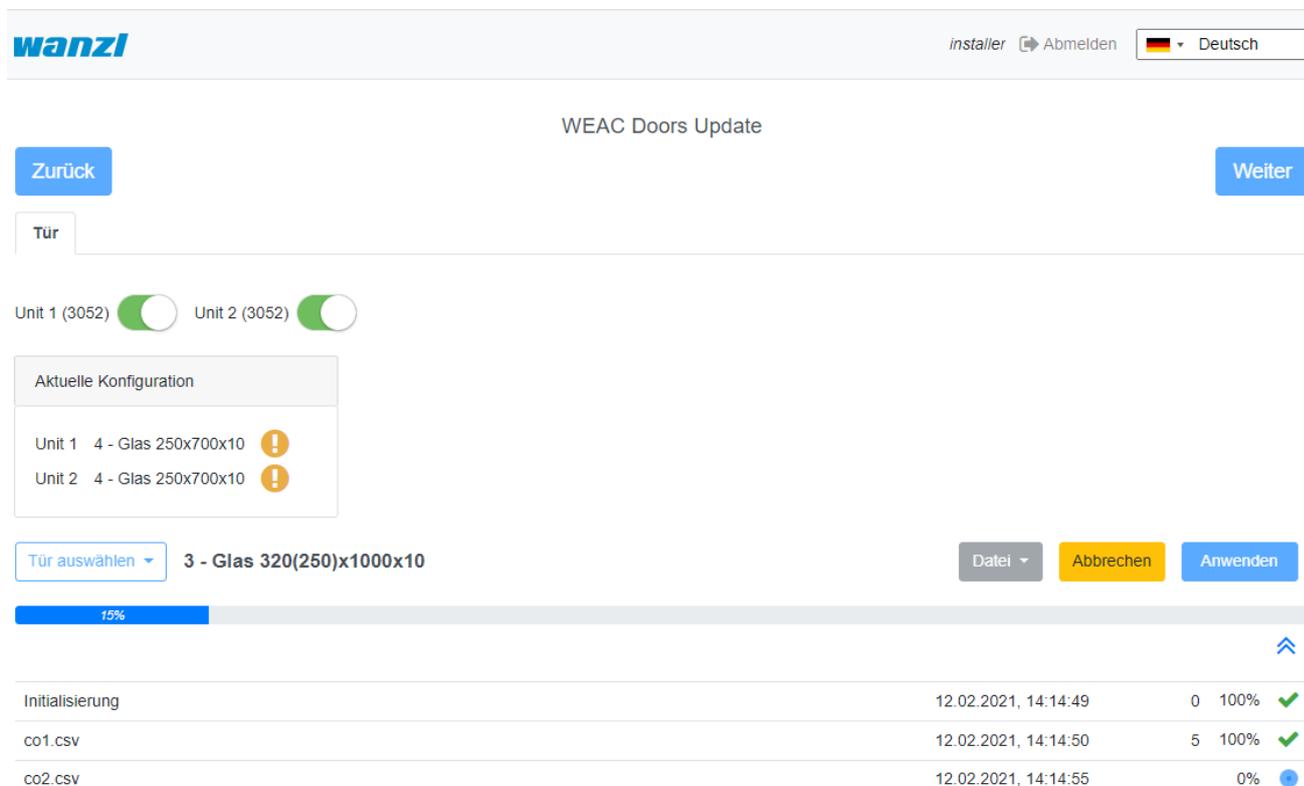
Unit 1 (None)  Unit 2 (None)

config

```
SPEED_MAX 150
BRAKE 40
BRAKE_R 10
BRAKE_RT 500
PANIC_BRAKE 10
```

Cancel Apply

If the requirements are met, you can select the swing doors and apply them to the gate.



**wanzl** installer [Abmelden](#) Deutsch

WEAC Doors Update

Zurück Weiter

Tür

Unit 1 (3052)  Unit 2 (3052)

Aktuelle Konfiguration

Unit 1 4 - Glas 250x700x10 

Unit 2 4 - Glas 250x700x10 

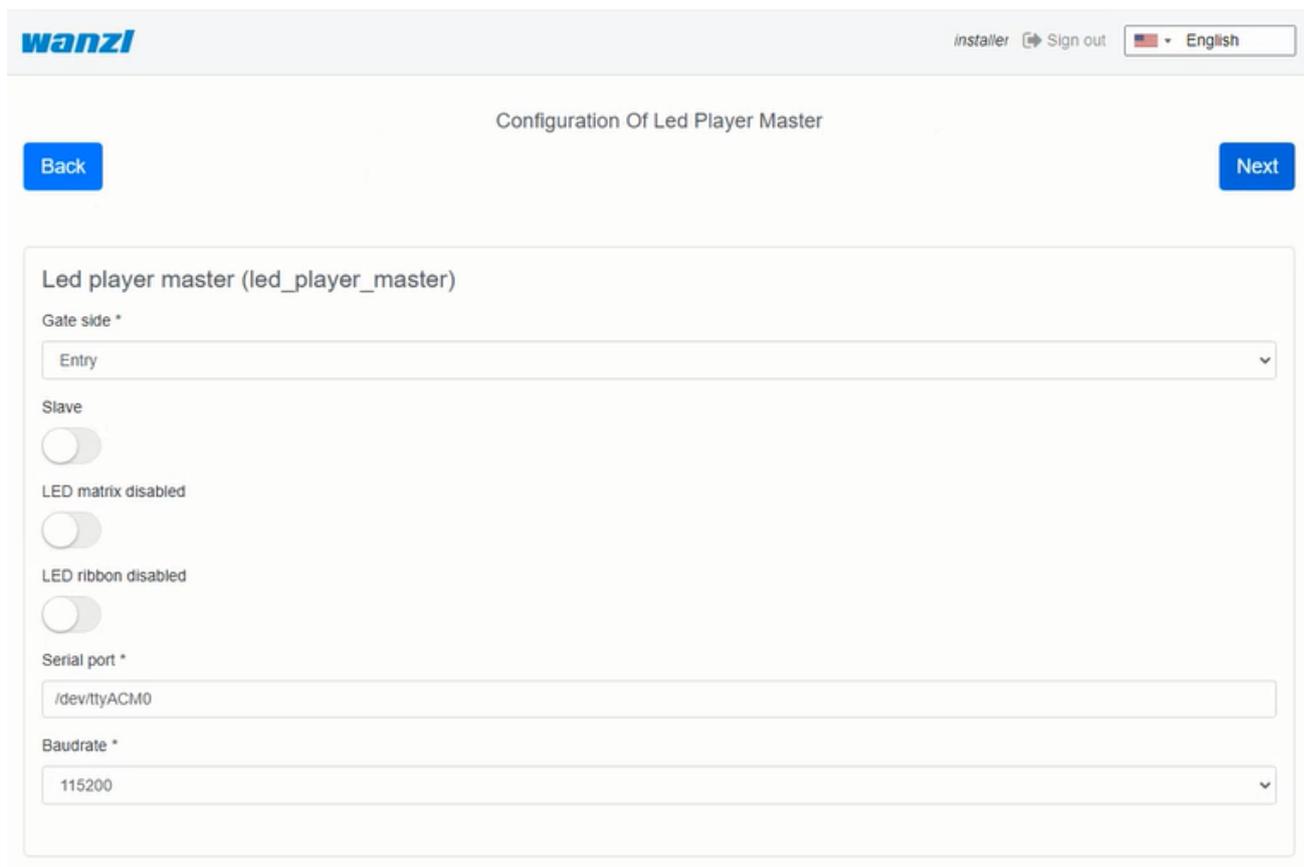
Tür auswählen **3 - Glas 320(250)x1000x10** Datei Abbrechen Anwenden

15%

|                 |                      |   |      |   |
|-----------------|----------------------|---|------|---|
| Initialisierung | 12.02.2021, 14:14:49 | 0 | 100% | ✓ |
| co1.csv         | 12.02.2021, 14:14:50 | 5 | 100% | ✓ |
| co2.csv         | 12.02.2021, 14:14:55 |   | 0%   | ⓘ |

## Configuring the Led Player

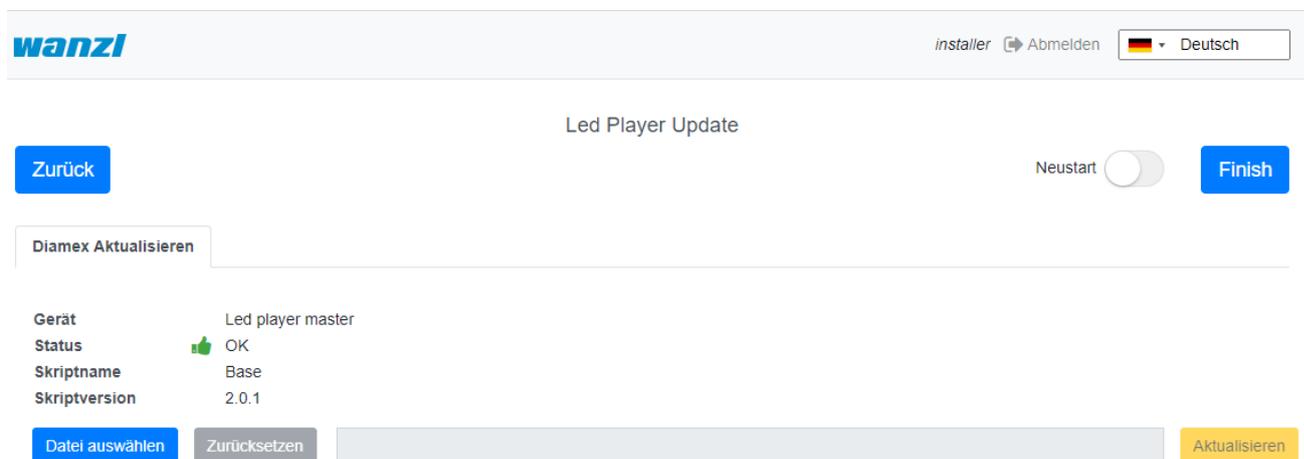
The next step is to configure the LED player for both units (Master and Slave) accomplished. If necessary, you can adjust the parameters. If the status is **ready for use**, no modifications are necessary.



