



## record POWER ASSIST

User manual

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**List of changes**

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List of changes

| <b>Change</b>                                 | <b>Location</b> |
|---|-----------------|
| Complete revision of all Sections and content | Entire document |
| New Section structure                         | Entire document |
| Revision of all graphics                      | Entire document |

# 1 Safety

## 1.1 Presentation of warning signs

Various symbols are used in this guide for easier understanding:



### NOTICE

Useful advice and information to ensure correct and efficient workflow of the system.



### IMPORTANT

Specific details which are essential for trouble-free operation of the system.



### IMPORTANT

Important details which must be read for proper function of the system.



### CAUTION

Against a potential hazardous situation that can lead to minor personal injury and property damage.



### WARNING

Against a latent hazardous situation that can lead to severe injuries or death and cause substantial property damage.



### DANGER

Against an imminent hazardous situation that can lead to severe injury or death.



### DANGER

Against an imminent or latent hazardous situation that could lead to electric shock and cause serious injury or death.

## 1.2 Intended purpose of use

The system is designed exclusively for use as a pedestrian passage. The installation must only occur in dry areas. If there are deviations then proper waterproofing and water drains will be required on-site.

Any other application or use beyond this purpose is not considered to be an intended purpose. The manufacturer bears no liability for any resulting damage; the operator alone shall bear the associated risk.

The intended purpose also includes observation of the operating conditions specified by the manufacturer, in addition to regular care, maintenance and repair.

Interventions in or alterations to the installation performed by non-authorized maintenance technicians exclude the manufacturer's liability for consequential damages.

# 1 Safety

## 1.3 General hazards

The following section lists hazards that can be caused by the system even when used as intended. To reduce the risk of malfunction, damage to property or injury to persons and to avoid dangerous situations, the safety instructions listed here must be observed.

The specific safety instructions in the other sections of this manual must also be observed.



### IMPORTANT

**The country-specific regulations must be observed and complied with!**



### IMPORTANT

**To avoid malfunctions, moving objects such as flags or parts of plants must not be allowed to enter the detection range of the sensors.**



### CAUTION

**Risk of malfunctions, material damage or injury due to improper settings!**

- a) Improper settings can lead to malfunctions, material damage or personal injury.
  - ⇒ Do not disconnect the system from the power supply overnight.
  - ⇒ Settings should only be made by personnel qualified to do so.
  - ⇒ Do not disassemble, put out of operation or manipulate safety devices.
  - ⇒ Have faults rectified by specialist personnel or by personnel qualified to do so.
  - ⇒ Have service and maintenance carried out according to locally applicable regulations or according to a maintenance contract.



### CAUTION

**Risk of malfunctions, material damage or injuries due to insufficient or missing cleaning or care!**

- a) Insufficient or inattentive cleaning or care of the system can lead to malfunctions, damage to property or injury to persons.
  - ⇒ Check the sensors regularly for dirt and clean them if necessary.
  - ⇒ Regularly remove dirt accumulations in the floor rail or under the floor mat.
  - ⇒ Keep the system free from snow and ice.
  - ⇒ Do not use aggressive or caustic cleaning agents.
  - ⇒ Use road salt or loose chippings only conditionally.
  - ⇒ Lay the floor mat without folds and flush with the floor.
  - ⇒ Equipment required for cleaning purposes such as ladders or similar must not be leaned on or attached to the system.



## CAUTION

### Risk of material damage or injury due to unforeseen opening, closing or turning of the door!

- a) The door can open, close or turn unexpectedly. This may result in damage to property or injury to persons.
  - ⇒ No persons may be present in the opening area of the system.
  - ⇒ Ensure that moving objects such as flags or parts of plants do not enter the detection range of the sensors.
  - ⇒ Do not make any settings on the control unit when the system is in use.
  - ⇒ Have faults rectified immediately by specialist or personnel qualified to do so.
  - ⇒ Remove objects from the opening area.
  - ⇒ Do not disassemble, put out of operation or manipulate safety devices.
  - ⇒ Do not rush through a closing system.



## CAUTION

### Risk of bruising and severing of limbs!

- a) If the system moves, careless behaviour can lead to serious injuries to limbs or severance of limbs.
  - ⇒ Do not reach in when parts of the system are moving.
  - ⇒ Keep a distance when parts of the system move.
  - ⇒ Do not bump into or touch the system when it is moving.
  - ⇒ Do not open or remove protective covers during operation.
  - ⇒ Do not permanently remove covers from the system.
  - ⇒ Only carry out inspection, service, maintenance and cleaning when the system is stationary and switched off.



## CAUTION

### Danger of material damage or injury due to non-functioning safety devices!

- a) If safety devices are not functioning, manipulated or put out of operation, there is a risk of damage to property or injuries that can lead to death.
  - ⇒ Never disable or manipulate safety devices.
  - ⇒ Have inspection, service and maintenance of the safety devices carried out according to local regulations or according to a maintenance contract.



## CAUTION

### Danger of malfunctions, damage to property or risk of injury if used by unauthorised persons!

- a) If unauthorised persons use the system, there is a risk of malfunction, damage to property or injury to persons.
  - ⇒ Children under 8 years of age may only use the system under supervision.
  - ⇒ Children must not play, clean or maintain the system.
  - ⇒ Persons with limited physical, sensory or mental abilities as well as persons with insufficient knowledge or experience may only use the system under supervision or must have received and understood instructions to do so.



