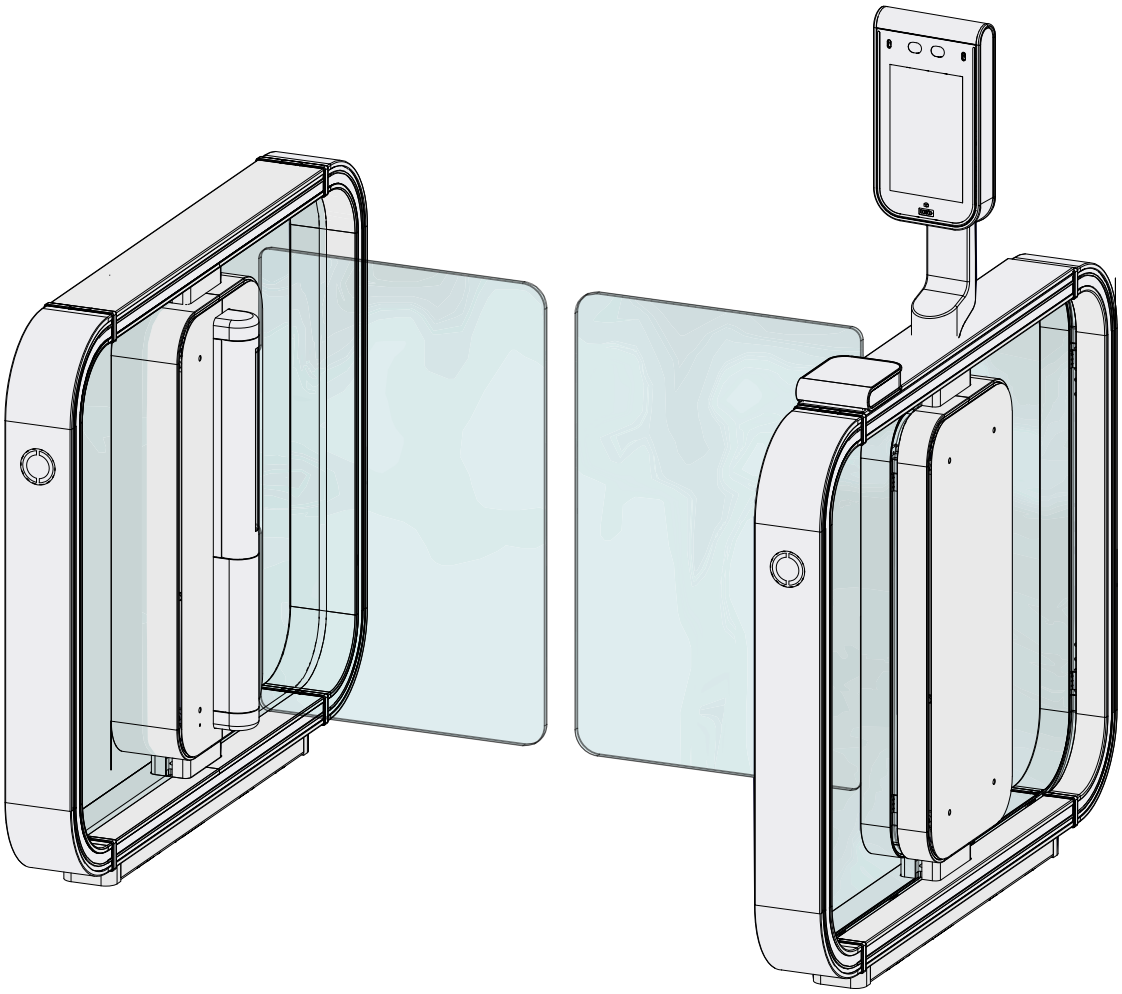
User manual

Security Entrance Control
ASSA ABLOY BG100

ASSA ABLOY
Entrance Systems

Experience a safer
and more open world



Original instructions

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Table of Contents

List of abbreviations

BMS

Building management system

DoC

Declaration of conformity

DoI

Declaration of incorporation

FEM

Extended Functions Module

FFL

Finished floor level

IP

Ingress Protection, degree of protection against the penetration of water and dust. The first number indicates the protection against the penetration of dust ("0" = No protection "6" = Dustproof). The second number indicates the protection against the penetration of water ("0" = No protection "8" = "Protection against permanent submersion).

LED

Light emitting diode

NFC

Near field communication

PE

Protective earth

PLC

Programmable logic controller

RFID

Radio frequency identification

1 Safety

1.1 Presentation of warning signs

DANGER

Warning against an imminent or latent hazardous situation that can lead to electric shock and cause serious injury or death.

DANGER

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

WARNING

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

CAUTION

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

NOTICE

Useful advice and information to make sure of a correct and efficient workflow of the system.

1.2 General hazards

The system can cause the hazards in this section even when it is 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. Save this manual for future reference.

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

DANGER

Electric current.

In case of contact with live parts, there is an immediate danger to life because of electric shock. Damage to or removal of the insulation or individual components can be life-threatening.

- Make sure that only approved personnel work on the electrical system.
- Make sure that all poles are voltage free and that this is maintained for the duration of the work.
- Disconnect all poles from voltage before you start the work (cleaning, maintenance, replacement) on active parts of the electrical systems and the equipment.
- Keep moisture away from live parts. This can lead to a short circuit.
- Do not bridge fuses or put them out of operation.
- Do not connect the power supply or a battery until all work has been completed.
- Do not use a damaged supply cord. Only the manufacturer, its service agent or a similarly qualified person is permitted to replace a damaged supply cord.

DANGER

Faulty connection of the mains power supply.

Risk of electric shock and property damage if the mains power supply to the system is not installed with a safe method.

- The mains power supply must be installed with protection (fuse, circuit breaker).
- An all-pole mains disconnection switch with isolating capabilities of Category III must be installed.
- All installation must be done correctly, refer to local regulations.

DANGER

Fire in an electronic system.

Risk of electric shock if you use a water-based fire extinguisher for a fire in an electrical system.

- Use a fire extinguisher of type carbon dioxide (CO_2) or ABC dry powder.

DANGER

Faulty safety devices of the fire protection system.

Danger to life if the safety devices of the fire protection system do not work. This can cause severe injuries or death.

- Do not disconnect the fire protection system from the power supply overnight.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Do not remove safety instructions from the system.
- Do not block, hold open, or otherwise prevent the fire doors from closing.
- Inspect and do a service and maintenance of the fire protection system.
- Always follow the local applicable regulations or the regulations in a maintenance contract.
- Examine and maintain the condition of the fire protection system.

DANGER

Faulty safety devices.

Risk of personal injuries that can lead to death or material damages if the safety devices are faulty, manipulated, or put out of operation.

- Make sure that all safety devices (breakouts, sensors, lock release, and so on) operate correctly.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Examine and perform service and maintenance of the safety devices.
- Always follow the local applicable regulations or the regulations in a maintenance contract.

DANGER

Moving system.

If the system moves, careless behaviour can lead to severe personal injuries to limbs or severance of limbs.

