



IS 9100

Mounting and Commissioning instructions

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1. General information

Keep the documents in a safe place and hand them over to the new facility drive if you transfer the system.

Symbols used in these instructions

-  **REMARK** A remark draws attention to important information which may make work easier for you.
-  **NOTE** A note warns of potential damage to the device and explains how it can be avoided.
-  **ATTENTION** This symbol points out dangers which may result in personal injury or even death.

 Unless specified otherwise, all dimensions are given in mm.

“Translation of the original instructions”

2. Safety

This documentation contains important instructions for installation and safe operation. Read these instructions carefully before beginning the installation.

Follow all of the enclosed instructions to guarantee your safety.

Incorrect installation may result in serious injuries.

The use of control elements, settings or procedures which are not described in this documentation may cause electric shock, danger due to electric voltages/currents and/or danger due to mechanical processes.

2.1 Intended Use

IS 9100 is electromechanical swing door drive and is used exclusively for opening and closing interior swing doors with a door leaf weight of max. 160 kg.

Before installing the device on a smoke or fire door, check that it is approved in conjunction with the door.

Before getting started with the installation, ensure that your device is suitable for the respective door situation using the comments in Chapter 4 and that the door is equipped with hinges suitable for automatic mode.

The cable length for external components must not exceed 30 m.

2.2 Limitation of Liability

IS 9100 must only be used according to their intended use. ISEO accepts no liability for damages resulting from unauthorized changes made to the door system. No liability is accepted for the use of accessories which have not been approved by ISEO.

2.3 Risk Assessment by the Installer

The manufacturer, i.e. the person performing the installation, and the contracting authority/facility drive must jointly perform an individual risk assessment when planning the system.

Due to particular spatial circumstances and the door user groups to be expected, it may be sensible to use safety sensors also in low-energy mode.

2.4 Particular Safeguard Requirement with Regard to Vulnerable Persons

If the risk assessment indicates that the door leaf could hit and therefore injure someone, additional sensors must be attached to eliminate the danger.

This must particularly be taken into consideration if children, older persons or disabled individuals use the door system, too.

2.5 Standards, Laws, Guidelines and Regulations

The latest versions of the generally valid and country-specific standards, laws, guidelines and regulations must be observed.

2.6 Information/Regulations to be Observed when Using IS 9100 on Fire and Smoke Doors:

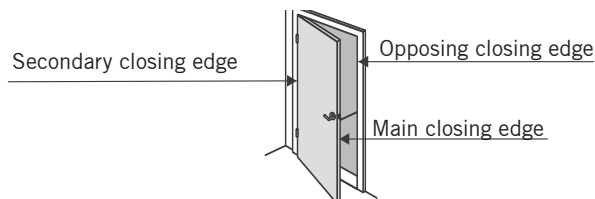
- Data sheet on using hold-open systems
- Guidelines for hold-open systems issued by the DIBt (German Institute for Civil Engineering), Berlin

2.7 Safety Instructions

- ⚠ **Work on electrical equipment must be performed by qualified electricians only.**
- ⚠ **Never stick metal objects into the door system's openings. Otherwise there is a risk of electric shock.**
- ⚠ **Safety glass must be used for glass door leaves.**
- ⚠ **If installing the IS 9100 on a metallic door leaf, ground the door leaf properly.**
- ⚠ **Never allow children to play with the IS 9100 or its control and regulating devices.**
- ⚠ **Keep remote controls out of the reach of children.**
- ⚠ **The IS 9100 must be protected against water and other liquids.**
- ⚠ **Only properly qualified persons may open the mains connection unit.**
- ⚠ **Deenergize the IS 9100 before removing the protective cover.**

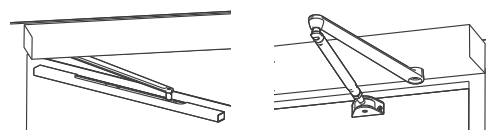
2.8 Dangers at Closing Edges

- ⚠ **There may be crushing, shearing, collision and drawing-in risks at the different closing edges of automatic doors.**



2.9 Dangers due to the Slide Channel Lever and Arm

- ⚠ **There are risks of crushing and shearing at the slide channel lever and arm.**



2.10 Residual Risk

Depending on the structural circumstances, door variant and potential safeguards, residual risks (such as minor crushing, impact with limited force and the risk to unsupervised children) cannot be excluded.

The danger spot on the secondary closing edge of all swing doors (including those which are manually operated) is generally known to all door users. It cannot be influenced by the drive manufacturer. Its safeguard is often not feasible from a constructive and functional standpoint.

Clamping protection (such as a rubber or textile cover) which may be suitable for this can be obtained from specialist dealers and is not included in the scope of delivery.