The screenshot shows the 'Configuration Of Led Player Master' page in the Wanzl installer. At the top, there is a 'wanzl' logo, 'installer' text, a 'Sign out' button, and a language dropdown set to 'English'. The main title is 'Configuration Of Led Player Master'. Below the title are 'Back' and 'Next' buttons. The configuration area is titled 'Led player master (led\_player\_master)' and contains the following fields and controls:

- 'Gate side \*': A dropdown menu with 'Entry' selected.
- 'Slave': A toggle switch that is currently turned off.
- 'LED matrix disabled': A toggle switch that is currently turned off.
- 'LED ribbon disabled': A toggle switch that is currently turned off.
- 'Serial port \*': A text input field containing '/dev/ttyACM0'.
- 'Baudrate \*': A dropdown menu with '115200' selected.

The current firmware of the LED player is shown again on the last page of the assistant. Optionally, you can end the configuration with a restart. However, this is only necessary if IP addresses or interface information have changed.



The screenshot shows the 'Led Player Update' page in the Wanzl installer. At the top, there is a 'wanzl' logo, 'installer' text, an 'Abmelden' button, and a language dropdown set to 'Deutsch'. The main title is 'Led Player Update'. Below the title are 'Zurück' and 'Finish' buttons. A 'Neustart' toggle switch is also present. The main content area is titled 'Diamex Aktualisieren' and contains the following information:

|               |  |
|---------------|--|
| Gerät         | Led player master  |
| Status        |  OK |
| Skriptname    | Base   |
| Skriptversion | 2.0.1  |

At the bottom, there are three buttons: 'Datei auswählen', 'Zurücksetzen', and 'Aktualisieren'.

After clicking **Finish** you can log in again as certain user and work with the Galaxy Gate. If you log in again as user *installer*, you get a graphical overview, can find out about the status of the access control and can carry out updates if necessary. So you complete the setup of the access control.

| Displays      |  |  |  |   |
|---------------|--|--|--|---|
| Display Entry |  |  |  | <a href="http://192.168.241.117:/display/display_entry">http://192.168.241.117:/display/display_entry</a> |
| Display Exit  |  |  |  | <a href="http://192.168.241.117:/display/display_exit">http://192.168.241.117:/display/display_exit</a>   |

| Devices  |                         |        |                |                          |
|--|-------------------------|--------|----------------|--------------------------|
| Name   | Type                    | State  | Failure Reason | Failure                  |
| GateModbusGalaxyGateTcp                          | GateModbusGalaxyGateTcp | Closed |                | <input type="checkbox"/> |
| Light bar  | Duometric               | Ready  |                | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Audio player | Weac                    | Ready  |                | <input type="checkbox"/> |
| Slave fmcu                                       | Device                  | Ready  |                | <input type="checkbox"/> |
| Led player master                                | Diamex Serial           | Ready  |                | <input type="checkbox"/> |
| Led player slave                                 | Diamex Remote           | Ready  |                | <input type="checkbox"/> |

You can now log in with a service account and carry out further tests.

## Operation Manual

### Configuration of the Swing Doors

The swing doors can have different dimensions. Depending on the width and height, this results in other target parameters for optimal curve passage.

Tür auswählen ▾

0 - Glas 670(600)x1550x10

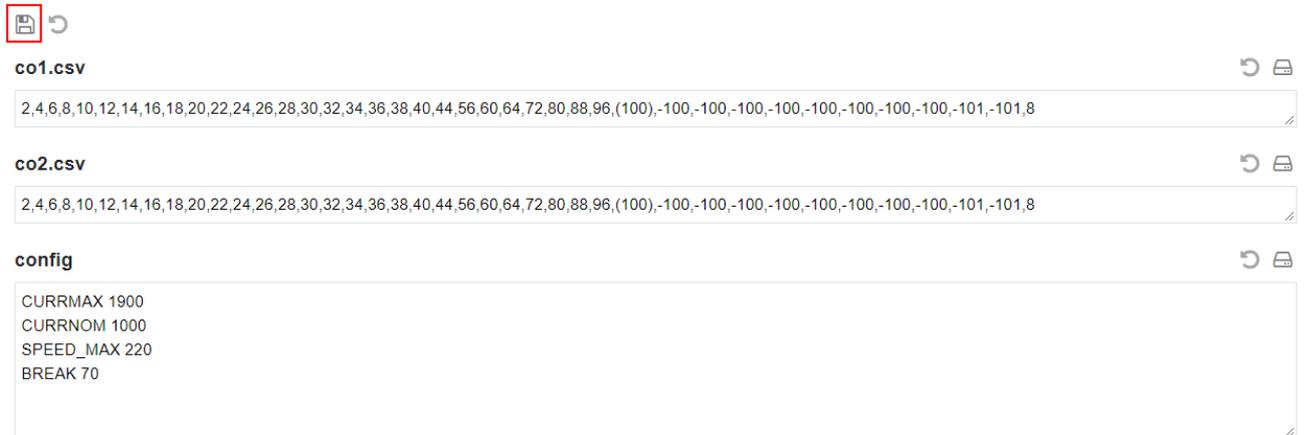
1 - Glas 520(450)x1255x10

2 - Glas 500(425)x1225x10

3 - Glas 320(250)x1000x10

4 - Glas 250x700x10

After a type has been selected, all parameters can be adjusted according to the needs in the interface before they are then activated via the button **Apply** in the configuration on the access control. If you change individual values in the display, the settings must first be saved. To do this, click on the diskette symbol on the left of the interface above the file list.



**co1.csv**

2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,44,56,60,64,72,80,88,96,(100),-100,-100,-100,-100,-100,-100,-100,-101,-101,8

**co2.csv**

2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,44,56,60,64,72,80,88,96,(100),-100,-100,-100,-100,-100,-100,-100,-101,-101,8

**config**

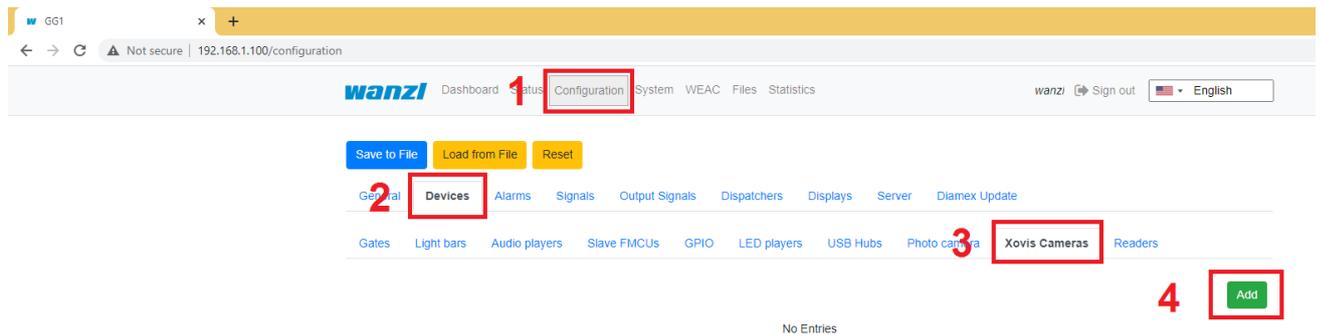
CURRMAX 1900  
CURRNOM 1000  
SPEED\_MAX 220  
BREAK 70

After the changes have been saved, you can activate them using the Apply button.