- Do not reach in when parts of the system move.
- Keep a distance when parts of the system move.
- Do not bump into or touch the system when it moves.
- Do not open or remove protective covers during operation.
- Do not permanently remove covers from the system.
- Only carry out inspection, service, maintenance, or cleaning when the system is stationary and the power is OFF.
- Danger points must be safeguarded up to a height of 2500 mm / 98.43 inch from the floor level.

WARNING

Maintenance and checks during operation.

Risk of personal injuries if the system is in operation during service and maintenance.

- Make sure that the power is OFF and that the system is stationary before you do checks, repairs, service, maintenance, and cleaning.
- Before you start the work, make sure that there are no persons in the system or in the close area of the system.

WARNING

Incorrect use and/or installation.

Incorrect use and/or installation can lead to severe injuries and/or cause substantial material damage.

- Read and obey all instructions regarding safe use and/or assembly.
- Make sure that all connection points between the door system and the building are sufficiently strong, even and level.
- Only use ASSA ABLOY approved components. Other components may have a negative effect on the safety of the system.

WARNING

Heavy parts.

Lifting the heavy parts can cause personal injuries.

- Always be at least two persons when you lift and handle the heavy parts. Refer to local regulations.
- Use the tools provided for lifting.

WARNING

Unapproved persons without supervision using the system.

Risk of personal injuries, malfunction, or material damage to the property if unapproved persons use the system.

- Infants and children under 8 years of age are not allowed to be within the opening area of the system without supervision of an adult.
- Children must not play, climb on, clean, or maintain the system or the fixed/remote controls.
- Children must not play with the system, the fixed controls, or the remote controls.
- Keep children away from the fixed controls and the remote controls.
- Persons with limited physical, sensory, or mental abilities can only use the system under supervision.
- Unapproved persons must have received and understood the instructions on how to use the system.

WARNING

Locked in persons in the building.

Risk of personal injuries and material damage.

- Before the system is set to locked, make sure that the locked area is empty and that no persons are locked in.

WARNING

The system can open, close, or turn unexpectedly.

Risk of material damage or personal injuries because of unforeseen opening, closing, or turning of the system.

- No persons can 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.
- Make sure that approved personnel immediately correct the errors.
- Remove objects from the opening area.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Do not dash through a closing system.

CAUTION

Incorrect settings.

Incorrect settings can lead to malfunctions, material damage, or personal injuries.

- Do not disconnect the system from the power supply overnight.
- Make sure that only approved personnel adjust the settings.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Make sure that only approved personnel correct errors.
- Follow locally applicable regulations, or make sure to have a maintenance contract for service and maintenance.

CAUTION

Insufficient cleaning or care.

Insufficient or inattentive cleaning or care of the system can lead to malfunctions, material damage or personal injuries.

- Examine the sensors regularly for dirt and clean them if necessary.
- Regularly remove dirt accumulations from the product and its close surroundings, for example the floor, in the floor rail, or under the floor mat.
- Keep the system free from moisture like water, snow and ice.
- Do not use aggressive or caustic cleaning agents.
- Use road salt or loose chippings only conditionally.
- Put the floor mat without folds and flush with the floor.
- Do not lean or attach equipment required for cleaning purposes, such as ladders or similar, to the system.

CAUTION

Imbalance and damaged parts.

Imbalance, wear, or damage to cables, springs, and fastening parts can cause material damages.

- Inspect the installation during the function- and safety check for imbalance and damaged parts.
- Make sure all fastening parts are securely fixed.
- Do not use the equipment if repair or adjustment work needs to be carried out.

CAUTION

Product damage.

If the product packages are not properly stored the product this can lead to personal injuries, material damage or malfunction.

- Always store the packages indoors, in a dry condition at all times during transportation and reloading.
- The package has plastic tarpaulin around it and can be stored outdoors for a shorter while during installation, at the installation site.

NOTICE

Observe and comply with the country-specific regulations.

NOTICE

To prevent not wanted activations of the system, keep the area around the system clear. Moving objects such as flags or parts of plants must not be allowed to enter the detection range of the sensors.

1.3 Electronic equipment reception interference

The equipment can generate and use radio frequency energy. If the equipment is not installed and used properly it can cause interference to radio, television reception or other radio frequency type systems.

If other equipment does not fully comply with immunity requirements, interference may occur. There is no guarantee that interference will not occur in a particular installation.

If the equipment causes interference to radio or television reception, try to correct the interference:

1. Turn the equipment ON and OFF to determine interference.
2. Reorient the receiving antenna.
3. Move the receiver with respect to the equipment.
4. Move the receiver away from the equipment.
5. Connect the receiver into a different outlet so that equipment and receiver are on different branch circuits.
6. Make sure that protective earth (PE) is connected.

If necessary, consult the dealer or an experienced electronics technician for additional suggestions.

1.4 State of technology

NOTICE

Installation, commissioning, inspection, and maintenance must only be done by approved technicians. We recommend you to have a service agreement.

Record the work in the check list and give it to the customer for safe keeping.

This system was developed using state of the art technology and officially recognized technical safety regulations. The system, depending on its options and variants, comply with the requirements of the Machine Guidelines 2006/42/EG as well as EN 17352:2022.

Danger can occur if you do not use the system as intended.

1.5 Compliance information

This product complies with European directives, regulations and standard EN 17352:2022.

The CE marking on the product indicates conformity with European directives and regulations together with the Declaration of conformity (DoC) or the Declaration of incorporation (DoI), accompanying the product.

The full DoC and the full DoI is available for download on our website.

1.6 Personal protective equipment

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

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

In hygiene-protected areas, special or additional requirements of personal protective equipment can be necessary. These requirements must be thought of 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.

1.7 Product liability

To guarantee a reliable and trouble-free operation of the system, only use parts that the manufacturer recommends. The manufacturer declines any liability for damages as a result of unapproved modifications to the system or the use of parts that are not permitted.

Refer to regulations, the responsibility of the owner or caretaker of the equipment are as follows:

- That the equipment operates correctly, so that it gives sufficient protection in regard to safety and health.
- That someone with documented competence in the equipment and in applicable regulations operates and regularly maintains, inspects, and services the equipment.
- That the provided Service log book and Site acceptance test and risk assessment are kept available for maintenance and service records.
- That the inspection covers the emergency opening function (when applicable).
- That the closing force is appropriate for the system size on fire-approved systems (when applicable).

1.8 Warranty

ASSA ABLOY warrants its products to be free from defects in material and workmanship under intended use and service for a warranty time of 12 months, beginning at time of delivery. This warranty extends only to the original buyer of the equipment.

ASSA ABLOY warrants that the software operates substantially in accordance with its functional descriptions and that it has been recorded on non-defective media.