2.11 Briefing

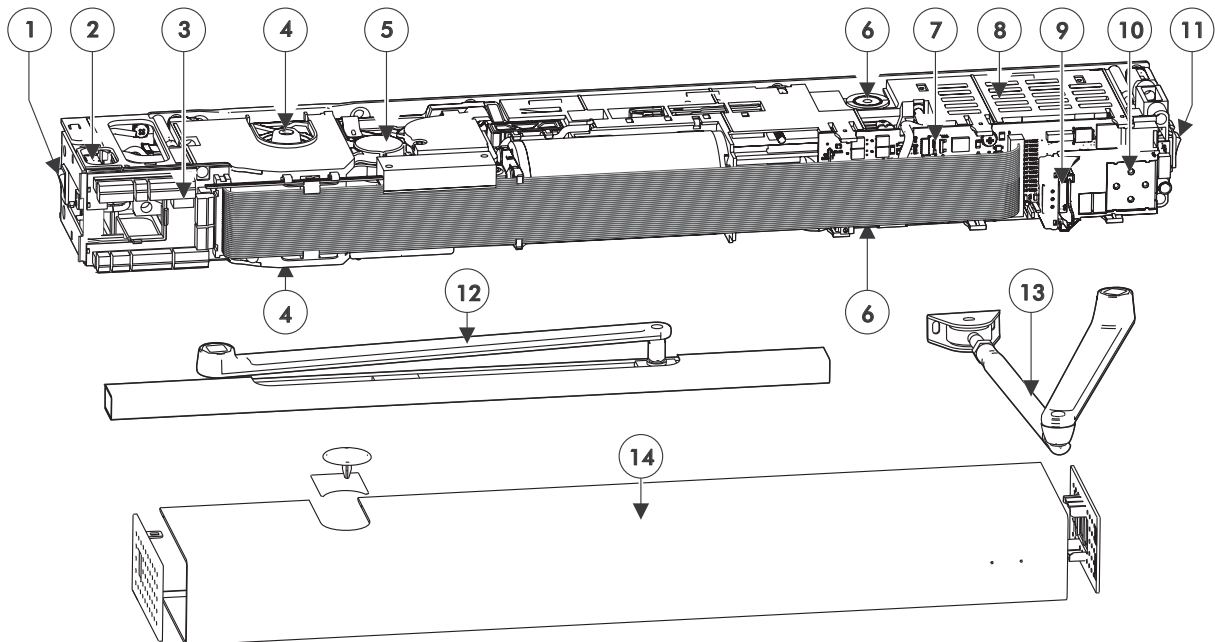
Once the door system has been successfully set, commissioned and functionally tested, the installation and operating instructions must be handed over to the facility drive. A briefing must take place on operating and maintaining the door system.

3. Product description

3.1 Drive Unit

The drive unit comprises all the core components.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Mains switch 2. Mains connection 3. Connection unit 4. Axle output on both sides 5. Drive unit (motor/gear/closer spring) 6. Closing force adjuster 7. Control unit 8. Switching power supply unit | <ol style="list-style-type: none"> 9. Slot for ISEO Upgrade Cards 10. User interface with information display 11. Internal program switch 12. * Slide channel (set) 13. * Standard arm 14. * Complete cover <p>* Not included in the drive unit's scope of delivery.</p> |
|--|--|



3.2 Functions

3.2.1 Operating modes

The IS 9100 can be operated in 2 modes: as a door closer or an automatic swing door drive. In the door closer mode (see chapter parameterization/service, parameter hd = 1), the drive unit is optimized for manual use. This operating mode is to be used with the power-assist function optionally available in this operating mode if the doors are operated mainly manually and if a door closer-like behavior is desired. The automatic mode (see chapter parameterization/service, parameter hd = 0) is designed for the automatic passage following a pulse generated by a motion sensor or pushbutton.

3.2.2 Power-assist function

In the door closer mode, the power-assist function (see chapter parameterization/service, parameter hd = 1) can be activated. Power assistance will then be available during the manual opening. The power assistance will be automatically adjusted to the set door closer parameter.

The power assistance can be adjusted so that the requirements of the DIN 18040, DIN Spec 1104, CEN/TR 15894, and BS 8300/2100 are met even up to EN 4.

The smallest adjustable opening moment is 23 Nm/5 lbf unless the hold-open system has been activated or the power failed.

This power-assist function allows you to comply with the requirements of the EN 1154 and at the same time to allow for a barrier-free access in normal mode.

A combination with the Push & Go function or the wind load control is not possible as they counteract the easy manual opening.

3.2.3 Push & Go

The Push & Go function (see chapter parameterization/service, parameter PG = 1) can be used only in automatic mode. The door will then be automatically opened when the door is manually moved from the "CLOSED" position by an angle of 4° into the "OPEN" direction.

3.2.4 Wind load control

The IS 9100 is especially suited for external doors that are exposed to changing wind loads or internal doors separating rooms in which pressure differences might occur. In automatic mode, the wind load control monitors the actual speed and will compensate for it if the speed deviates from the set value. In combination with the Upgrade Card Full Energy the drive unit can provide up to 150 N at the main closing edge, which can then be used to compensate for environmental influences.

The closing process during the last 5° can be additionally supported by the electronic latching speed.

The door can be passed through manually. We recommend the Push & Go function.