## DANGER

### Danger to life due to electric current!

- a) In case of contact with live parts, there is an immediate danger to life due to electric shock. Damage to or removal of the insulation or individual components can be life-threatening.
  - ⇒ Before starting work on active parts of electrical systems and equipment, ensure that all poles are voltage free and that this is maintained for the duration of the work.
  - ⇒ Keep moisture away from live parts. This can lead to a short circuit.
  - ⇒ Never bridge fuses or put them out of operation.
  - ⇒ Do not connect the power supply until all work has been completed.
  - ⇒ Have work on the electrical system performed by qualified personnel only.



## DANGER

### Danger to life due to non-functioning safety devices of the fire protection system!

- a) If safety devices of the fire protection system do not function properly, there is a risk of serious or fatal injuries.
  - ⇒ Never disconnect the fire protection system from the power supply overnight.
  - ⇒ Do not disassemble, put out of operation or manipulate safety devices.
  - ⇒ Do not remove safety instructions on the system.
  - ⇒ Never block, hold open or otherwise prevent fire doors from closing.
  - ⇒ Have inspection, service and maintenance of the fire protection system carried out in accordance with locally applicable regulations or according to a maintenance contract.
  - ⇒ Have the fire protection system checked and maintained according to the state of the art.

## 1.4 State of technology

This system was developed using state of the art technology and officially recognized technical safety regulations. The system, depending on its options and diameter, comply with the requirements of the Machine Guidelines 2006/42/EG as well as EN 16005 and DIN 18650 (D).

Nevertheless, danger may arise if not used as intended.



## IMPORTANT

**Installation, commissioning, inspection, maintenance and repair work may only be conducted by qualified, trained and authorized technicians.**

**After commissioning or repair work, fill in the check list and give it to the customer for safe keeping.**

**We recommend obtaining a service agreement.**

## 1.5 Personal protective equipment

Personal protective equipment is used to protect persons from adverse effects on health. Personnel must wear personal protective equipment during the various work activities on and with the system.

Personal protective equipment is explained below:



Hearing protection is used to protect the hearing from noise. As a rule of thumb, hearing protection is compulsory from when normal conversation with other people is no longer possible.



The head protection serves to protect against falling and flying parts and materials. It also protects the head from bumping into hard objects.



Protective goggles protect the eyes from flying parts, dust, splinters or splashes.



Protective gloves are designed to protect hands from friction, abrasions, punctures or serious injury and from burning caused by contacting hot surfaces.



Safety shoes protect the feet from crushing, falling parts and slipping on surfaces. The puncture resistance of the shoes ensures, that pointy objects do not penetrate the foot.



The high-visibility vest is used to make the personnel stand out and therefore to be seen. With improved visibility and attention, the high-visibility vest protects personnel in busy work areas from collisions with vehicles.

Depending on the place of work and the working environment, the protective equipment varies and must be adapted accordingly. In addition to protective equipment for specific work, the work site may require other protective equipment ( for example a harness).

In hygiene-protected areas, special or additional requirements of personal protective equipment may be required. These requirements must be considered when choosing personal protective equipment. If there is any uncertainty regarding the choice of personal protective equipment, the safety officer must be consulted at the place of work.

## 1.6 Spare parts and liability

Reliable and trouble free operation of the door is only guaranteed when using parts that were recommended by the manufacturer. The manufacturer declines any liability for damages resulting from unauthorized modifications to the door or the use of parts that are not permitted.

## 2 General information

---

## 2 General information

### 2.1 Purpose and use of the instructions

These instructions are an integral part of the system and enable efficient and safe handling of the system. In order to ensure proper functioning, the instructions must be accessible at all times and kept in the immediate area of the system.

Although only the male form has been chosen for reasons of better legibility, the information refers to members of both sexes.

The operator must have read and understood the manual before starting any work. The basic requirement for safe working is to follow the safety instructions and the handling instructions. In addition, the local regulations and safety rules apply.

The manual can be handed over in extracts to instructed personnel who are familiar with the operation of the system.

The illustrations are for basic understanding and may differ from the actual presentation. Specific representations are contained in the drawings.

### 2.2 Copyright

The copyright of the instructions remain at:

BLASI GmbH

Carl-Benz-Str. 5-15

D – 77972 Mahlberg

It is prohibited to reproduce, distribute or use the manuals for purpose of competition without the written authorization of BLASI GmbH.

Violation of the here stated copyrights will be prosecuted and fined with compensation of damage.

Subject can change without prior notice.

Differences between product and manual are thereby possible.

### 2.3 Product identification

The nameplate located on the door provides accurate identification of the product.

### 2.4 Manufacturer BLASI GmbH

#### **BLASI GmbH Automatic Door Systems**

Carl-Benz-Str. 5-15

D-77972 Mahlberg

Germany

Telephone: +49 7822-893-0

Fax: +49 7822-893-119

### 2.5 Target groups



#### **CAUTION**

##### **Risk of injury if personnel are insufficiently qualified!**

If unqualified personnel work on the system or are in the danger zone of the system, dangers may arise which can cause serious injuries and considerable damage to property.

- a) All work must be carried out by qualified personnel only.
- b) Keep unqualified personnel away from danger areas.