The ASSA ABLOY warranty does not apply to:

- That the software is error-free or operates without interruption.
- General wear and tear on the system.
- Fuses, disposable batteries and glass damage.
- System deviations caused by installers other than ASSA ABLOY.
- System that has been altered or damaged by vandalism or misuse.
- System that has been additionally equipped with non ASSA ABLOY original branded parts and/or spare parts.
- Unnecessary visits due to poor client communication (system working when our technician arrives, reset, power discontinuation).
- Adjustments (closing and opening speed and also sensor detection field) due to customer requests (excludes operational adjustments thought to create a hazard).
- Water damage.
- Adverse weather conditions.
- Any damage caused, directly or indirectly, by a circumstance beyond the control of the applicable company within ASSA ABLOY. Damages can be for example industrial dispute, fire, natural disaster, war, extensive military mobilization, insurrection, requisition, seizure, embargo, restrictions in the use of power, and defects or delays in deliveries by sub-contractors caused by any such circumstances.
- Non-compliance with the manufacturers care and the maintenance recommendations may void the warranty.
- ASSA ABLOY approved resellers must extend this warranty to the end-users only, but have no authority to extend a greater or different warranty on behalf of ASSA ABLOY.
- A service agreement with ASSA ABLOY helps to secure the availability of a fully operational system and gives priority at call-out, thus minimizing the time that the equipment is unusable.

2 General information

2.1 Terms and definitions

Term	Definition
Approved and qualified personnel	The approved and qualified personnel are entitled to perform the following work: • Disassembly • Assembly • Commissioning • Operation • Audit • Maintenance • Troubleshooting • Decommissioning The qualified personnel have several years of professional experience in the technical field, for example, as mechanics or machine fitters. The person must be approved by the manufacturer or the authorized representative to perform the work. The approved and qualified personnel are aware of the residual risks arising from the installation site and, due to their professional training, knowledge, and experience, can carry out the work assigned to them and to independently identify and avoid possible danger points.
Authorized representative	The authorized representative takes over certain parts of the manufacturer's obligations about 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.
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.
Manufacturer	The manufacturer is whoever designs and/or builds machinery or incomplete machinery under the scope of the Machinery Directive.
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.
System	The term is used in these instructions as a synonym for the product. Door operators, revolving doors, sliding doors, gates, and so on are referred to as a system. If information in these instructions refers to a specific type, this is shown accordingly in the text.
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.
User	Users are all the persons who use the system.

2.2 Purpose and use of the instructions

NOTICE

A replacement of the instruction is available from the supplier or on the website.

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.

Only the male form has been chosen for reasons of better legibility.

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.

2.3 Manufacturer

ASSA ABLOY Entrance Systems AB
Box 131
SE-261 22 Landskrona
Sweden
Phone: +46 10 4747 000

2.4 Target groups

WARNING

Risk of injury if the personnel are not approved.

If unapproved personnel work on the system or are in the danger zone of the system, dangers can occur. Severe injuries and substantial material damages can be the consequence.

- Only approved personnel must carry out work on the system.
- Keep unapproved personnel away from danger areas.

This manual is intended for the target groups listed below:

- The person who is responsible for the technical maintenance of this system.
- The person who operates the system every day and has been instructed.

3 Description

3.1 Intended use of the product

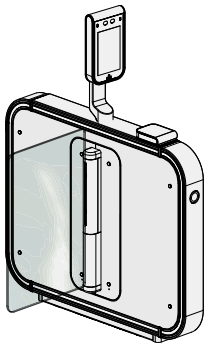
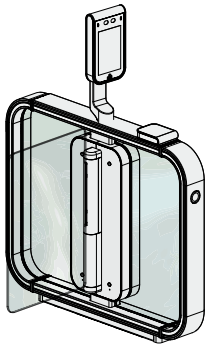
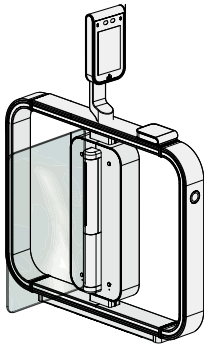
The system is designed exclusively for use as a pedestrian passage. The installation must only occur indoors in dry areas.

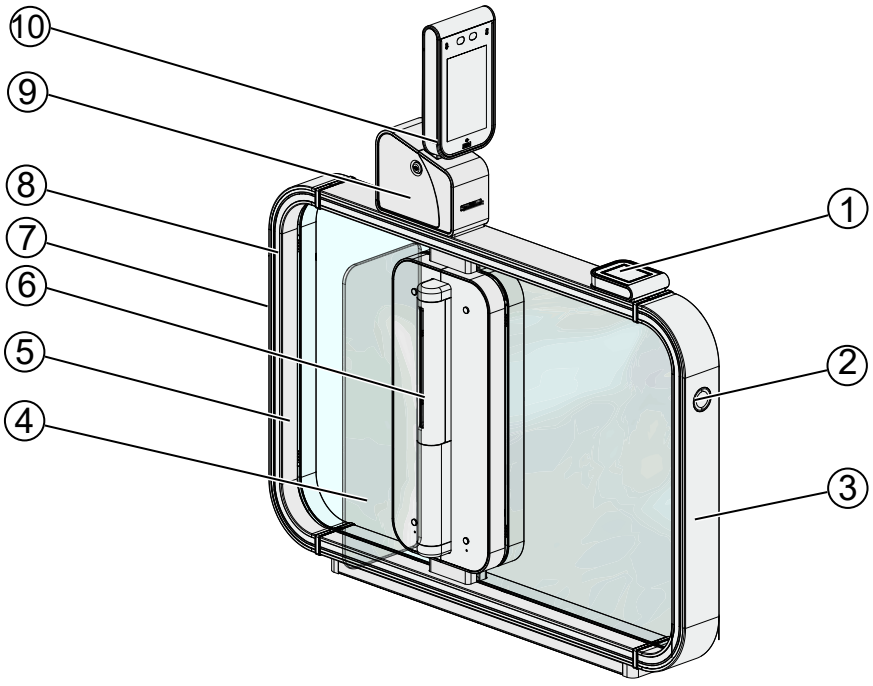
Any other application or use beyond this purpose is not considered to be an intended use. The manufacturer bears no liability for any resulting damage; the operator alone shall bear the associated risk.

The intended use 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.

3.2 Overview

Boxed version	Center glass version	Open version
		



1	Reader	6	Drive unit
2	LED pictogram Eye	7	Integrated emergency exit button (Option)
3	Cabinet	8	Light band
4	Glass leaf	9	Printer (Option)
5	Sensor	10	FacePod

3.2.1 Reader

Depending on the customer-specific version or settings, the reader can be used in different ways. Refer to the following examples.

- Barcode reader.
- RFID reader.
- NFC reader.

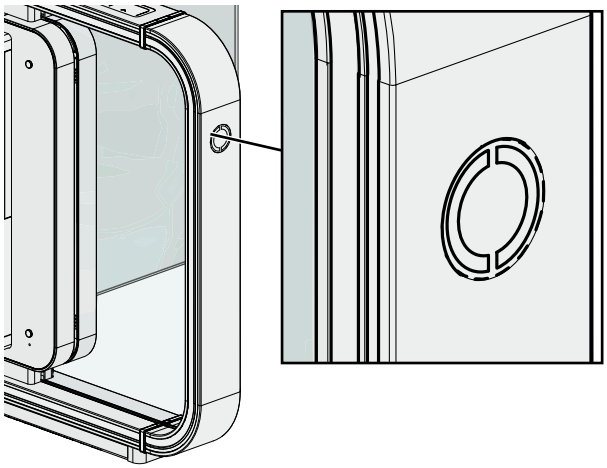
Depending on the customer-specific version or settings, authorisation or errors are indicated by either a symbol or a corresponding light colour on the reader.