## Configuration of the XOVIS Sensors

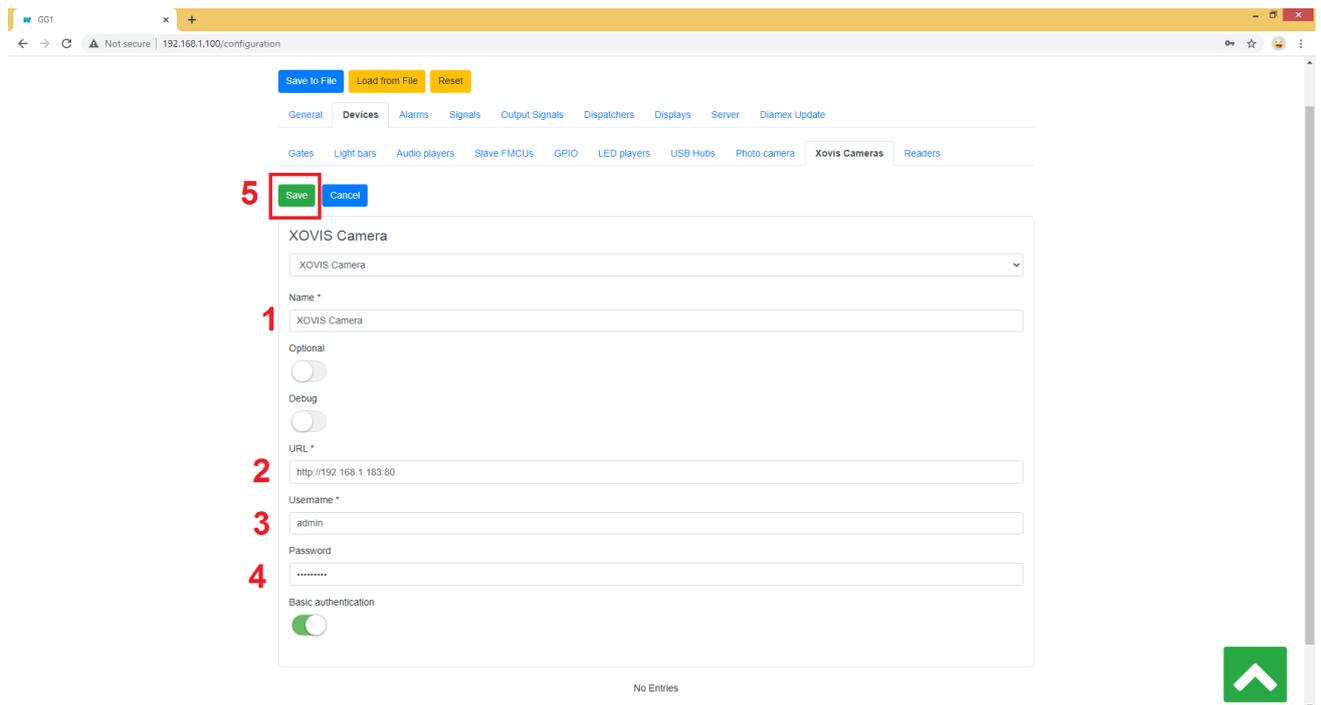
### Add XOVIS-Sensor

Navigate to "Configuration" -> "Devices" -> "Xovis Cameras" and then click on the "Add" button



The following fields are filled in the order shown:

1. Name
2. URL
3. Username
4. Password



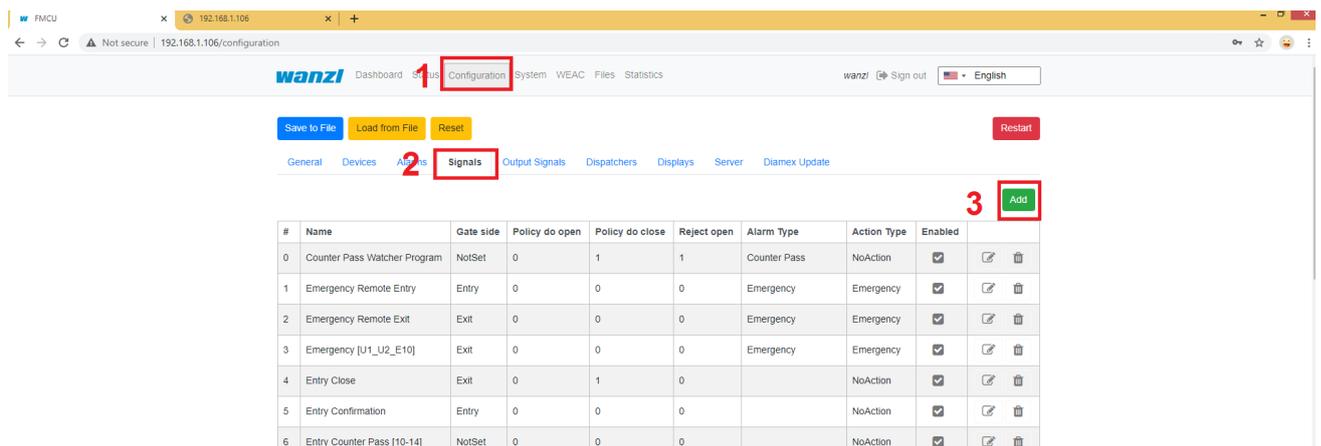
The configuration is saved by clicking the **Save** button.

### NOTE

After adding the XOVIS sensor, the **FMCU** must be restarted before proceeding with the configuration.

## Add XOVIS monitoring area as alarm signal

Navigate to "Configuration" -> "Signals" and then click on the "Add" button



| # | Name                         | Gate side | Policy do open | Policy do close | Reject open | Alarm Type   | Action Type | Enabled                             |   |   |
|---|------------------------------|-----------|----------------|-----------------|-------------|--------------|-------------|-------------------------------------|---|---|
| 0 | Counter Pass Watcher Program | NotSet    | 0              | 1               | 1           | Counter Pass | NoAction    | <input checked="" type="checkbox"/> |  |  |
| 1 | Emergency Remote Entry       | Entry     | 0              | 0               | 0           | Emergency    | Emergency   | <input checked="" type="checkbox"/> |  |  |
| 2 | Emergency Remote Exit        | Exit      | 0              | 0               | 0           | Emergency    | Emergency   | <input checked="" type="checkbox"/> |  |  |
| 3 | Emergency [U1_U2_E10]        | Exit      | 0              | 0               | 0           | Emergency    | Emergency   | <input checked="" type="checkbox"/> |  |  |
| 4 | Entry Close                  | Exit      | 0              | 1               | 0           |              | NoAction    | <input checked="" type="checkbox"/> |  |  |
| 5 | Entry Confirmation           | Entry     | 0              | 0               | 0           |              | NoAction    | <input checked="" type="checkbox"/> |  |  |
| 6 | Entry Counter Pass [10-14]   | NotSet    | 0              | 0               | 0           |              | NoAction    | <input checked="" type="checkbox"/> |  |  |

The following fields must be filled in here:

1. Select type "XOVIS Sensor"
2. Specify the name of the signal (e.g. "XOVIS ALARM")
3. Set the minimum number of people in the alarm zone to trigger an alarm (e.g. 2)
4. Select the alert type (e.g. "Unauthorized Access")
5. Determine a list of alarm zones (e.g. "AlarmZone")

6. Select the XOVIS sensor added to.

The configuration is saved by clicking the **Save** button.

Save to File Load from File Reset

General Devices Alarms **Signals** Output Signals Dispatchers Displays Server Diamex Update

Save Cancel

GateSignalXovis

1 XOVIS Sensor

2 Name \*  
XOVIS Alarm

Enabled

Count Max \*  
0

Gate side \*  
NotSet

Policy do open \*  
0

Open gate, ignore locked

Open gate speed, % \*  
100

Open gate angle, % \*  
100

Open gate timeout, ms \*  
2000

Re-open gate delay, ms \*  
1800

Policy do close \*  
0

Close gate speed, % \*  
100

Protect from soft close. Soft Alarm delay, ms \*  
0

Soft Alarm Type  
[Dropdown]

Soft close was forbidden. Alarm delay, ms \*  
60000

Close was forbidden. Alarm Type  
[Dropdown]

Protect from force close

Force close was forbidden. Alarm delay, ms \*

Delay to start closing the gate, ms (0 - 1000) \*

Reject open \*

Ignore reject open delay, after gate closed, ms \*

Alarm \*

3

Alarm Type

4

Alarm delay, ms \*

Action \*

Action Type \*

Counter \*

List of zones ("Gate side" and "Counter" must be unset)

5

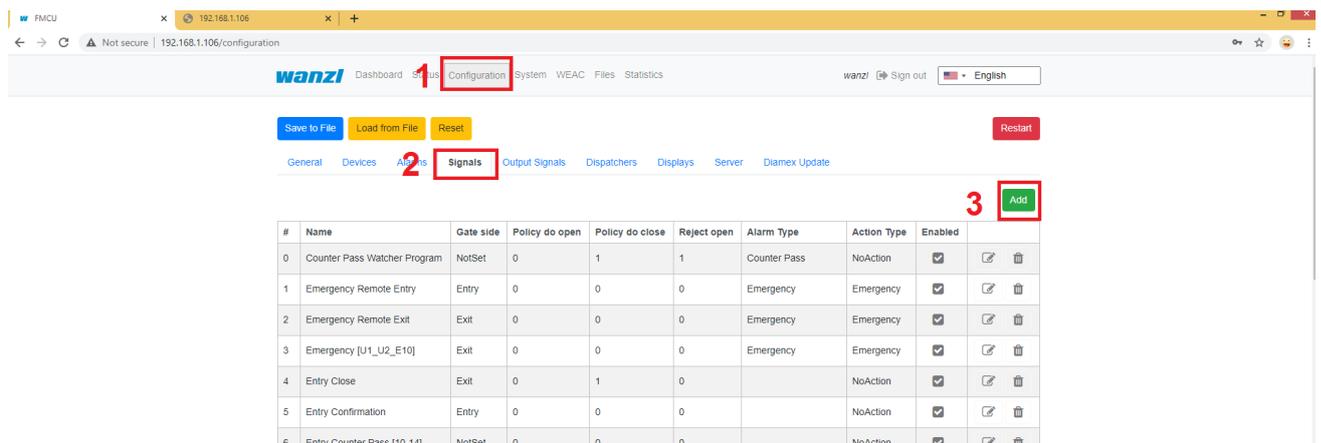
List of lines ("Gate side" and "Counter" must be set)

Camera XOVIS \*

6

### Add XOVIS counter

Navigate to "Configuration" -> "Signals" and then click on the "Add" button



| # | Name                         | Gate side | Policy do open | Policy do close | Reject open | Alarm Type   | Action Type | Enabled                             |   |
|---|------------------------------|-----------|----------------|-----------------|-------------|--------------|-------------|-------------------------------------|---|
| 0 | Counter Pass Watcher Program | NotSet    | 0              | 1               | 1           | Counter Pass | NoAction    | <input checked="" type="checkbox"/> |   |
| 1 | Emergency Remote Entry       | Entry     | 0              | 0               | 0           | Emergency    | Emergency   | <input checked="" type="checkbox"/> |   |
| 2 | Emergency Remote Exit        | Exit      | 0              | 0               | 0           | Emergency    | Emergency   | <input checked="" type="checkbox"/> |   |
| 3 | Emergency [U1_U2_E10]        | Exit      | 0              | 0               | 0           | Emergency    | Emergency   | <input checked="" type="checkbox"/> |   |
| 4 | Entry Close                  | Exit      | 0              | 1               | 0           |              | NoAction    | <input checked="" type="checkbox"/> |   |
| 5 | Entry Confirmation           | Entry     | 0              | 0               | 0           |              | NoAction    | <input checked="" type="checkbox"/> |   |
| 6 | Entry Counter Pass [10-14]   | NotSet    | 0              | 0               | 0           |              | NoAction    | <input checked="" type="checkbox"/> |   |

The following fields must be filled in here:

1. Select type "XOVIS Sensor".
2. Specify the name of the signal (e.g. "XOVIS Counter")
3. Specify the side of the gate (e.g. "Entrance")
4. Set the value "Counter".
5. Specify a list of lines(e.g. "EntryLine")
6. Select the XOVIS camera that you added earlier.