This operating manual is intended for the target groups listed below:

- Operating entity of the system:  
the person who is responsible for the technical maintenance of this system
- Operator of the system:  
the person who operates the system every day and has been suitably instructed

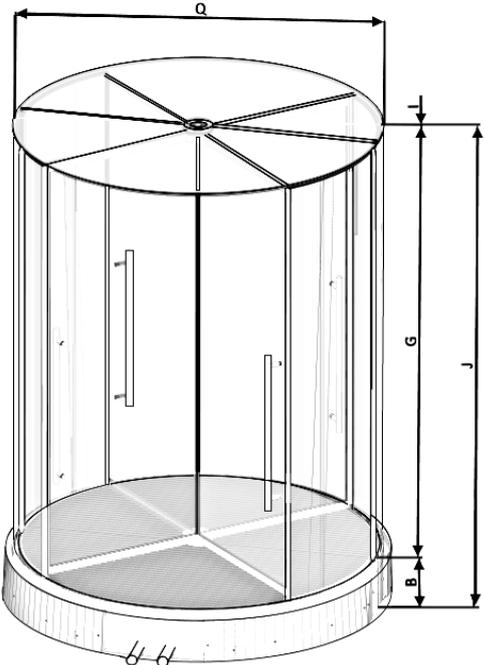
## 2.6 Definition of terms

| Term:                     | Explanation:   |
|---------------------------|--|
| System                    | <p>The term is also used in these instructions as a synonym for the product. Door operators, revolving doors, sliding doors, etc. are referred to as a system.</p> <p>If information in these instructions refers to a specific type, this is shown accordingly in the text.</p>   |
| User                      | Users are all persons who use the system.  |
| System operator           | The respective owner is referred to as the system operator, regardless of whether they operate the system as the owner or pass it on to third parties.   |
| Authorized representative | The authorized representative takes over certain parts of the manufacturer's obligations with regard to fulfilling the requirements of the Machinery Directive. In particular, the authorized representative may also place the system on the market and/or sign EC declarations of incorporation.   |
| Qualified personnel       | <p>Qualified personnel are authorized and appropriately trained to perform the following work:</p> <ul style="list-style-type: none"> <li>– Disassembly, Assembly, Commissioning, Operation, Audit, Maintenance, Troubleshooting, Decommissioning</li> </ul> <p>The qualified personnel have several years of professional experience in the technical field, e.g. as mechanics or machine fitters.</p> <p>The qualified personnel are aware of the residual risks arising from the installation site and, due to their professional training, knowledge and experience, are able to carry out the work assigned to them and to independently identify and avoid possible danger points.</p> |
| Manufacturer              | The manufacturer is whoever designs and/or builds machinery or incomplete machinery under the scope of the Machinery Directive.  |
| Life phases               | All phases of the system's condition and use are referred to as life phases. This applies from the time the system leaves the factory until it is disposed of.   |
| Personnel                 | All persons who carry out activities on and with the system are referred to as personnel. Personnel can be, for example, the operator, the cleaning staff, or the security staff. The personnel meet the personnel qualifications required by the manufacturer.  |
| Service technician        | Experts and specialists or representative authorized by the manufacturer to perform commissioning, maintenance and servicing.  |

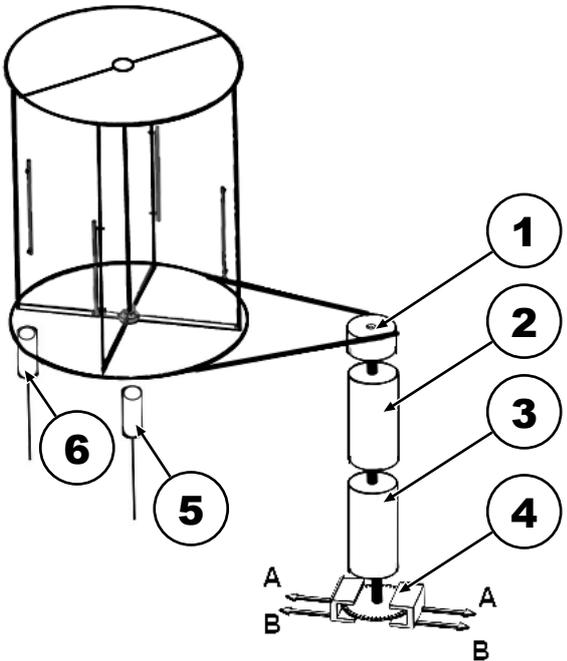
### 3 Description

### 3 Description

#### 3.1 Graphical illustration

| Example: K41/42 -ST/SU/NMA  | Abbreviation | Description       |
|---|--------------|-------------------|
|  | B            | Floor ring height |
|   | G            | Height of passage |
|   | I            | Cladding height   |
|   | J            | Overall height    |
|   | Q            | Overall diameter  |

#### 3.2 Function description POWER ASSIST

| Example: K41/42   | No. | Description          |
|---|-----|----------------------|
|  | 1   | Track roller         |
|   | 2   | Gearbox              |
|   | 3   | Motor                |
|   | 4   | Motor-Encoder        |
|   | 5   | Zero-position sensor |
|   | 6   | Locking device       |

When a user enters the revolving door and presses the turnstile, this is detected by the motor encoder.

The door drive then starts the motor support and powers the motor to assist the user in pushing the turnstile (up to 800 kg).

If the turnstile is no longer being pushed, this is detected by the drive, the support is retracted and the turnstile moves out and positions itself at slow speed in X position. The door behavior is similar to a manual revolving door.

By attaching safety sensors in the area of the main closing edges, the safety is considerably increased compared to a purely manual door. If a person is detected in the shearing edge danger zone, the drive actively stops the turnstile.

Using a key switch, it is possible to switch between the operating modes **LOCKED**, **ASSIST**, **MANUAL** and **ENGINEERING**.

LEDs inform about operating mode, system and error status.