- Green light / green arrow = Passage granted.
- Red light / red cross = Passage denied.
- Red light / red cross = Error.

3.2.2 LED pictogram Eye

Status and error messages are displayed through the LED pictogram. The LED pictogram consists of two halves, these two halves display the information on the corresponding passage side.

- Green = Passage granted
- Red = Passage denied / Malfunction
- White = Active
- Off = Inactive



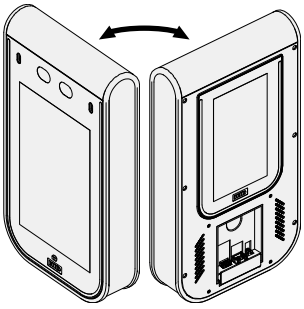
3.2.3 BMS-Modul (FEM)

The BMS-Modul (FEM) enables the system to be controlled with the building management system. The BMS-Modul consists of 4 relay inputs and 14 relay outputs with the option of selecting between normally open and normally closed contacts using a jumper. The module also supports four galvanically isolated inputs.

3.2.4 FacePod

Depending on the customer-specific version or settings, the FacePod can be used in different ways. Refer to the following examples.

- Mirroring the functionality of the control unit.
- Facial recognition for biometric authentication.
- The rear display touchscreen has a light strip for illumination and operator feedback.
- An audio speaker provides cues and user feedback.
- Automatic face detection, capture and image quality checks, as well as matching.



Example

3.3 Signage

CAUTION

Without marking on the moving door leaf the glass pane is difficult to see.

Risk of personal injuries or material damages.

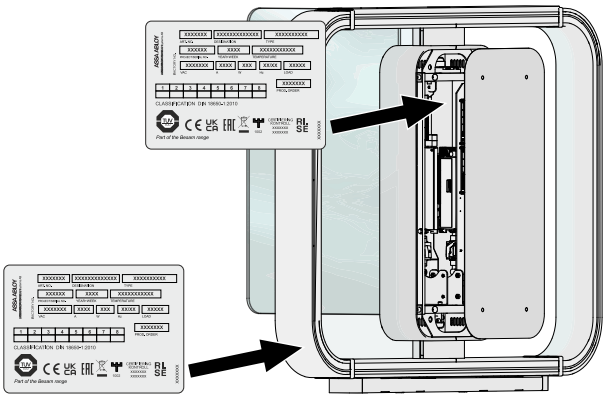
- It is a requirement in EN 17352:2022 that the glass surface is clearly recognizable, for example with markings or stickers. Always place marking on the moving leaf.
- If the system operator does not want to use the supplied marking, they must supply another marking that will be put on the moving leaf.

The signs must be attached from both the inside and the outside. To avoid malfunctions, there must be no signs or shading (for example smoked glass) in the detection range of the sensors.

Do a visual check that all necessary signage is applied and intact. Mandatory in the table indicates that the signage is mandatory by European directives and equivalent national legislation outside the European Union.

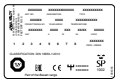
When the system is correctly installed and adjusted:

1. Attach the labels that come with the system.
2. Attach the product label with the CE marking. We recommend the mandatory attachment of the product label in the lower area of the system. A second product label is already attached at the factory below the cover, on the electronic board.



Exemplary position of the product label with the CE marking

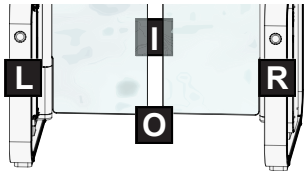
3. Do a visual check that all necessary signage is applied and intact.
4. If problems occur contact your ASSA ABLOY service representative.

Item emample	Door label	Description
	Product label	Mandatory.
	No entry	If mandatory in your country, the sign must be applied. Identifies that this door is one-way traffic. The sign is not included in the product.
	Emergency breakout	Mandatory, if the door is approved for escape route.
	Supervision of child	If mandatory in your country, the sign must be applied. If the risk analysis shows that children use the door, the sign is recommended.
	ASSA ABLOY door sticker	Mandatory, if applicable for the door set-up, to highlight the presence of the glass. Apply the signs to all glass sections that are moving.
	Automatic door	If mandatory in your country, the sign must be applied. The sign is not included in the product.
	Keep clear	If mandatory in your country, the sign must be applied. The sign is not included in the product.

3.4 Functional description

The definition of right (R) and left (L) is defined as viewed from the outside (O) to the inside (I). The inside (I) represents the area inside the building or the secure area. The Outside (O) represents the public area.

Entry cycle means the approved passage from the outside area (O) to the inside area (I). Exit cycle means the approved passage from the inside area (I) to the outside area (O).



The security system BG100 uses sensor technology to control the access to a specific area. The function involves detection of presence of individuals, and allows or denies passage based on predefined criteria.

The system is an automated access control solution that detects individuals, verifies their authorization, and controls their passage into a secured area based on the predefined criteria.

Detection:

The system detects the presence of individuals approaching it using various sensor technologies.

Authentication:

Once an individual is detected, the system verifies their authorization to access the secured area. This authentication can be done through methods (provided by others) like:

- RFID cards.
- Biometric scans like fingerprints.
- Biometric scans like facial recognition.
- PIN codes.
- Mobile credentials.

Passage Control:

If the individual is authorized, the leaves open automatically and allowing a free passage. If the individual is unauthorized, the system remains closed or triggers an alarm.

Integration:

The system is often integrated into larger security systems, such as access control systems and surveillance systems. To enhance security measures, enable centralized monitoring and control, the system is often integrated into larger security systems. Such systems can be access control systems and surveillance systems.

Security

The system has a high number of sensors to detect unapproved users. The sensors detect tailgating attempts. The integrated booking signal gives the opportunity to make sure that the user has passed the system. Incorrect use generates an audible alarm from the integrated speaker.

Safety

The system is safe to use when it is installed correctly and it is used as intended. In case of an obstruction by a person or object, the obstruction control makes sure to stop on stall and reverse operation. Status and error messages can be given through various visual or acoustic signals.

Energy-efficiency

The system is sustainable and convenient as it makes sure that the system is only opened when a passage is necessary. The innovative electronics in the system make sure that there is minimal energy consumption for optimal performance.

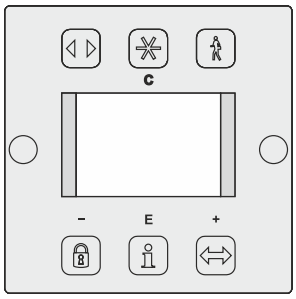
4 Options

The system complies with all applicable safety regulations, but it is possible to enhance the safety and comfort with the add-ons.