The configuration is saved by clicking the **Save** button.

Save to File Load from File Reset Restart

General Devices Alarms **Signals** Output Signals Dispatchers Displays Server Diamex Update

7 Save Cancel

**GateSignalXovis**

1 XOVIS Sensor

2 Name \*  
XOVIS Counter

Enabled

Count Max \*  
0

3 Gate side \*  
Entry

Policy do open \*  
0

Open gate, ignore locked

Open gate speed, % \*  
100

Open gate angle, % \*  
100

Open gate timeout, ms \*  
2000

Re-open gate delay, ms \*  
1800

Policy do close \*  
0

Close gate speed, % \*  
100

Protect from soft close. Soft Alarm delay, ms \*  
0

Soft Alarm Type  
[Dropdown]

Soft close was forbidden. Alarm delay, ms \*  
60000

Close was forbidden. Alarm Type  
[Dropdown]

Protect from force close

Force close was forbidden. Alarm delay, ms \*

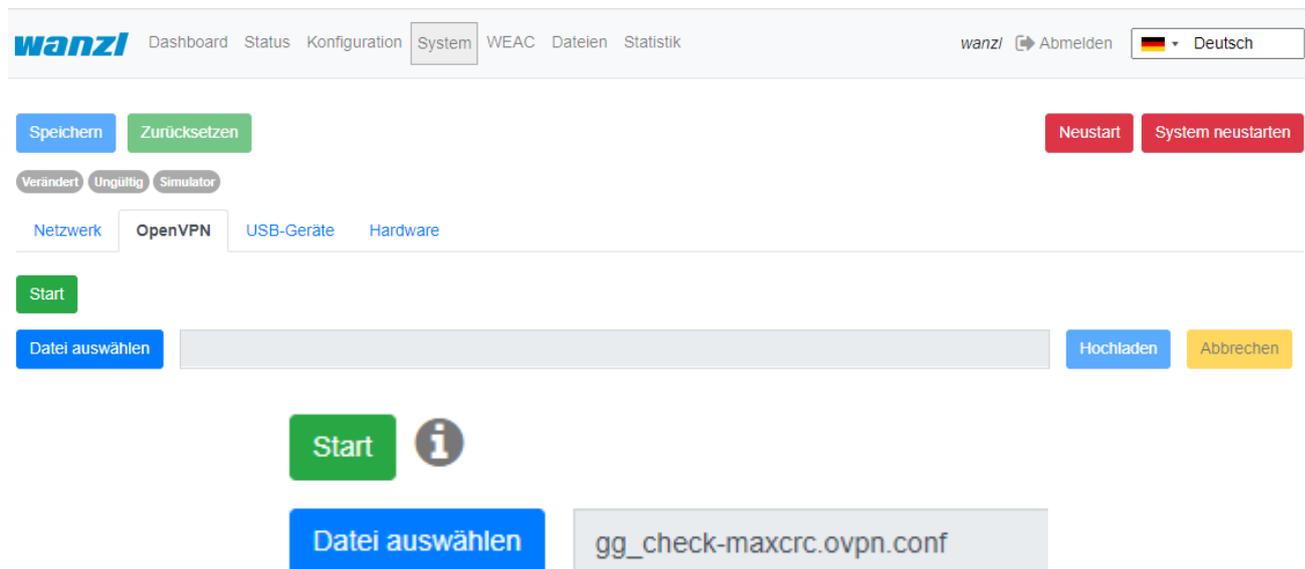
|   |   |
|---|---|
|   | 1200  |
|   | Delay to start closing the gate, ms (0 - 1000) *        |
|   | 0   |
|   | Reject open *   |
|   | 0   |
|   | Ignore reject open delay, after gate closed, ms *       |
|   | 0   |
|   | Alarm *   |
|   | 0   |
|   | Alarm Type  |
|   | <input type="text"/>                                    |
|   | Alarm delay, ms *                                       |
|   | 400   |
|   | Action *  |
|   | 0   |
|   | Action Type *   |
|   | NoAction  |
| 4 | Counter *   |
|   | 1   |
|   | List of zones ("Gate side" and "Counter" must be unset) |
|   | <input type="text"/>                                    |
|   | List of lines ("Gate side" and "Counter" must be set)   |
| 5 | EntryLine   |
| 6 | Camera XOVIS *  |
|   | XOVIS Camera  |

## Store VPN key

A VPN key is required to use remote maintenance. This key can be requested from maxcrc support (support@maxcrc.de) by specifying the project name (Configuration->General view).

After the key file (\*.opvn.conf) is available, you can import via the System->OpenVPN page. The following steps are necessary for this.

Navigating to the **System-OpenVPN** page.



wanzl Dashboard Status Konfiguration System WEAC Dateien Statistik wanzl Abmelden Deutsch

Speichern Zurücksetzen Neustart System neustarten

Verändert Ungültig Simulator

Netzwerk OpenVPN USB-Geräte Hardware

Start

Datei auswählen Datei auswählen Hochladen Abbrechen

Start i

Datei auswählen gg\_check-maxcrc.ovpn.conf

This file is now specified via the **Select file** button in the file selection dialog. Then click on **Upload**. When the process has been successfully completed, an info icon will appear next to the start button. This means the file has been uploaded successfully, the OpenVPN client can now be activated by clicking on **Start**.



wanzl Dashboard Status Konfiguration System WEAC Dateien Statistik wanzl Abmelden Deutsch

Speichern Zurücksetzen Neustart System neustarten

Verändert Ungültig Simulator

Netzwerk OpenVPN USB-Geräte Hardware

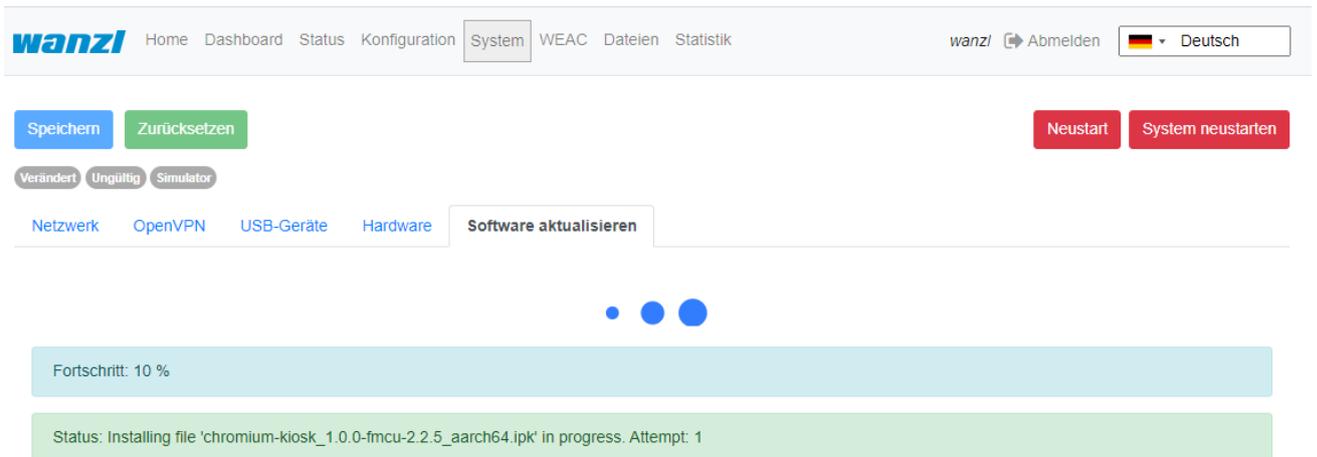
Halt i Running 192.168.240.27

Datei auswählen Datei ausgewählt gg\_check-maxcrc.ovpn.conf Hochladen Abbrechen

If the start was successful, the color changes from green to red and the label from start to stop. The status of the OpenVPN client and the IP address for access in the VPN network for this gate are displayed to the right of the info symbol. You can disable remote access by clicking the **Stop** button.