### 3.3 Safety features

#### 3.3.1 Locking device

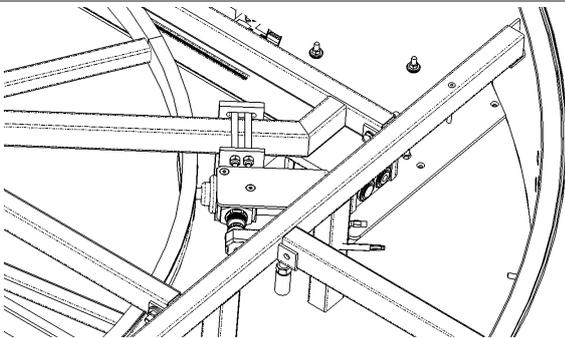


#### NOTICE

There are two types of locking device, the monostable and the bistable locking. The locking device is located below the system behind the cover.

To find out which variant is installed in your system, refer to the wiring diagram.

##### Monostable locking device



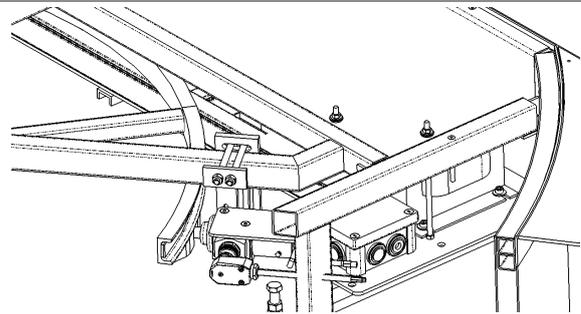
The monostable locking device is a bolt lock with a stable end position (locked).

The door control manages the locking statuses.

In the currentless state, an internal spring pushes the locking bolt into the end position (locked). If the locking device is permanently electrically actuated, the bolt retracts and unlocks. The door control manages the actuation signal of the locking device.

In the event of a power failure, the turnstile is locked and can be unlocked using the external unlocking device.

##### Bistable locking device

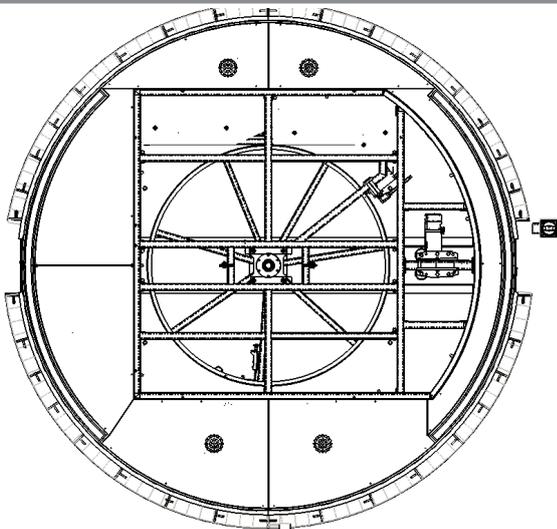


The bistable lock is a bolt lock with two stable end positions (locked, unlocked).

The door control manages the locking statuses. The door control unit locks or unlocks the turnstile via electrical impulses.

In the event of a power failure, the current locking status is retained. The bistable interlock therefore does not require an external unlocking device.

##### Locking procedure



The motion is only in the normal direction of movement; there is no locking in the opposite direction.

Since only one locking position is defined in the software, a complete rotation may be necessary.

As soon as the rotation is close to the locking position, the system is slowed down to crawl speed to approach the final locking position.

If an obstacle is detected, the door stops for 5 seconds and then continues the movement.

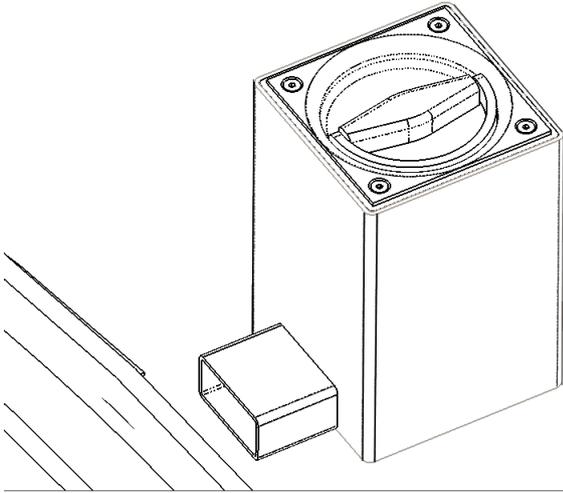
Locking is done manually via the control unit. This prevents the operator from locking himself in.

Through a test movement, the controller checks that the lock bolt is in the locked position.

When the correct position is confirmed, the door is moved back to the middle position between the lock bolts.

### 3 Description

#### 3.3.2 External unlocking (optional)

| External unlocking  |  |
|---|--|
|  | <p>The equipment with monostable locking is combined with an emergency release.</p> <p>If a person is locked inside in the event of a power failure or malfunctions, they can be released by means of an emergency release lever on the door, inside the building. The locking bolt is retracted via a Bowden cable and the turnstile is freely rotatable again.</p> |

#### 3.3.3 Securing the main closing edge

By means of prescribed safety sensors, in the area of the shearing edges, the safety is increased compared to a purely manual door. If a person is detected in the shearing edge danger zone, the drive actively stops the turnstile.

#### 3.3.4 Limitation of turnstile speed

The turnstile speed is limited to 1 m/s. If the user tries to turn the door faster, the drive actively brakes and prevents the turnstile from overrunning.