Contact the local ASSA ABLOY company for a detailed description.

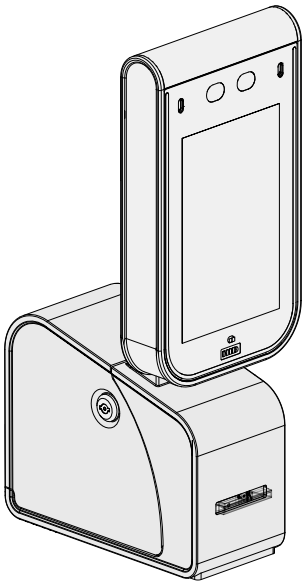
4.1 Control unit

The control unit is an input and output unit for the operation and limited programming of the system, such as changing operating modes. The display shows information about the system by means of symbols and text.



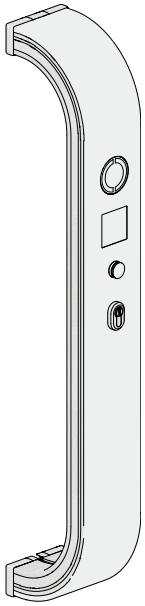
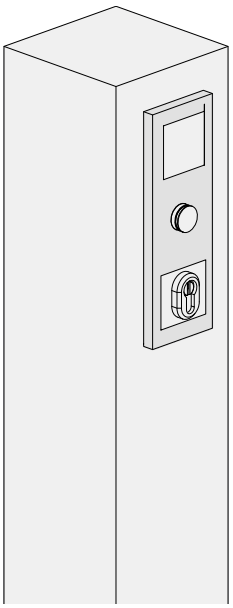
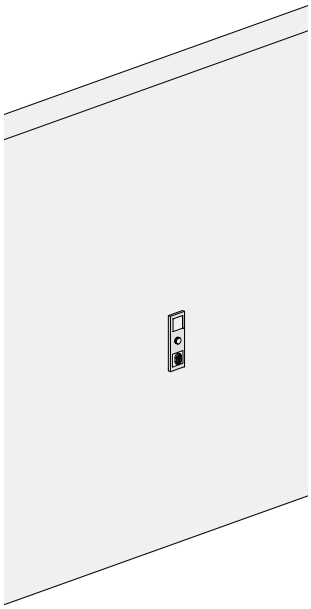
4.2 Printer

The printer is an additional option to the self-boarding gate system. The printer can be used to print tickets, for example.



Example of the printer

4.3 Emergency solution

Example of the integrated emergency exit button	Example of the post mounted emergency exit button	Example of the wall mounted emergency exit button
		

The system can be optionally equipped with and emergency exit button to release after pushing the leaves for manual opening. The integrated emergency exit button is equipped with an illuminated emergency exit sign and an key release. When the emergency exit button is activated, the status and the operating mode are displayed in the optional control unit and the service application. The LED pictogram Eye lights up in green on the inside and red on the outside. The light band lights up white and flashing green.

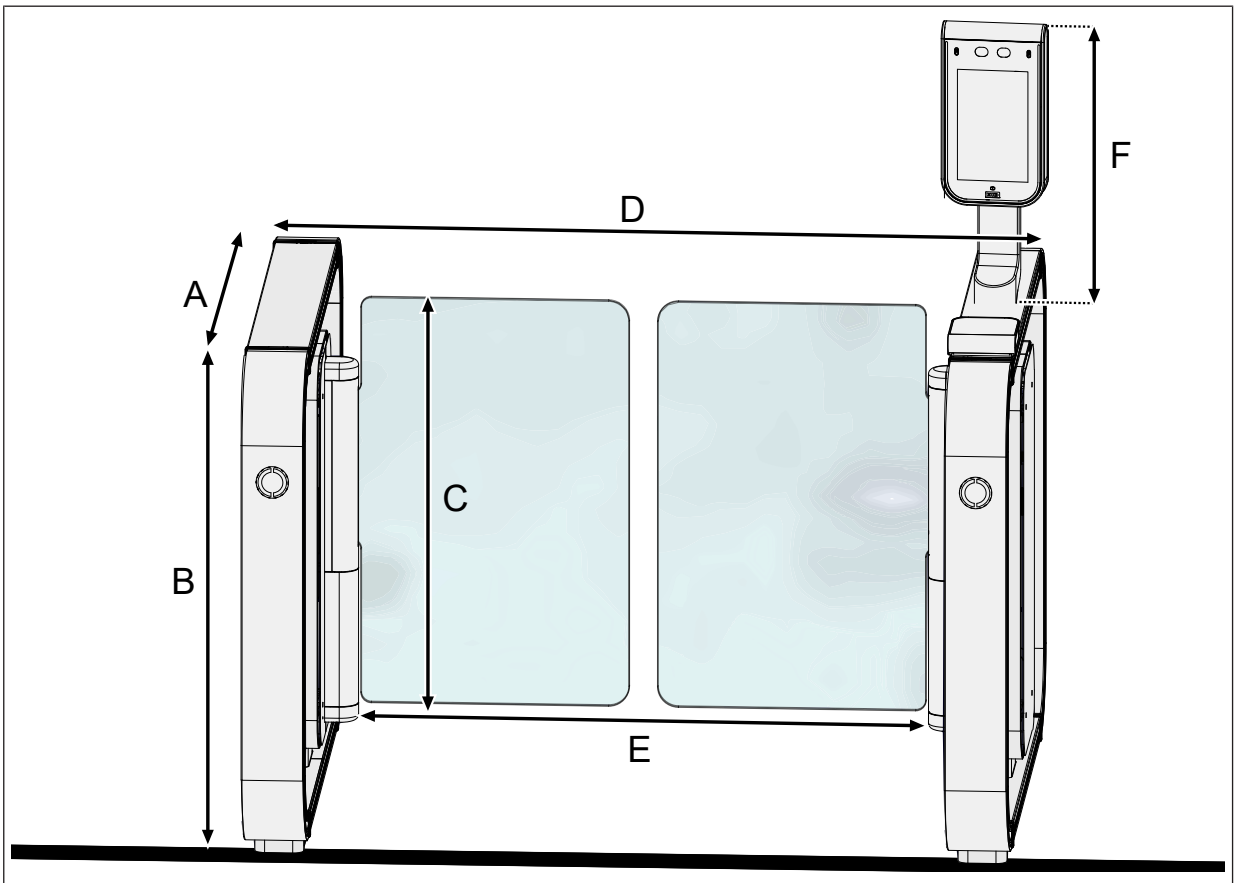
This function is according to the EN13637:2015. The local legislations have to be checked, depending on code requirements. EltVTR executions possible too, local installations must be fulfilled as per requirements (separate wall installation or post installation).

If the emergency exit button is installed in a post supplied by a third party - the post has to be installed according to the original installation instructions of the third party. The post must be able to withstand a side force of 300 N (at 1000 mm / 39.37 inch height). The installation of the post together with the system must also comply with the standards of EN 17352:2022, EN13637:2015 & EltVTR. (for example height of the button minimum 850 mm / 33.47 inch, distance from the system maximum 600 mm / 23.62 inch).