## Update Software

If there is no Internet connection, individual package installations can be carried out using the **System->Update software** menu. You should have a zip archive with the packages to be installed. It must be ensured that no relative paths are used in the archive. Then you can insert the archive into the input line via **Select file** and start the update procedure with **Upload**. The progress of update process is displayed:



wanzl Home Dashboard Status Konfiguration System WEAC Dateien Statistik wanzl Abmelden Deutsch

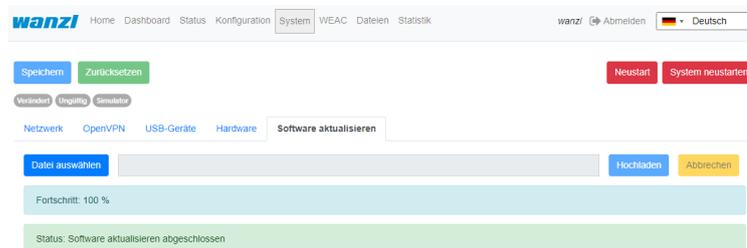
Speichern Zurücksetzen Neustart System neustarten

Verändert Ungültig Simulator

Netzwerk OpenVPN USB-Geräte Hardware Software aktualisieren

Fortschritt: 10 %

Status: Installing file 'chromium-kiosk\_1.0.0-fmcu-2.2.5\_aarch64.ipk' in progress. Attempt: 1



wanzl Home Dashboard Status Konfiguration System WEAC Dateien Statistik wanzl Abmelden Deutsch

Speichern Zurücksetzen Neustart System neustarten

Verändert Ungültig Simulator

Netzwerk OpenVPN USB-Geräte Hardware Software aktualisieren

Datei auswählen Hochladen Abbrechen

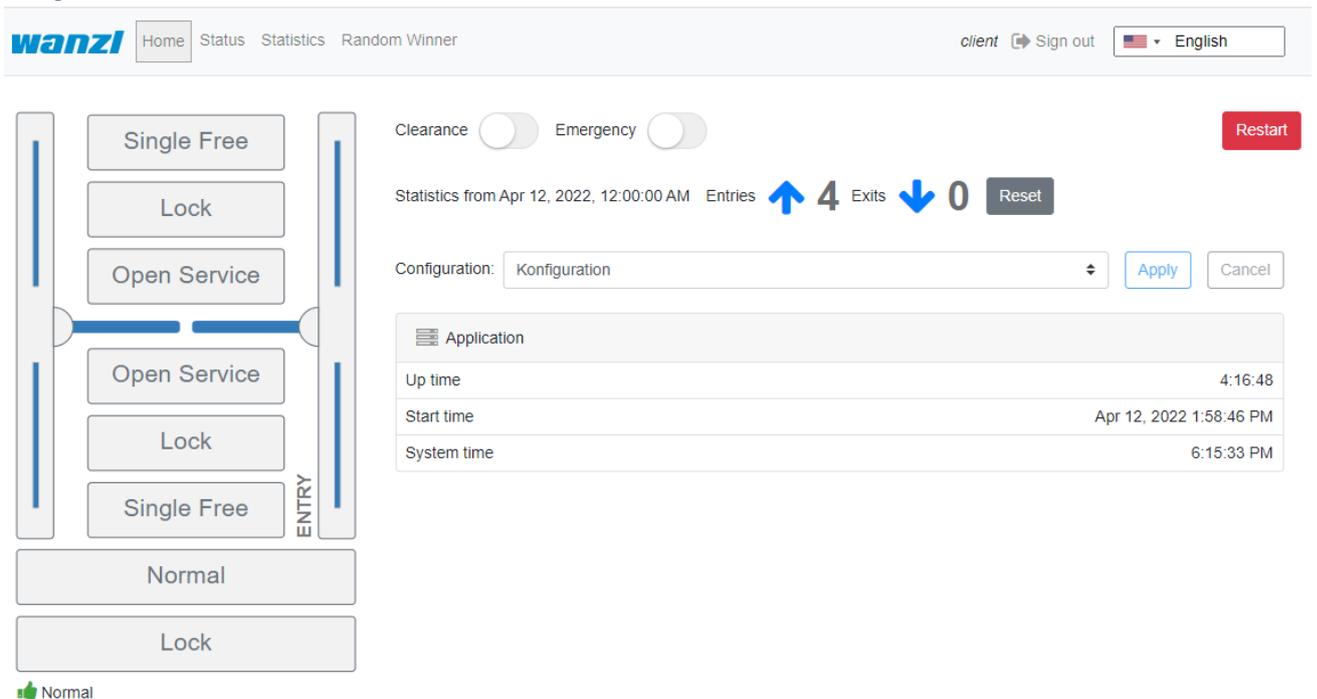
Fortschritt: 100 %

Status: Software aktualisieren abgeschlossen

If necessary, the application can be restarted.

## Customer Role

When you log in as user *client*, a simplified interface appears with "Home", "Status", "Statistics" configuration menus.



wanzl Home Status Statistics Random Winner client Sign out English

Clearance  Emergency  Restart

Statistics from Apr 12, 2022, 12:00:00 AM Entries ↑ 4 Exits ↓ 0 Reset

Configuration: Konfiguration Apply Cancel

| Application |                         |
|-------------|-------------------------|
| Up time     | 4:16:48                 |
| Start time  | Apr 12, 2022 1:58:46 PM |
| System time | 6:15:33 PM              |

Normal Lock

Single Free Lock Open Service Open Service Lock Single Free

ENTRY

Normal

In this view you can administrate the access control, but you cannot make any configuration adjustments. The current statistics are displayed directly on the interface, a complete overview of the accesses can be viewed in the **Statistics** tab and exported if required. The current status of the individual access control components can be viewed in the **Status** tab. The **Clearance** option disables all alarms to make the cleaning staff's job easier. The **Emergency** option supports the user in opening the access control immediately.

## Standard Assignment Connection Board

### Unit 1

| Port            | Function  | Description                          |
|-----------------|---|--------------------------------------|
| <b>LSU (E1)</b> | LS Middle<br><i>Center Light barrier</i>  | NO<br><i>Normally Open Contact</i>   |
| <b>LSV (E2)</b> | LS Entry<br><i>Photocell Input</i>  | NO<br><i>normally open contact</i>   |
| <b>E3</b>       | Open Entry<br><i>Single free entry direction Impuls<br/>0,1-1,0 Sek.</i>        | NO<br><i>Normally Open Contact</i>   |
| <b>E4</b>       | Open Exit<br><i>Single free exit direction Impuls<br/>0,1-1,0 Sek.</i>          | NO<br><i>normally open contact</i>   |
| <b>LSH (E5)</b> | NA<br><i>not connected</i>  |                                      |
| <b>E6</b>       | State bit 0<br><i>Status bit 0</i>  | NO<br><i>normally open contact</i>   |
| <b>E7</b>       | State bit 1<br><i>Status bit 1</i>  | NO<br><i>normally open contact</i>   |
| <b>E8</b>       | Fire Alarm<br><i>fire alarm system (BMA)</i>                                    | NC<br><i>normally closed contact</i> |
| <b>E9</b>       | Open Entry 70%<br><i>Einzelfrei 70% Input Direction<br/>Impuls 0,1-1,0 Sek.</i> | NO<br><i>normally open contact</i>   |
| <b>E10</b>      | Emergency Open Button<br><i>emergency button</i>                                | NC<br><i>normally closed contact</i> |

|           |  |         |
|-----------|--|---------|
| <b>A8</b> | Entry Confirmation<br><i>Confirmation of passage entry direction Impuls 0,5 Sek.</i> | +12 VDC |
| <b>A9</b> | Exit Confirmation<br><i>Confirmation of passage exit direction Impuls 0,5 Sek.</i>   | +12 VDC |

**Unit 2**

| <b>Port</b>     | <b>Function</b>  | <b>Description</b>                   |
|-----------------|--|--------------------------------------|
| <b>LSU (E1)</b> | NA<br><i>not connected</i>   |                                      |
| <b>LSV (E2)</b> | NA<br><i>not connected</i>   |                                      |
| <b>E3</b>       | Open Entry<br><i>Single free entry direction Impuls 0,1-1,0 Sek.</i>       | NO<br><i>normally open contact</i>   |
| <b>E4</b>       | Open Exit<br><i>Single free exit direction Impuls 0,1-1,0 Sek.</i>         | NO<br><i>normally open contact</i>   |
| <b>LSH (E5)</b> | LS Exit<br><i>Photocell exit</i>   | NO<br><i>normally open contact</i>   |
| <b>E6</b>       | State bit 2<br><i>Status bit 2</i>   | NO<br><i>normally open contact</i>   |
| <b>E7</b>       | State bit 3<br><i>status bit 3</i>   | NO<br><i>normally open contact</i>   |
| <b>E8</b>       | Fire Alarm<br><i>fire alarm system (BMA)</i>                               | NC<br><i>normally closed contact</i> |
| <b>E9</b>       | Open Exit 70%<br><i>single free 70% exit direction Impuls 0,1-1,0 Sek.</i> | NO<br><i>normally open contact</i>   |
| <b>E10</b>      | Emergency Open Button<br><i>emergency button</i>                           | NC<br><i>normally closed contact</i> |

|           |  |         |
|-----------|--|---------|
| <b>A8</b> | Alarm Impuls<br><i>Alarm Impuls 0,5 Sek.</i>         | +12 VDC |
| <b>A9</b> | Gate State Error<br><i>error condition Durchgang</i> | +12 VDC |