#### 3.3.5 Defined walking direction

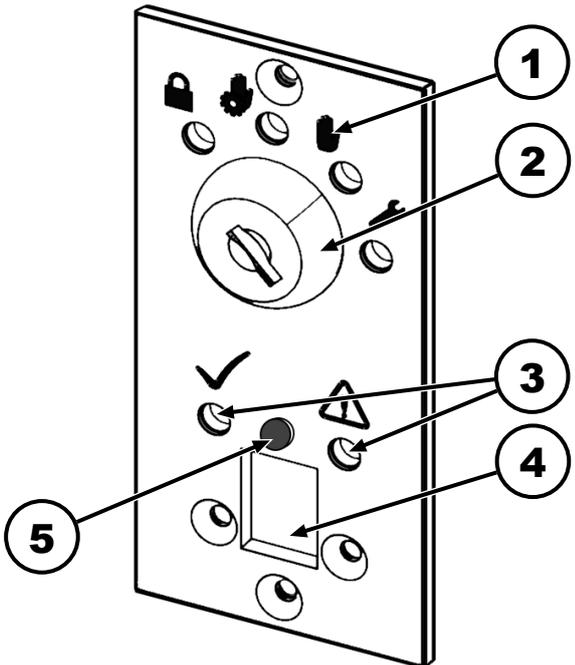
The turnstile can only be pushed in the walking direction (counterclockwise). Reverse rotation (clockwise) is prevented by the drive. If the door is turned backwards by force, the drive goes into **SHUT-DOWN MODUS** and the door is very difficult to turn.

#### 3.3.6 Kinetic energy

After using the door, the turnstile positions itself at low speed. Here the kinetic energy is less than 1.69J.

During positioning the force at the rotary wing edge remains below 133N.

## 3.4 Control unit

| Control unit POWER ASSIST   | No. | Denomination                                 |
|---|-----|--|
|  | 1   | Display of operating mode                    |
|   | 2   | Key switch for selecting the operating modes |
|   | 3   | Error and status display                     |
|   | 4   | Interface for service and diagnostic devices |
|   | 5   | Reset-Button                                 |

## 3.4.1 Operating modes

| Icon  | Operating mode | Function   |
|---|----------------|--|
|  | LOCKED         | <ul style="list-style-type: none"> <li>– Turnstile moves slowly to the locked position.</li> <li>– By pressing the RESET button on the control panel, the locking bolt is extended.</li> </ul> |
|  | ASSIST         | <ul style="list-style-type: none"> <li>– Manual operation with motor support.</li> </ul>   |
|  | MANUAL         | <ul style="list-style-type: none"> <li>– Manual operation without motor support.</li> </ul>  |
|  | ENGINEERING    | <ul style="list-style-type: none"> <li>– Operating mode for restart and remote maintenance.</li> </ul>   |

## 3.4.2 Error- and status display

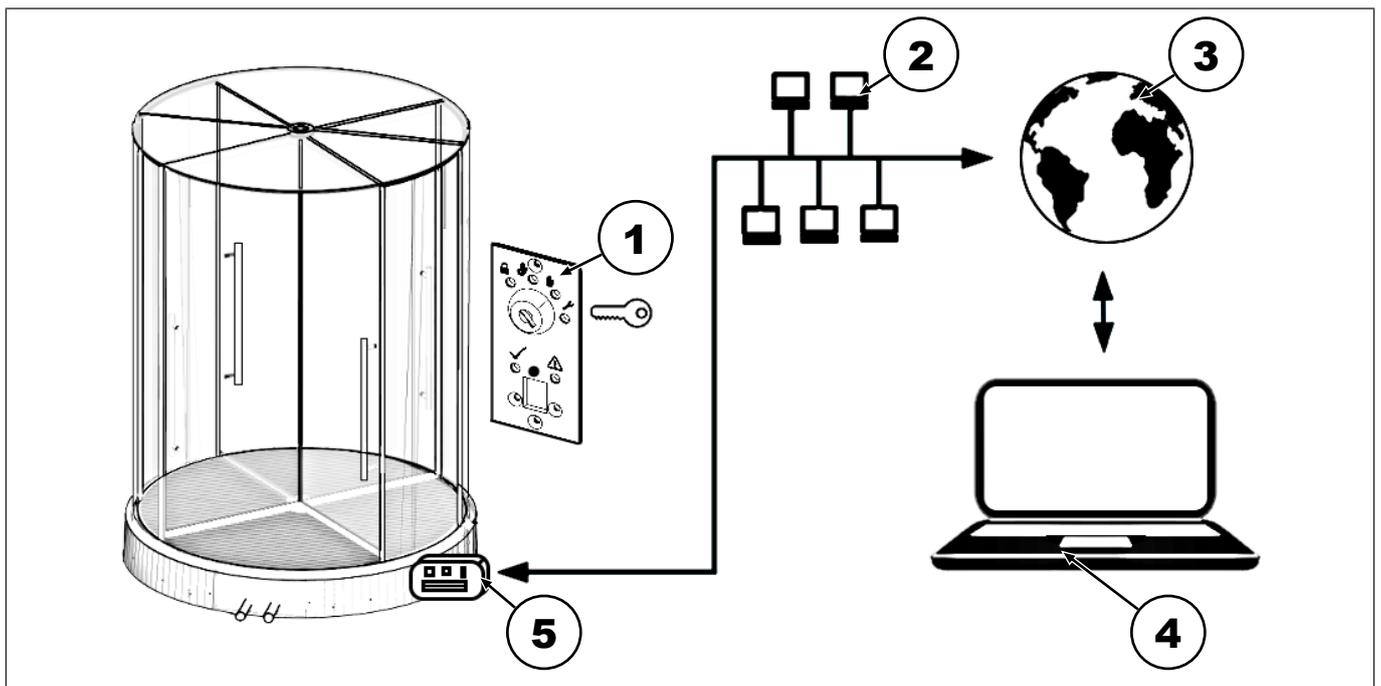
On the control panel there are a green and a red LED, which display system information and can indicate errors via flash code.

Alternatively to the LED system display, this information can also be viewed via the REMO software.