5 Specifications

NOTICE

The system is made up of aluminium, metal, plastic and glass components. The dimensions and weight are only approximate. The dimensions can be different, depending on the product variant and the options.



Total length (A):	800 mm / 31.50 inch	1000 mm / 39.37 inch	1200 mm / 47.24 inch	1450 mm / 57.09 inch	1700 mm / 66.93 inch
Cabinet weight without leaf:	54 kg to 62 kg	57 kg to 69 kg	60 kg to 76 kg	64 kg to 84 kg	67 kg to 92 kg
Leaf material:	10 mm safety glass. Other glass on request.				
Leaf weight:	8 kg to 25 kg				
Cabinet height (B):	1000 mm / 39.37 inch				
Barrier leaf height:	1000 mm / 39.37 inch	1200 mm / 47.24 inch	1800 mm / 70.87 inch		
Leaf height variants (C):	800 mm / 31.50 inch	1000 mm / 39.37 inch	1600 mm / 62.99 inch		
Spacing between leaves and FFL:	200 mm / 7.87 inch				

Total width (D):	976 mm / 38.43 inch	1087 mm / 42.80 inch	1231 mm / 48.47 inch	1276 mm / 50.24 inch	1291 mm / 50.83 inch	1476 mm / 58.11 inch
Clear passage width (E):	600 mm / 23.62 inch	711 mm / 27.99 inch	855 mm / 33.66 inch	900 mm / 35.43 inch	915 mm / 36.02 inch	1100 mm / 43.31 inch
FacePod height (F):	560 mm / 22.05 inch					
Spacing between leaves:	60 mm / 2.36 inch					

Mains voltage:	100-240 V AC
Frequency:	50-60 Hz
Control voltage:	24V DC (protective extra-low voltage)
Power consumption:	700 W
Protection class:	1

Temperature range:	From -10° to +55° C
Humidity range:	Up to 85% relative humidity, not condensing
IP class:	IP 32
Sound pressure:	$L_{pA} \leq 70$ dB (A).

6 Operation

6.1 Operating modes

Operating mode OFF	
Reader (option):	Red cross or red light
Ambient light:	OFF
Eye:	OFF
Leaf:	Closed position
Brake:	OFF, ON when presence detected
Presence detection:	ON
Alarm messages:	ON
Authorisation:	OFF

Operating mode OPEN	
Reader (option):	Green arrow or green light
Ambient light:	White
Eye:	Green
Leaf:	Open position
Brake:	OFF
Presence detection:	OFF
Alarm messages:	OFF
Authorisation:	OFF

Operating mode SECURE	
Reader (option):	Green arrow or green light / Red cross or red light
Ambient light:	White / Green / Red
Eye:	White / Green / Red
Leaf:	Normal operation, closed position
Brake:	OFF, active when presence detected
Presence detection:	ON
Alarm messages:	ON
Authorisation:	ON in both directions

Operating mode SECURE ENTRY	
Reader (option):	Green arrow or green light / Red cross or red light
Ambient light:	White / Green / Red
Eye:	White / Green / Red
Leaf:	Normal operation, closed position
Brake:	OFF, ON when presence detected
Presence detection:	ON

Operating mode SECURE ENTRY	
Alarm messages:	ON
Authorisation:	ON in entry direction

Operating mode SECURE EXIT	
Reader (option):	Green arrow or green light / Red cross or red light
Ambient light:	White / Green / Red
Eye:	White / Green / Red
Leaf:	Normal operation, closed position
Brake:	OFF, ON when presence detected
Presence detection:	ON
Alarm messages:	ON
Authorisation:	ON in exit direction

Operating mode FREE	
Reader (option):	Green arrow or green light
Ambient light:	White / Green
Eye:	Green
Leaf:	Normal operation, closed position
Brake:	OFF
Presence detection:	ON
Alarm messages:	ON
Authorisation:	OFF, controlled by presence detection (both directions)

Operating mode MAINTENANCE	
Reader (option):	Red cross or red light
Ambient light:	White / Yellow
Eye:	Yellow
Leaf:	Released leaves
Brake:	OFF
Presence detection:	OFF
Alarm messages:	OFF - Maintenance state output
Authorisation:	OFF

Special functions

Operating mode EMERGENCY RELEASE	
Reader (option):	Green arrow or green light (Exit direction) / Red cross or red light (Entry direction)
Ambient light:	White / Green
Eye:	Green (Exit direction) / Red (Entry direction)
Leaf:	Leaves completely released, can be manually opened in emergency direction
Brake:	OFF
Presence detection:	OFF
Alarm messages:	OFF – Only emergency state message
Authorisation:	OFF

Operating mode POWER FAIL	
Reader (option):	OFF
Ambient light:	OFF
Eye:	OFF
Leaf:	Leaves completely released
Brake:	OFF, leaves can be manually opened
Presence detection:	OFF
Alarm messages:	OFF
Authorisation:	OFF

Operating mode MAINS RETURN	
Reader (option):	Previous operation
Ambient light:	Previous operation
Eye:	Previous operation
Leaf:	Previous operation
Brake:	Previous operation
Presence detection:	Previous operation
Alarm messages:	Previous operation
Authorisation:	Previous operation

6.2 Operation by the control unit (option)

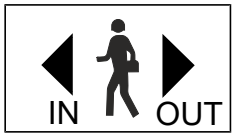
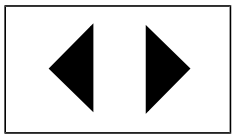
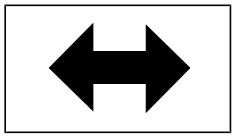
6.2.1 Menu navigation

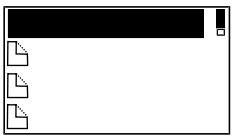
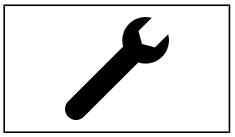
NOTICE

The keys on the control unit are used to set the operating modes in the main menu and the system parameters in the submenu.

The functions of the keys differ from the main menu to the submenu.

Main menu

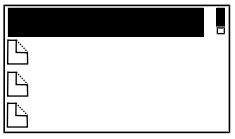
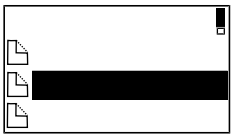
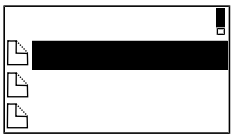
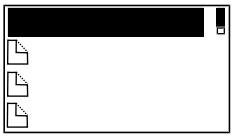
Key	Name	Operation	Capacity	Display example
	OFF / LOCKED	Push the key once.	The system is closed, the sensors are OFF.	
	SECURE	Push the key once.	Monitoring from both directions.	
	SECURE ENTRY	Push the key again.	Monitoring from the outside to the inside.	
	SECURE EXIT	Push the key again.	Monitoring from the inside to the outside.	
	OPEN	Push the key once.	Permanently open, the sensors are OFF.	
	FREE	Push the key once.	Automatic operation with the sensors.	
	-	-	-	

Key	Name	Operation	Capacity	Display example
	Info	Restart the control unit. Push the key for 5 seconds.	Restart the control unit.	
		Restart hardware control unit. Push the key for 12 seconds.	Restart the hardware control unit.	
		Push the key twice.	Access to the error menu.	
	MAINTENANCE	Operate the service app (Option).	Leaves are released, the sensors are OFF.	
	EMERGENCY RELEASE	Operate the emergency exit button (Option).	Leaves are released, the sensors are OFF.	