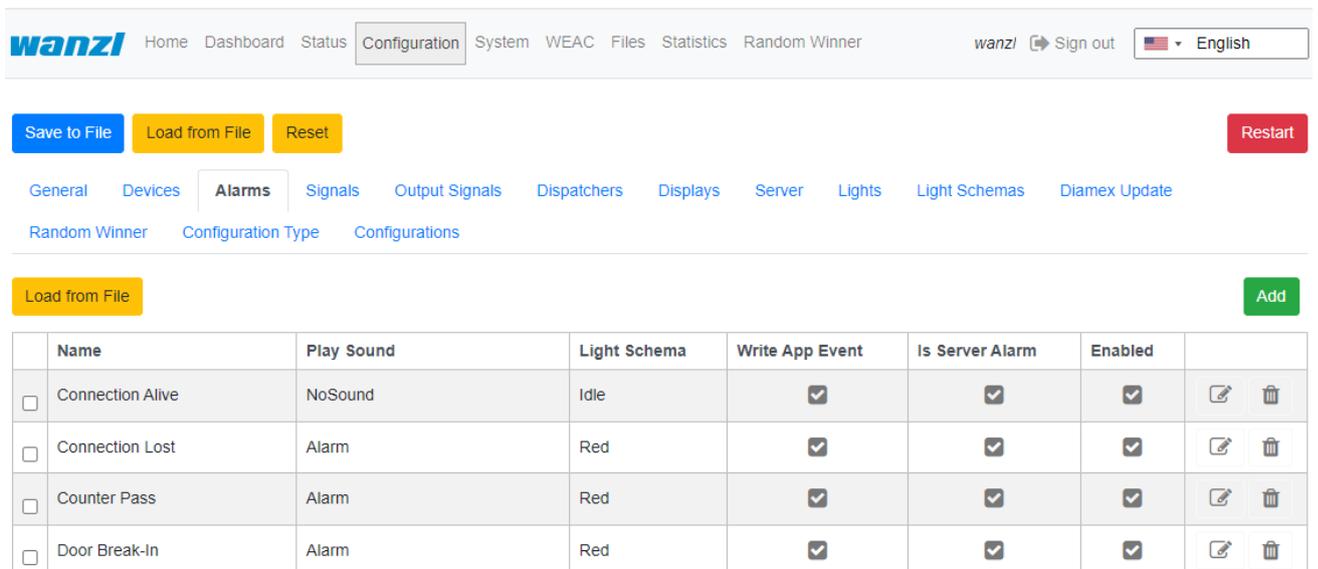
**Status Bits**

| Status  | Unit 1 E6 | Unit 1 E7 | Unit 2 E6 | Unit 2 E7 |
|---|-----------|-----------|-----------|-----------|
|   | Bit 0     | Bit 1     | Bit 2     | Bit 3     |
| Normal<br><i>Normal</i>   | 0         | 0         | 0         | 0         |
| Free Entry<br><i>Entrance permanently free</i>                                  | 1         | 0         | 0         | 0         |
| Lock Entry<br><i>entrance blocked</i>   | 0         | 1         | 0         | 0         |
| Service Entry<br><i>Permanently open entry direction</i>                        | 1         | 1         | 0         | 0         |
| Free Exit<br><i>Exit permanently free</i>                                       | 0         | 0         | 1         | 0         |
| Free Entry/Exit<br><i>Input/Output permanently free(<b>N</b>ot implemented)</i> | 1         | 0         | 1         | 0         |
| Lock Entry / Free Exit<br><i>Entrance blocked / exit permanently free</i>       | 0         | 1         | 1         | 0         |
| tbd   | 1         | 1         | 1         | 0         |
| Lock Exit<br><i>exit blocked</i>  | 0         | 0         | 0         | 1         |

|   |          |          |          |          |
|---|----------|----------|----------|----------|
| Free Entry / Lock Exit                          |          |          |          |          |
| <i>Entrance permanently free / exit blocked</i> | <b>1</b> | <b>0</b> | <b>0</b> | <b>1</b> |
| Lock  |          |          |          |          |
| <i>Gesperrt</i>                                 | <b>0</b> | <b>1</b> | <b>0</b> | <b>1</b> |
| tbd   | <b>1</b> | <b>1</b> | <b>0</b> | <b>1</b> |
| Service Exit                                    |          |          |          |          |
| <i>Permanently open exit direction</i>          | <b>0</b> | <b>0</b> | <b>1</b> | <b>1</b> |
| tbd   | <b>1</b> | <b>0</b> | <b>1</b> | <b>1</b> |
| tbd   | <b>0</b> | <b>1</b> | <b>1</b> | <b>1</b> |
| Self Test                                       |          |          |          |          |
| <i>self test</i>                                | <b>1</b> | <b>1</b> | <b>1</b> | <b>1</b> |

## Alarms Definition

An alarm is triggered as a follow-up action from signals or other sources (e.g. devices). Navigate to "Configuration" -> "Alarms".



The screenshot shows the wanzl configuration interface. The navigation menu includes Home, Dashboard, Status, Configuration (selected), System, WEAC, Files, Statistics, and Random Winner. The user is signed out and the language is set to English. The main configuration area has buttons for Save to File, Load from File, and Reset, along with a Restart button. The Alarms section is active, showing a list of alarms with columns for Name, Play Sound, Light Schema, Write App Event, Is Server Alarm, and Enabled. There are also icons for editing and deleting each alarm.

|                          | Name             | Play Sound | Light Schema | Write App Event                     | Is Server Alarm                     | Enabled                             |   |
|--------------------------|------------------|------------|--------------|-------------------------------------|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/> | Connection Alive | NoSound    | Idle         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   |
| <input type="checkbox"/> | Connection Lost  | Alarm      | Red          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   |
| <input type="checkbox"/> | Counter Pass     | Alarm      | Red          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   |
| <input type="checkbox"/> | Door Break-In    | Alarm      | Red          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   |

To create the alarm click on the "Add" button:

**Alarm Name**

Alarm ▼

Name \*

Alarm Name

Enabled

Priority \*

1000

Play Sound \*

No Sound ▼

Sound Volume \*

80

Re-Play Sound, ms \*

0

Activate Output Signal

Light Schema

▼

An alarm has several general characteristics: Name, Enabled Status, Priority, Sounds settings, Light settings, etc.

In the table below there are descriptions of existing alarms.

| Definition       | Description  | Status |
|------------------|--|--------|
| Connection Alive | monitors connection to external application                                | on/off |
| Connection Lost  | monitors connection to external application                                | on/off |
| Counter Pass     | is set by anti-rotation protection is activated                            | on/off |
| Door Break-In    | Door is forcibly moved when closed   | on/off |
| Emergency        | is set if the signals on unit 1 E8 or unit 2 E8 are not active (opener).   | on/off |
| Fire Alarm       | is set if the signals on unit 1 E10 or unit 2 E10 are not active (opener). | on/off |
| Invalid Ticket   | is set if ticket validation fails  | Impuls |
|                  | is set when an object is in the  |        |

|                     |  |        |
|---------------------|--|--------|
| Motionless Object   | gate area for more than a defined period of time and closing is prevented by a timeout.              | on/off |
| No Alarm            | is set if no alarm is defined for signals  | on/off |
| Proceed Alarm       | analogous to Motionless Object with a different time span and other actions without light indication | on/off |
| Server Alarm        | is triggered in the FMCU server  | on/off |
| Tailgating          | is set if more than one person is in the gate area   | on/off |
| Unauthorized Access | is set if a person is in the gate area when the gate is closed                                       | on/off |
| Valid Ticket        | is set if the ticket validation was successful (trigger beep)  | Impuls |

## Signals

The information in this section is based on FMCU software v2.3.7 and WEAC version 32.14.

**wanzl** Home Dashboard Status **Configuration** System WEAC Files Statistics Random Winner
wanzl Sign out 🇺🇸 English

Save to File
Load from File
Reset

General Devices Alarms **Signals** Output Signals Dispatchers Displays Server Lights Light Schemas Diamex Update

Random Winner Configuration Type Configurations

Load from File
Add

|                          | # | Name                           | Gate side | Policy do open | Policy do close | Reject open | Alarm Type              | Action Type | Enabled                             |  |
|--------------------------|---|--------------------------------|-----------|----------------|-----------------|-------------|-------------------------|-------------|-------------------------------------|--|
| <input type="checkbox"/> | 0 | Anybody Light Bar [1-50]       | NotSet    | 0              | 0               | 0           |                         | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 1 | Broken Device                  | NotSet    | 0              | 0               | 0           |                         | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 2 | Counter Pass Watcher Program   | NotSet    | 0              | 1               | 1           | Counter Pass            | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 3 | Disinfectant Dispenser         | NotSet    | 0              | 0               | 0           |                         | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 4 | Disinfectant Dispenser Program | NotSet    | 0              | 0               | 1           |                         | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 5 | Door Break In Alarm            | NotSet    | 0              | 0               | 0           | Door Break-In           | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 6 | Door Motor Low Speed           | NotSet    | 0              | 0               | 0           | Door Motor Low Speed    | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 7 | Door Motor Over Current        | NotSet    | 0              | 0               | 0           | Door Motor Over Current | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 8 | Door Motor Over Speed          | NotSet    | 0              | 0               | 0           | Door Motor Over Speed   | NoAction    | <input checked="" type="checkbox"/> |  |
| <input type="checkbox"/> | 9 | Emergency Remote Entry         | Entry     | 0              | 0               | 0           | Emergency               | Emergency   | <input checked="" type="checkbox"/> |  |

## System

The information in this section is based on FMCU software v2.6.14.