### 3 Description

| Icon  | LED Color     | Function  |
|---|---------------|---|
|  | Green         | <ul style="list-style-type: none"> <li>– If the green LED lights up permanently, everything is in order and running properly.</li> <li>– A flashing green LED means that a process is running with a defined end. The number of flashes, between two pauses, informs about the process-internal step.</li> </ul>  |
|  | Red           | <ul style="list-style-type: none"> <li>– If the red LED lights up permanently, the running process is waiting for an input from the key switch or Reset-Button.</li> <li>– A flashing red LED indicates that an error has occurred and the system is in <b>OP_SHUTDOWN</b>. The observer control (<b>Observer Control</b>) informs with a flashing code about the pending error.</li> </ul> |
|  | Green and Red | <ul style="list-style-type: none"> <li>– If both the green and the red LED flash synchronously, the flashing code informs about an error of the main control (<b>Main Control</b>).</li> </ul>  |

#### 3.5 Service and diagnostic interface REMO



| No. | Denomination | No. | Denomination       |
|-----|--------------|-----|--------------------|
| 1   | Control unit | 2   | Customer network   |
| 3   | Internet     | 4   | REMO remote access |
| 5   | Mini PC      |     |                    |

The door is configured via a mini PC located in the drive housing. This Mini-PC is connected to the drive control unit and communicates via LAN or W-LAN.

In case of possible door failures a diagnosis can be made and events can be recorded.

The Mini-PC can be connected to the customer's network (LAN) in order to be able to help quickly and easily from the service point in the event of faults.

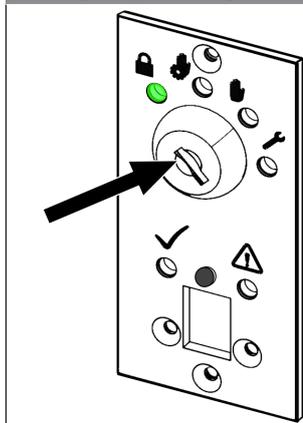
The configuration and diagnosis software REMO runs on this Mini PC. With the REMO door status, events, errors and warnings can be displayed and log files generated.

If required, the Mini-PC can be controlled externally via TeamViewer.

## 4 Operation

### 4.1 Change operating mode

#### Change operating mode



Turn the key switch to the desired operating mode (*see chapter operating modes*).

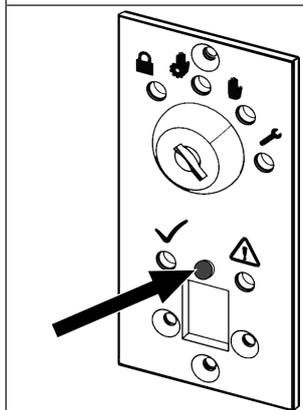
### 4.2 Locking / Unlocking

#### Locking (operating mode LOCKED)



- Set key switch to operating mode LOCKED.

System moves into locking position. As soon as the locking position is reached, the red status indicator lights up.



- Keep Reset button pressed for about 6 seconds.

Locking bolt is extended. System checks by test movement that the lock bolt is in locked position. If this is confirmed, the door is moved back to the middle position between the lock bolts. System is now locked. Red status indicator switches off.

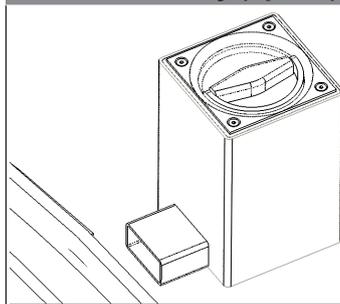
#### Unlocking



- Set key switch from LOCKED operating mode to desired operating mode e.g. ASSIST.

The system is now unlocked.

#### Unlock externally (option)



The equipment with monostable locking is combined with an external unlocking.

- If a person is locked inside in case of power failure or occurring malfunctions, operate the unlocking lever (inside of the building).

Locking bolt is retracted via a Bowden cable and the turnstile is freely rotatable again.

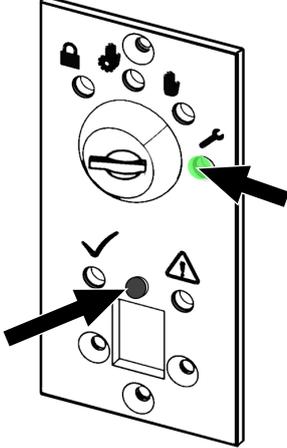
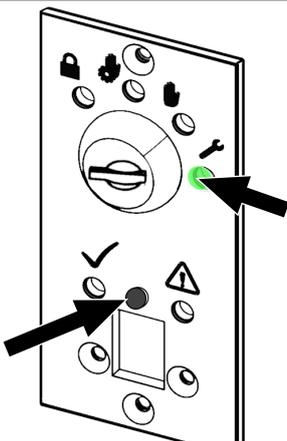
## 4 Operation

### 4.3 Perform reset / restart



#### NOTICE

A restart is initiated when the power returns or by a reset. The turnstile rotates slowly and searches for the reference point. When the reference point is found, the turnstile positions in the next X-position.

| Reset-Taste  | Perform restart after mains is restored  |
|--|--|
|   | <ul style="list-style-type: none"><li>– If necessary, remove obstacle in the passage area.</li><li>– Activate operating mode <b>ENGINEERING</b>.</li><li>– As soon as the red status LED lights up continuously, change key to operating mode <b>ASSIST</b>.</li><li>– Door moves slowly and searches the X-position.</li><li>– As soon as the door stops in the X-position, the system is calibrated and ready for operation.</li></ul>   |
| Reset button   | Perform Reset  |
|  | <ul style="list-style-type: none"><li>– If necessary, remove obstacle in the passage area.</li><li>– Activate operating mode <b>ENGINEERING</b>.</li><li>– Press reset button until both status LEDs have flashed 3 times.</li><li>– Release the reset button.</li><li>– As soon as the red status LED lights up continuously, change key to operating mode <b>ASSIST</b>.</li><li>– Door moves slowly and searches the X-position.</li><li>– As soon as the door stops in the X-position, the system is calibrated and ready for operation.</li></ul> |

## 5 Servicing and maintenance

### 5.1 General remarks

According to current legislation, the operator of an automatic door system is responsible for its maintenance and safety.