NOTICE

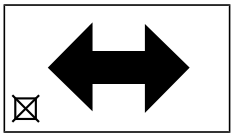
The return from the submenu to the main menu takes place automatically 3 minutes after the last entry.

Submenu

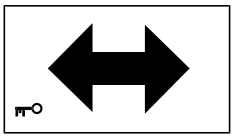
Key	Name	Operation	Capacity	Display example
E 	Enter	Push the key once to access the next submenu.	Select the menu item (for example: error, status, parameter), confirm the entry.	
+ 	Plus	Push the key once to move down.	Navigate down in the menu.	
- 	Minus	Push the key once to move upwards.	Navigate upwards in the menu.	
 C	Clear	Push the key once to return to the previous menu.	Exit the menu item without saving.	

6.2.2 Locking and unlocking

Activate the operation lock through the keyboard

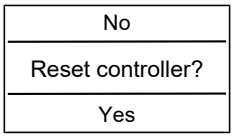
Key	Operation	Capacity	Display example
	Push the key sequence as shown. To deactivate, push the key sequence again.	No settings can be adjusted on the control unit.	

Activating the operation lock through the key

Prerequisite	Operation	Capacity	Display example
The desired operating mode is set.	Activate / deactivate the operating lock with the key.	No settings can be adjusted on the control unit.	

6.2.3 Reset

Reset the control system

Key	Operation	Capacity	Display example
	Push the key for 5 seconds.	Reset the control system.	
	Push the key once.	Cancel reset.	
	Push the key once.	Do a reset.	

Reset the control unit

Key	Operation	Capacity	Display example
	Push the key for 12 seconds.	Reset the control unit (connection is established).	

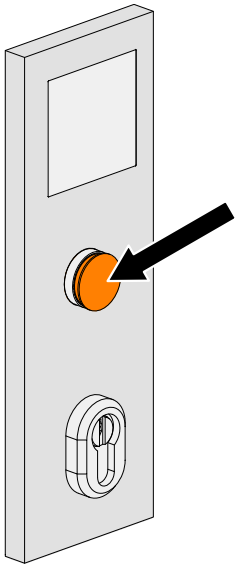
6.3 Use and reset the emergency solution (option)

NOTICE

The steps and parts may vary depending on the customer-specific solution, but the principle remains the same.

In case of an emergency

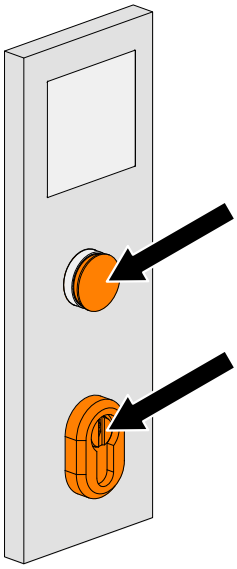
1. Push the emergency exit button.



Example

Reset

1. Examine the emergency situation is resolved.
2. Push the emergency exit button to release.
3. The escape route function can now be reset using the key release and the system returns to the last operating mode.



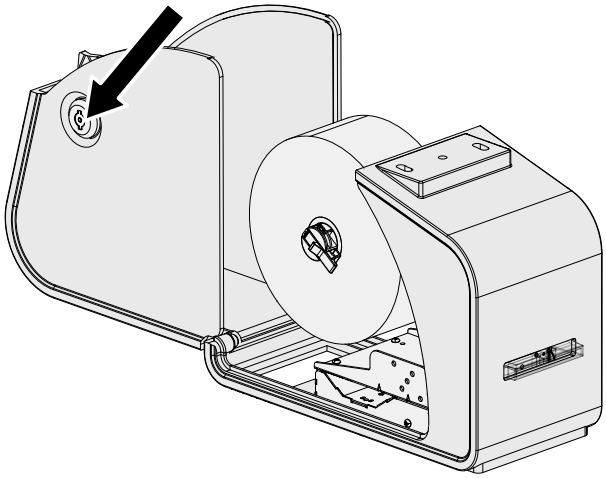
Example

6.4 Use the printer (option)

NOTICE

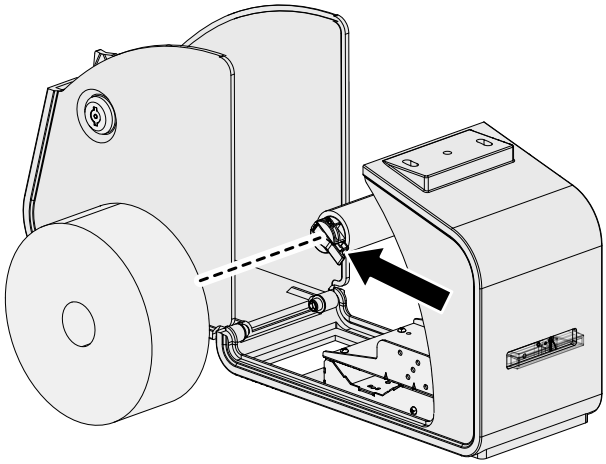
The steps and parts may vary depending on the customer-specific solution, but the principle remains the same. For more detailed information, refer to the manufacturer's instructions.

1. Unlock and open the printer housing using the manufacturer's key.



Example of the printer

2. Unlock the roll holder.
3. Replace the roll and thread it.
4. Lock the roll holder.



Example of the printer

5. Close the printer housing and lock it using the manufacturer's key.

7 Inspection and maintenance

DANGER

Electric current.

In case of contact with live parts, there is an immediate danger to life because of electric shock. Damage to or removal of the insulation or individual components can be life-threatening.

- Make sure that only approved personnel work on the electrical system.
- Make sure that all poles are voltage free and that this is maintained for the duration of the work.
- Disconnect all poles from voltage before you start the work (cleaning, maintenance, replacement) on active parts of the electrical systems and the equipment.
- Keep moisture away from live parts. This can lead to a short circuit.
- Do not bridge fuses or put them out of operation.
- Do not connect the power supply or a battery until all work has been completed.
- Do not use a damaged supply cord. Only the manufacturer, its service agent or a similarly qualified person is permitted to replace a damaged supply cord.

CAUTION

Safety check necessary

Personal injuries or damages to the equipment can occur.

- Do not use the equipment if repair or adjustments are necessary.

When you have a service agreement with ASSA ABLOY approved representatives do the service and adjustments. ASSA ABLOY makes sure that there is a safe and proper operation of your automatic system.

Remember to keep the service log book, the site acceptance test and the risk assessment documents available. These documents are used together.