## Network

wanzl Home Dashboard Status Configuration **System** WEAC Files Statistics Random Winner wanzl Sign out English

Simulator Restart Reboot System

Network Hostname Hosts CA Certificates NTP nginx FMCU USB Devices Hardware Update Software

DHCP

MAC

b8:27:eb:ea:35:49

Address \*

192.168.1.99

Netmask \*

255.255.255.0

Gateway \*

192.168.1.240

DNS server \*

8.8.8.8

Save Reset

## Hostname

wanzl Home Dashboard Status Configuration **System** WEAC Files Statistics Random Winner wanzl Sign out English

Simulator Restart Reboot System

Network **Hostname** Hosts CA Certificates NTP nginx FMCU USB Devices Hardware Update Software

Hostname

fmcu

Save Cancel

## Hosts

wanzl Home Dashboard Status Configuration System WEAC Files Statistics Random Winner wanzl Sign out English

Simulator Restart Reboot System

Network Hostname Hosts CA Certificates NTP nginx FMCU USB Devices Hardware Update Software Add

| IP Address    | FQDN                   |   |
|---------------|------------------------|---|
| 192.168.1.101 | fmcu-slave.wanzl.local |    |

## CA Certificates

wanzl Home Dashboard Status Configuration System WEAC Files Statistics Random Winner wanzl Sign out English

Simulator Restart Reboot System

Network Hostname Hosts CA Certificates NTP nginx FMCU USB Devices Hardware Update Software Add

| Filename                |   |
|-------------------------|---|
| wanzl.local.root-ca.crt |   |

## NTP

**wanzl** Home Dashboard Status Configuration **System** WEAC Files Statistics Random Winner wanzl Sign out English

Simulator Restart Reboot System

Network Hostname Hosts CA Certificates **NTP** nginx FMCU USB Devices Hardware Update Software

**ntpd-client** ✔ Service is running Restart Stop

**ntpd** ✘ Service is stopped Start

Jul 11, 2023 2:37:27 PM

NTP servers

```
server 0.debian.pool.ntp.org iburst
server 1.debian.pool.ntp.org iburst
server 2.debian.pool.ntp.org iburst
server 3.debian.pool.ntp.org iburst
```

The host is an NTP server

Save Cancel

## nginx

**wanzl** Home Dashboard Status Configuration **System** WEAC Files Statistics Random Winner wanzl Sign out English

Simulator Restart Reboot System

Network Hostname Hosts CA Certificates NTP **nginx** FMCU USB Devices Hardware Update Software

✔ Service is enabled Disable

✔ Service is running Restart Stop

Add

| Enabled                             | Filename              | Server Name            | SSL                                 | SSL Certificate | SSL Key         |  |
|-------------------------------------|-----------------------|------------------------|-------------------------------------|-----------------|-----------------|--|
| <input type="checkbox"/>            | fmcu-http.wanzl.local | \$hostname.wanzl.local | <input type="checkbox"/>            |                 |                 |  |
| <input checked="" type="checkbox"/> | fmcu.wanzl.local      | \$hostname.wanzl.local | <input checked="" type="checkbox"/> | wanzl.local.crt | wanzl.local.crt |  |

## FMCU

wanzl Home Dashboard Status Configuration **System** WEAC Files Statistics Random Winner wanzl Sign out English

Simulator Restart Reboot System

Network Hostname Hosts CA Certificates NTP nginx **FMCU** USB Devices Hardware Update Software

✔ Service is running Restart

Port

8888

Port open

Use system CA certificates

Save Cancel

## Light Schemas

To navigate the section click "Configuration" -> "Light Schemas". Here you can add and/or customize named color schemes.

wanzl Home Dashboard Status **Configuration** System WEAC Files Statistics Random Winner wanzl Sign out English

Save to File Load from File Reset

General Devices Alarms Signals Output Signals Dispatchers Displays Server Lights **Light Schemas** Diamex Update

Random Winner Configuration Type Configurations

Add

| Name           | Priority | Led Image Entry | Led Image Exit | Running Light |   |
|----------------|----------|-----------------|----------------|---------------|---|
| Emergency      | 10000    | Arrow           | Arrow          | ✘             |   |
| Open Entry     | 10000    | Cross           | Cross          | ✔             |   |
| Entry And Exit | 10000    | Cross           | Cross          | ✔             |   |
| Open Exit      | 10000    | Cross           | Cross          | ✔             |   |
| Free Entry     | 10000    | Arrow           | Cross          | ✘             |   |

Each schema describes the colors and behaviour of FMCU lights elements like enter and exit zones and the door. Existing light schema you can use in settings of **Gates** and **Alarms**.

Click Add to create light schema or click "pen" in the table to edit existing schema.

Save
Cancel

**Light Schema Name**

Light Schema ▼

Name \*

Light Schema Name

Priority \*

10000

Color Entry On \*

Color Exit On \*

Color Door On \*

Light Schema On, ms \*

0

Light Schema Off, ms \*

0

Color Entry Off \*

Color Exit Off \*

Each light schema is described by the fields below

| Field                  | Description  |
|------------------------|--|
| Name                   | Name of light schema   |
| Priority               | Priority of using light schema if there is competition situation. Less value means more priority |
| Color Entry On         | Color of the gate entry zone during "On" time period   |
| Color Exit On          | Color of the gate exit zone during "On" time period  |
| Color Door On          | Color of the doors during "On" time period   |
| Light Schema On, ms *  | Length of "On" time period in ms   |
| Light Schema Off, ms * | Length of "Off" time period in ms  |
| Color Entry Off        | Color of the gate entry zone during "Off" time period  |
| Color Exit Off         | Color of the gate exit zone during "Off" time period   |
| Color Door Off         | Color of the doors during "Off" time period  |
| Led Image Entry *      | Selected image of the gate entry zone (Arrow, Cross, Empty)                                      |
| Led Image Exit *       | Selected image of the gate exit zone (Arrow, Cross, Empty)                                       |

|               |  |
|---------------|--|
| Running Light | Using "runing light" for the light schema (option) |
|---------------|--|

Click on any field for color to edit color of selected gate element

### Light Schema Name

Name \*

Priority \*

Color Entry On \*



You can select the color space (RGB, HSL, HEX) to set the required color



## Lights

To navigate the section click "Configuration" -> "Lights". Here you can add and/or customize light configurations for different gate's modes.

wanzi Home Dashboard Status **Configuration** System WEAC Files Statistics Random Winner wanzi Sign out English

Save to File Load from File Reset

General Devices Alarms Signals Output Signals Dispatchers Displays Server **Lights** Light Schemas Diamex Update

Random Winner Configuration Type Configurations

| Name    | Normal | Off | Locked | Locked Entry | Locked Exit | Free Entry | Free Exit | Open Entry | Open Exit | Service Entry | Service Exit | Terminated | WEAC | Winner |   |
|---------|--------|-----|--------|--------------|-------------|------------|-----------|------------|-----------|---------------|--------------|------------|------|--------|---|
| Default | Idle   | Off | Locked | Locked Entry | Locked Exit | Free Entry | Free Exit | Open Entry | Open Exit | Service Entry | Service Exit | Terminated | Weac | Winner |   |

Each configuration has its own name. The image above shows the default light configuration. Click *Add* to create configuration, or "pen" to edit existing one.

Save Cancel 1 / 1

Default (default\_light\_mode\_configuration)

Light Mode Configuration

Name \*

Default

Normal

Idle

- Emergency
- Open Entry
- Entry And Exit
- Open Exit
- Free Entry
- Free Exit
- Idle
- Locked Entry
- Locked Exit
- Locked
- Manual Mode
- Off
- Out Of Order
- Red

For each mode select existing light schema.

Then you can use the light configuration in "Devices" -> "Gates" settings.

wanzi Home Dashboard Status Configuration System WEAC Files Statistics Random Winner wanzi Sign out English

Save to File Load from File Reset

General **Devices** Alarms Signals Output Signals Dispatchers Displays Server Lights Light Schemas Diamex Update

Random Winner Configuration Type Configurations

**Gates** Light bars Audio players Slave FMCUs GPIO LED players USB Hubs Photo camera Xovis Cameras Readers

| Name | Class                   | Port | Turnstile ID |   |
|------|-------------------------|------|--------------|---|
| Gate | GalaxyGate (Modbus TCP) |      |              |  |

Press "pen" to edit gate settings, and select light configuration.