Accidents or defects can be avoided if the system operator takes good care of the system.

#### Testing

| Type of test                          | Measure   |
|---------------------------------------|---|
| Visual inspection                     | Check door leaves, guides, bearings, limiting devices, sensors, and the securing of crushing and shearing points for damage.  |
| Mechanical inspection                 | Check fastenings for tight fit.   |
| Safety check (exit and escape routes) | Check sensors, safety devices, and monitoring devices for tight fit and damage.   |
| Function testing                      | Check functioning of switches, operators, controllers, power or energy storage devices, and sensors.<br>Also check the adjustment of the safety devices and the setting of all movement sequences including the end points. |

#### Servicing

| Type of servicing      | Measure  |
|------------------------|--|
| Adjusting and cleaning | Clean and adjust bearings, sliding points, and power transmission. |

For documentation and information purposes, the testing and servicing work as well as the condition of the system are recorded in a test log book. The test log book must be kept for at least one year or until the next testing/servicing.



#### IMPORTANT

The testing and/or servicing interval according to the manufacturer's specification is at least 1 to 2 times a year.



#### IMPORTANT

The recommended and planned spare parts and wearing parts can be requested from your service center.

### 5.2 Cleaning and care



#### DANGER

**Warning: risk of fatal electric shock!**

- a) Risk of death by electrocution
  - ⇒ Do not touch the drive system while the main power is connected.
  - ⇒ Do not spray water into the drive system.



#### NOTICE

Before cleaning, select **MANUAL** mode and also press the emergency stop button. Rinse cleaned surfaces with a clean, damp cloth.

## 5 Servicing and maintenance



### IMPORTANT

Keep the system clean from dirt, leaves, snow and ice!

- a) If heavily soiled, please contact a professional.
- b) Do not use road salt or gravel in front of the entrance area or within the system.
- c) We recommend that you impregnate the safety strips with water repellent care products.



### IMPORTANT

Any other cleaning products, not mentioned here, should not be used!

| What                    | Interval | Cleaning agent   |
|-------------------------|----------|--|
| General parts           | Weekly   | Damp cloth, neutral to low alkaline, wetting agent solution / vinegar diluted with water |
| Sensors / safety strips | Weekly   | Synthetic cleaner  |
| Floor mats              | Weekly   | Vacuum cleaner / carpet cleaner  |
| Display cases           | Weekly   | Commercial glass cleaner   |

## 6 Malfunctions

### 6.1 Conduct during malfunctions



#### IMPORTANT

If malfunctions that endanger the safety of individuals occur, the system must be turned off. It may not be turned back on until the problem has been resolved by a professional and the danger no longer exists.

#### 6.1.1 Locking / Unlocking in case of malfunction

If the door can no longer be started via restart, the turnstile can be locked in the operating mode **LOCKED** via the key switch and unlocked in the other operating modes.

#### 6.1.2 Indication of errors via flashing code



#### NOTICE

If only the red LED flashes, the Observer Control informs about the pending error with a flashing code.

If both the green and the red LED flash synchronously, the flashing code informs about an error in the main control.



#### CAUTION

**Risk of injury if personnel are insufficiently qualified!**

If unqualified personnel work on the system or are in the danger zone of the system, dangers may arise which can cause serious injuries and considerable damage to property.

- a) All work must be carried out by qualified personnel only.
- b) Keep unqualified personnel away from danger areas.



#### NOTICE

In case of an error message, contact the responsible service centre.

Before you make a call, make a note of the information that is displayed on the control unit.

This information gives the technician important hints for a possible troubleshooting.

Example:

Red and green LED flash synchronously 16 times = **ERROR\_MOVE\_BACK\_TO\_MUCH**

| LED Color   | Quantity of flashing codes | Description              | Possible troubleshooting                                       |
|-------------|----------------------------|--------------------------|--|
| Green + Red | 1                          | ERROR_SYSTEM             | – Contact Service  |
| Green + Red | 2                          | ERROR_VERSION_CONFLICT   | – Contact Service  |
| Green + Red | 3                          | ERROR_HANDSHAKING        | – Contact Service  |
| Green + Red | 4                          | ERROR_OBSERVER_TIMESTAMP | – Contact Service  |
| Green + Red | 5                          | ERROR_ENCODER_UNDERFLOW  | – Contact Service  |
| Green + Red | 6                          | ERROR_ZERO_PULSE         | – Contact Service  |
| Green + Red | 7                          | ERROR_SAFETY_SENSOR_BAD  | – Shut down the system<br>– Contact Service                    |
| Green + Red | 8                          | ERROR_OVERSPEED_TIMEOUT  | – Perform restart<br>– Pass through the plant at a slower pace |
| Green + Red | 9                          | ERROR_MOVING_TOO_LONG    | – Perform restart<br>– If necessary, contact service           |