It is important to record any maintenance operation.

Recommended minimum maintenance interval of once a year.

To help you fulfil the national and international requirements and to avoid malfunction and risk for injuries, perform a check of the following items:

- Inspection on page 33
- Maintenance on page 34
- Signage on page 17

7.1 Inspection

7.1.1 Daily inspection

NOTICE

If the door is put in an escape route, approved personnel or the fire department must test the equipment regularly. Refer to the local regulations.

Test / inspection	Procedure	Expected result
Motion detector	• Approach the system at normal speed, both from the inside and from the outside. • If necessary, clean the sensors (motion detectors), in particular the external sensor(s). • Make sure that the inside air is dehumidified. Steam or condense on the sensors can prevent the system from closing. Steam can come from warm moist inside air that condense on the external sensors. Wipe the external sensors dry if necessary. • Examine the safety sensors (if there are any). If you are unsure of which type of sensor you have, contact your ASSA ABLOY representative.	• The sensor must cover the entire passage width. • System opening takes place at an early stage and at an appropriate speed, so that unhindered passage is possible.
Emergency solution (Option)	• Examine the condition and function of the emergency solution.	• If there are any problems, contact your ASSA ABLOY representative.
Panels / covers	• Examine the condition of the panels / covers.	• No damaged panels / covers.
Leaves / glass parts	• Examine the condition of the leaves / glass parts.	• No damaged leaves / glass parts.

7.1.2 Cleaning

Clean the product on a regular basis to maintain the quality of the coating layer.

- Remove dust and dirt.
- To avoid damages to the profiles the brushes must be vacuum cleaned weekly.
- Clean the surfaces three times a year with a gentle (pH 5-9) non-polishing detergent and water.
- Use a soft non-abrasive sponge (abrasive materials can cause mechanical damage).
- Do not expose the product to alkalis. Both aluminium and glass are sensitive to alkalis.
- Do not clean with high pressure water. Operator, program selector and sensor can be damaged and water can enter the profiles.
- Do not use detergents or abrasive additives.
- If there is a doormat, remove the doormat and clean it thoroughly every year.
- Document the cleaning.

7.2 Maintenance

7.2.1 Maintenance intervals

The table below shows the recommended interval in revolutions, when to replace parts during preventive maintenance. Talk to your ASSA ABLOY representative to learn more about our service offering.

Part	Revolutions	Action
Signage	If wear is detected.	Examine / Replace.
Covers	If wear is detected.	Examine / Replace.
Electrical components	In event of breakdown.	Examine / Replace.
Mechanical components	In event of breakdown.	Examine / Replace.
Emergency solution (Option)	Minimum once a year.	Examine.

8 Troubleshooting

8.1 Operation by the control unit (option)

8.1.1 Status displays

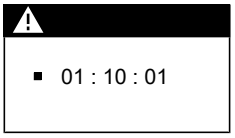
NOTICE

The status display shows information with status number and message in plain text. If there is more than one piece of information (for example the malfunction), the number and the consecutive entry number are also displayed.

The next entry is called up by pressing the info key.

Key	Operation	Capacity	Display example
	Push the key one time.	Change of information if several messages are pending. Return to main menu for 4 seconds, then display of information again.	

8.1.2 Error displays

Key	Operation	Capacity	Display example
	Push the key one time	The current errors in the error display are shown as a list of error numbers without plain text display in decimal format. The error number is composed of the error source and the error number. Up to three error codes can be listed per display. If there are more errors, the number of displays and the current display number are also shown. The next page is called up by pressing the info key.	

8.1.3 Troubleshooting by the control unit

Fault	Cause	Action	Staff
Display shows a fault message.	• Error number present.	• Write down the number(s) shown in the display, in case of further technical inspections. • Restart the control system through the control unit. • Do a reset.	Operator
Fault message still present after restart.	• Error number could not be rectified.	• Specialised personnel are required to rectify the fault.	Specialised personnel
System does not work.	• No power connected.	• Examine the power connection.	Operator
	• Operating mode incorrectly selected.	• Examine the operating mode.	Operator
	• Fault message on the control unit display.	• Write down the message(s) shown in the display, in case of further technical inspections. • Restart the control system through the control unit. • Do a reset.	Operator
	• Defect.	• Close the system manually and notify service technician.	Operator
Fault message still present after restart.	• Fault could not be rectified.	• Specialised personnel are required to rectify the fault.	Specialised personnel
		• Display and read out the system information about the system on the display. • Notify the service centre. • If necessary, close the system manually.	Operator
	• Mains fuse defective.	• Replace fuse.	Operator
	• Fuse on power supply unit of drive defective.	• Replace fuse.	Specialised personnel

8.2 Tips on troubleshooting

NOTICE

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 long exists.

NOTICE

The following list shows faults and their causes along with possible remedies that the operator can carry out. If the remedies are unsuccessful, the operator must disconnect the system from the mains supply and call for service.

Faults	Remedies	Causes
System without function.	• No mains supply. • Short circuit. • System control defective. • Motor damage. • PLC control defective. • Locking mechanism jammed.	• Examine the mains supply, call in a specialist if necessary. • Examine that the emergency exit button (option) is released. • Remove obstacle. • Call Service.
System does not perform the desired function.	• PLC control is defective or in an undefined state. • System control defective. • Fuse sensor defective or sensor triggered.	• Disconnect the system from the power supply and reconnect the power supply (Reset). • Examine that the emergency exit button (option) is released. • Remove the obstacle in the sensor's protection area. • Call Service.
Power failure.	• Fuse defective. • Main supply defective.	• Examine the fuse. • Examine the mains supply.
Broken glass.	• Glass defective.	• Disconnect the system from the power supply. • Barrier area around the system. • Call Service.

9 Taking out of service and disposal

9.1 Decommissioning

NOTICE

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

When the system is taken out of service:

1. Disconnect the system from the mains supply.
2. Unplug from any existing battery.

9.2 Dismantling and disposal

NOTICE

All parts must be separated, sorted by the type of material, and disposed of. Refer to local regulations and guidelines.

NOTICE

The systems can be completely disassembled in the reverse order.

The installation mainly consists of the following materials:

Metal components (aluminium, steel, and iron)

- Linking profiles, system leaf profiles, side profiles, various profiles, and reinforcement profiles.
- Gearbox, drive panel.
- Gear components and springs.
- Stainless steel casing, floor panel, and box recess for the floor installation.
- Various small parts like fittings, covers, optional spacers, and linking parts.

Glass

- Leaves and side panels.

Various electronic and electromechanical components

- Sensors.
- Control components and operator components.
- Batteries and rechargeable batteries.

Various plastics

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

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ASSA ABLOY Entrance Systems is a leading supplier of entrance automation solutions for efficient flow of goods and people. Building on the long-term success of the Besam, Crawford, Albany and Megadoor brands, we offer our solutions under the ASSA ABLOY brand. Our products and services are dedicated to satisfying end-user needs for safe, secure, convenient and sustainable operations. ASSA ABLOY Entrance Systems is a division within ASSA ABLOY.

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