Is firmware version strict



Entry\Exit Light Disable



Gate Light Schema \*

Default

Unit 1 is Galaxy Port



Unit 2 is Galaxy Port



## Technical Background

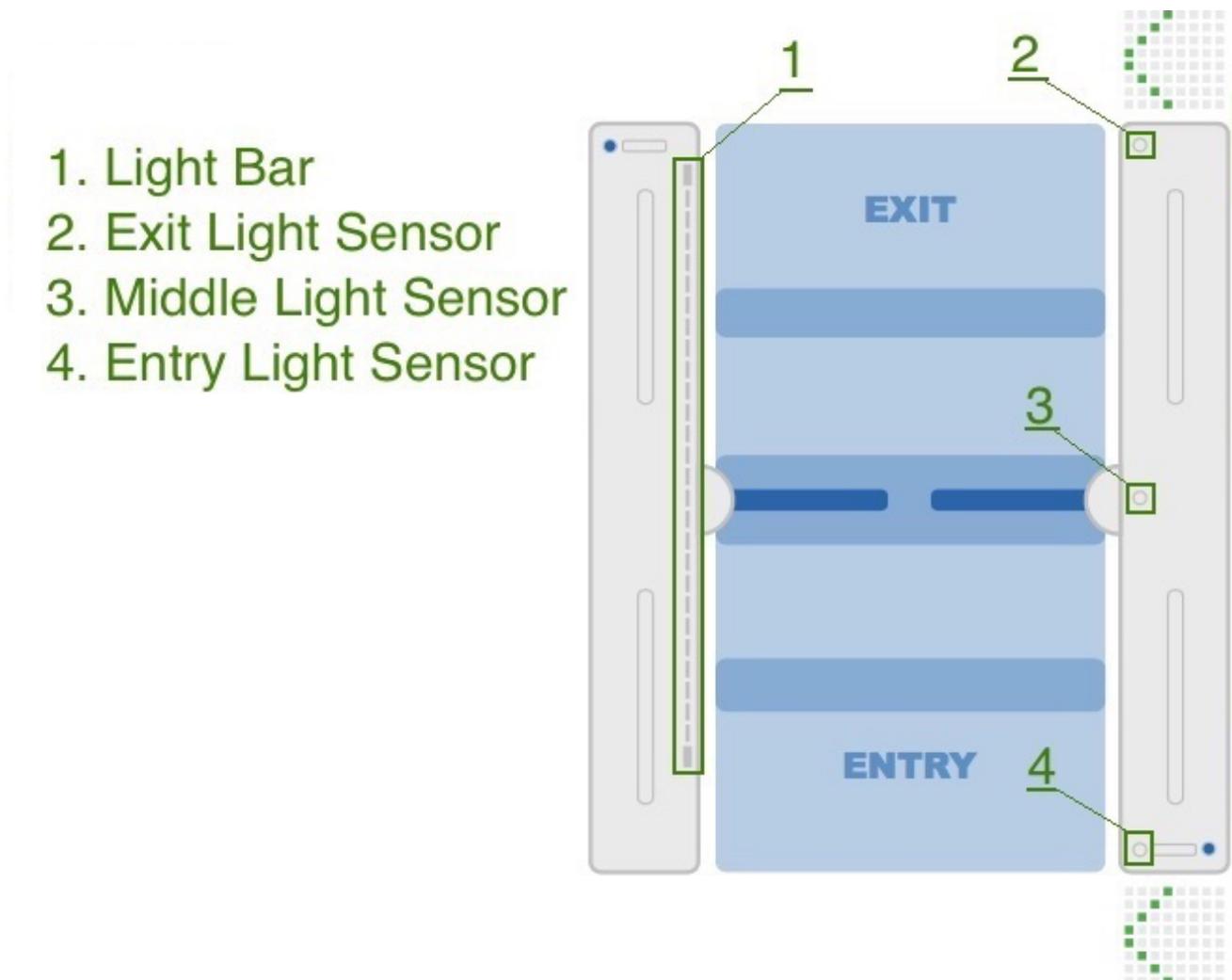
The **FMCU** software is based on a customized UNIX operating system, which has been produced using the [Yocto Project](#). Only the required services are activated in the operating system. The optimal support packages for the CPU type are taken into account when creating the operating system. These so-called **B**oard **S**upport **P**ackages (BSP) are provided by the hardware manufacturers and allow optimal and efficient utilization of the hardware resources.

## Functions

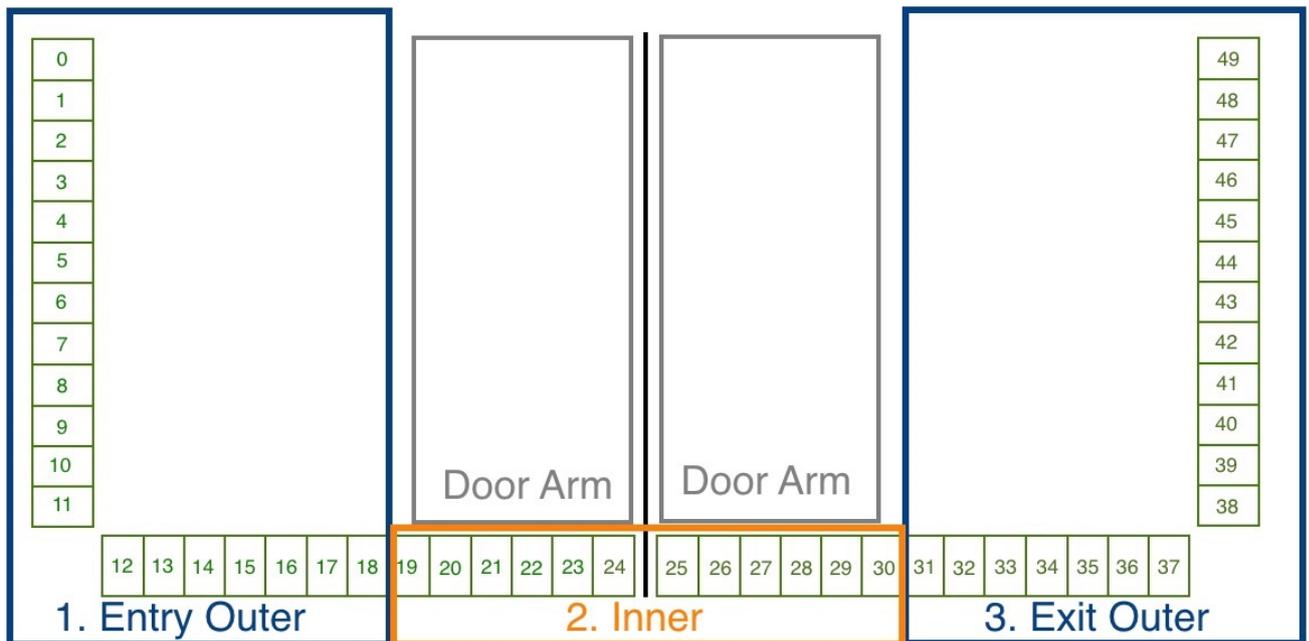
In principle, the functions are mapped via the signal processing. The signals are generated by different sources including:

- Light bar
- Light sensor
- Ceiling sensor
- Other

The location of the sensors is shown in the figure below. In each half of the frame there is a so-called "inner zone" and an "outer zone". When passing through an access control, a signal flow diagram is generated, which is used to map the following functions.



The light bar serves as a source for several signals and is also divided into different areas.



The following signals are installed in the standard configuration.

| Signal Name               | Frame Half |
|---------------------------|------------|
| Entry Confirmation        | Entry      |
| Entry Gate Sensor [U1_E2] | Entry      |
| Entry Outer LightBar      | Entry      |
| Exit Inner LightBar       | Entry      |
| Free Entry [1000]         | Entry      |
| Lock Entry [0100]         | Entry      |
| Open Entry [U1_U2_E3]     | Entry      |
| Open Entry 70% [U1_E9]    | Entry      |
| Remote Open Entry         | Entry      |
| Service Entry [1100]      | Entry      |
| Emergency Remote          | Exit       |
| Emergency [U1_U2_E8]      | Exit       |
| Entry Inner LightBar      | Exit       |
| Exit Confirmation         | Exit       |
| Exit Gate Sensor [U2_E5]  | Exit       |
| Exit Outer LightBar       | Exit       |
| Free Exit [0010]          | Exit       |
| Lock Exit [0001]          | Exit       |
| Open Exit [U1_U2_E4]      | Exit       |
| Open Exit 70% [U2_E9]     | Exit       |

|                     |      |
|---------------------|------|
| Remote Open Exit    | Exit |
| Service Exit [0011] | Exit |

## Closing-run at reduced Speed

This function applies to signals that have the property **CloseGate > 0**. For the affected signals, the value **Close gate speed, % \*** must be defined with a value between 10 and 100%. It is therefore possible to define appropriate closing speeds for different passage scenarios. The default value is set to 100%. In the standard configuration, the following signals meet this requirement.

| Signal                    | Parameter             | Value |
|---------------------------|-----------------------|-------|
| Tailgating watcher        | Close gate speed, % * | 100%  |
| Entry Gate Sensor [U1_E2] | Close gate speed, % * | 100%  |
| Exit Gate Sensor [U2_E5]  | Close gate speed, % * | 100%  |
| Entry Outer LightBar      | Close gate speed, % * | 100%  |
| Exit Outer LightBar Exit  | Close gate speed, % * | 100%  |

## Passage Confirmation

This function sets an impulse with an adjustable duration in the connection board for connection **A8**.

## Suitcase Trolley Detection

This function is active when the listed parameters are set for the following signals. It means that a person with a suitcase being pulled behind them can pass through prematurely closing swing doors without being disturbed.

| Signal                     | Parameter                | Value |
|----------------------------|--------------------------|-------|
| Middle Gate Sensor [U1_E1] | Protect from force close | true  |
| Inner LightBar             | Protect from force close | true  |

## Multiple Opening

This function is only valid if a reader has been set up for the entry direction. It means that several people can pass through the entrance in a row without the swing door being closed in the meantime. Each person must present a ticket at the card reader at the entrance. The swing doors only remain open if the validation is successful. This function is active when the listed parameters are set for the following signals.

| Signal                     | Parameter                | Value |
|----------------------------|--------------------------|-------|
| Middle Gate Sensor [U1_E1] | Protect from force close | true  |
| Inner LightBar             | Protect from force close | true  |
| Entry Outer LightBar       | Protect from force close | true  |
| Entry Gate Sensor [U1_E2]  | Protect from force close | true  |

|                    |           |       |
|--------------------|-----------|-------|
| Tailgating watcher | Activated | false |
|--------------------|-----------|-------|

## Tips for Working

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If you have lost the overview when configuring the signals, you can use the function

### Reset to Default

[Reset to Default](#)

restore a defined initial state.

#### NOTE

If you use the "Rest to Default" function, the current settings will be lost. If necessary, you can export the current configuration before this step.

## Verwandte Themen

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-  [Galaxy Gate Bedienungsanleitung](#)
- [Beschreibung zentrales Dashboard](#)
- [Galaxy Gate Inbetriebnahme](#)
- [Applikationsserver Zutrittskontrollen](#)
- [Zutrittskontrollen Checkliste IT Infrastruktur](#)