## 6 Malfunctions

| LED Color   | Quantity of flashing codes | Description                   | Possible troubleshooting  |
|-------------|----------------------------|-------------------------------|---|
| Green + Red | 10                         | ERROR_REVERSE_TOO_FAST        | <ul style="list-style-type: none"> <li>– User went through the system in the wrong direction and too fast</li> <li>– Perform restart</li> <li>– If necessary, contact service</li> </ul>                            |
| Green + Red | 11                         | ERROR_CURRENT_STANDBY         | <ul style="list-style-type: none"> <li>– Contact Service</li> </ul>   |
| Green + Red | 12                         | ERROR_CURRENT_KICKED          | <ul style="list-style-type: none"> <li>– Contact Service</li> </ul>   |
| Green + Red | 13                         | ERROR_CURRENT_CREEP           | <ul style="list-style-type: none"> <li>– Remove possible obstacle</li> <li>– If necessary, contact service</li> </ul>   |
| Green + Red | 14                         | ERROR_CURRENT_POSITIONING     | <ul style="list-style-type: none"> <li>– Remove possible obstacle</li> <li>– If necessary, contact service</li> </ul>   |
| Green + Red | 15                         | ERROR_CURRENT_WALKSPEED       | <ul style="list-style-type: none"> <li>– Contact Service</li> </ul>   |
| Green + Red | 16                         | ERROR_MOVE_BACK_TO_MUCH       | <ul style="list-style-type: none"> <li>– User went through the system in the wrong direction</li> <li>– Perform restart</li> <li>– If necessary, contact service</li> </ul>   |
| Green + Red | 17                         | ERROR_MOVING_TOO_FAST         | <ul style="list-style-type: none"> <li>– User has turned turnstile too fast</li> <li>– Perform restart</li> <li>– If necessary, contact service</li> </ul>  |
| Green + Red | 18                         | ERROR_WATCHDOG                | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 19                         | ERROR_WRONG_OBSERVER_SOFTWARE | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 20                         | ERROR_WRONG_MAIN_SOFTWARE     | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 21                         | ERROR_LOCK_POWER_OVERTIME1    | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 22                         | ERROR_LOCK_POWER_OVERTIME2    | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 23                         | ERROR_CURRENT_CALIBRATION     | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 24                         | ERROR_TEST_RELAY              | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 25                         | ERROR_CURRENT_REVERSE         | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 26                         | ERROR_MIN_MOTOR_TEMPERATURE   | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 27                         | ERROR_MAX_MOTOR_TEMPERATURE   | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 28                         | ERROR_SAFETY_SENSOR_INSIDE    | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 29                         | ERROR_SAFETY_SENSOR_OUTSIDE   | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |
| Green + Red | 30                         | ERROR_OBSTRUCTION             | <ul style="list-style-type: none"> <li>– Check if user or object obstructs turnstile</li> <li>– Clean the floor</li> <li>– Perform restart</li> <li>– If necessary, contact service</li> </ul>                      |
| Green + Red | 31                         | ERROR_CURRENT_MAX REVERSE     | <ul style="list-style-type: none"> <li>– Turnstile was turned in the wrong direction with too much force and for more than 2 seconds</li> <li>– Perform restart</li> <li>– If necessary, contact service</li> </ul> |
| Green + Red | 32                         | ERROR_CURRENT_MAXFORWARD      | <ul style="list-style-type: none"> <li>– Turnstile was turned in the wrong direction with too much force and for more than 2 seconds</li> <li>– Perform restart</li> <li>– If necessary, contact service</li> </ul> |
| Green + Red | 33                         | ERROR_CHECKSUM                | <ul style="list-style-type: none"> <li>– Contact service</li> </ul>   |

## 6.2 Conduct during power failure

### 6.2.1 Power failure



#### **IMPORTANT**

**If malfunctions that endanger the safety of individuals occur, the system must be turned off. It may not be turned back on until the problem has been resolved by a professional and the danger no longer exists.**

For equipment with monostable locking:

In the event of a power failure, the locking bolt is extended immediately. The turnstile can now be pushed to the next locking position at most. There the locking bolt engages between the locking ramps and the turnstile is locked.

If equipped with bistable locking:

In the event of a power failure, the locking status of the door is maintained. If the turnstile was unlocked before the power failure, it remains unlocked after the power failure. The same applies to a locked turnstile that remains locked after a power failure.

### 6.2.2 Power restored

When power is restored, the locking state depends on the set operating mode. In the **LOCKED** mode, the turnstile locks or remains locked when power is restored. In all other operating modes, the turnstile is unlocked or remains unlocked. The door can be restarted by means of a restart (operating mode selector switch).

## 7 Taking out of service and disposal

### 7 Taking out of service and disposal

#### 7.1 Decommissioning

When shutting down or taking out of service, the system is disconnected from the mains supply and any existing battery is unplugged.



#### NOTICE

After each temporary shutdown a new commissioning must be carried out.

#### 7.2 Dismantling and disposal



#### IMPORTANT

All machine parts must be sorted by type of material and disposed of according to local regulations and guidelines.



#### NOTICE

The door systems can be completely disassembled in reverse order.

The automatic door mainly consists of the following materials:

##### Aluminum:

- Linking profiles
- Gearbox, Drive panel
- Door wing profiles and side profiles
- Various profiles and small parts

##### Steel / iron parts:

- Stainless steel casing, Floor panel, Box recess for floor installation
- Optional spacer or reinforcement profiles
- Gear components, springs
- Various small parts like fittings, covers, linking parts, etc.

##### Glass:

- Door wings and side panels

##### Various electronic and electromechanical components:

- Sensors, control and operator components
- Lead batteries and nickel-cadmium rechargeable batteries

##### Various plastics:

- Rollers
- Cable clips, coupling and linking parts
- Sealing profiles
- Casing of electromechanical components and sensors





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