3.3 Low energy product

The IS 9100 can be adjusted so that the requirements of a low energy application (low energy drive unit) are in accordance with the EN 16005 or DIN 18650, ANSI 156.19 and BS 7036-4. During the commissioning, the drive parameters must be adjusted according to the specifications of the respective standard.

The required safety of the system will be achieved with the following characteristics:

- Reduced dynamic door panel forces/contact forces
- Low speeds
- Reduced static door panel forces/contact forces
- Force limitation

Due to system tolerances, the actual forces on the door panel have to be measured after the teach-in run and adjusted, if necessary, in order to comply with the local standards and regulations.

Additional safety sensors to safeguard the rotational movement are not required but optional if this becomes necessary due to a risk assessment to be carried out individually.

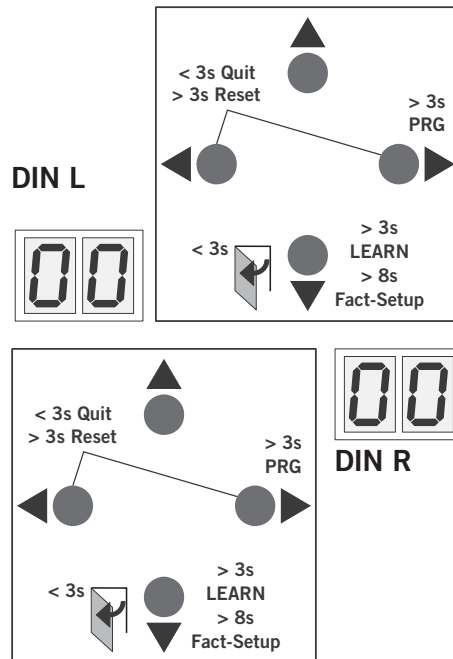
The safeguarding of the secondary closing edge must be considered separately.

3.4 Control elements

The drive unit IS 9100 is electromechanical drives. The interaction between motor gear unit and control unit makes the automatic opening and closing possible in the first place. The control unit must know certain parameters of the door in order to achieve the ideal behavior.

The control unit is equipped with a user interface featuring 4 pushbuttons and a 2 digit display. This allows you to make all settings specified in the parameter list.

During the commissioning, the key functions and the display are configured so that - independent of the installation direction of the pushbuttons - always the same functions and the numbers and digits are correctly shown. The legend of the pushbuttons can be removed and turned.



By pressing the pushbuttons, you can execute the following functions:

▼ Lower pushbutton

- Setting of the installation direction following a mains reset
- Browsing in parameter and error messages
- Reducing the parameter value
- Opening pulse
- Teach-in run
- Reset with factory setting (Fact-Setup)

▲ Upper pushbutton

- Browsing in parameter and error messages
- Increasing the parameter value

► Right pushbutton

- Open parameter menu
- Change selected parameter
- Save changed value

◀ Left pushbutton

- Cancel parameter change
- Exit parameter menu

◀ ► Left and right pushbutton simultaneously

- Error acknowledgement
- Reset

3.5 Upgrade Card

The Upgrade Card allows you to extend the functional range of the automatic swing door drive unit IS 9100. During the installation of the Upgrade Card, information between the control unit and the Upgrade Card is exchanged and assigned. The desired function can be used as long as the Upgrade Card is installed in the drive system.

- The first installed Upgrade Card becomes the container module. The functions of additional Upgrade Cards are saved in the container module. Each control unit features only 1 container module.
- The status of the Upgrade card is indicated by 3 integrated LEDs.

3.5.1 Upgrade Card Full Energy – blue

The Upgrade Card Full Energy allows you to make use of the full setting range of the opening and closing speed parameters as well as the opening and closing torque. It can be used for 2-panel systems.

3.6 Accessories

In addition to an extensive range of ISEO accessories, many activators, locking devices, safety sensors and accessories of other manufacturers are available and could be used together with the drive unit IS 9100.

ISEO cannot guarantee the compatibility with devices from other manufacturers. If those devices are always used, the full functional range of the drive units may not be available or the devices may not function properly.

The drive unit or the connected device may also become damaged.

The operator can provide a maximum 1.5 A with 24 V DC for external consumers. Should more be required (even if only temporarily), an external power supply is to be used in order to prevent a malfunction of the drive unit.

3.6.1 Activator

In general, the following types of devices are activators: radar motion sensors, passive infrared motion sensors, pushbuttons, switches, sensor buttons, radio, IR-receivers, access control systems, telephone and intercom systems.

Activator, inside outside, night/bank and intercom system may be connected to the device. The activator inside is usually found inside a building or room. The activator outside is found on the outside of a building or room. The activator night/bank is installed on the outside and often designed as a card reader or key switch button.

Minimum requirements:

Operating voltage when supplied by the drive unit:
24 V DC +/- 5 %

Pulse duration:
min. 200 ms

Potential-free output:
(in case a signal input internal is used,
external detector or night/bank)

Energized output (telephone systems):
max. 24 V DC/AC +/- 5 %

3.6.2 Locking device

In general, the following types of devices are locking devices: electrical door opener (E-opener), motor locks, multi-point locking device with response contact, holding magnets.

Motor locks without a locking response can be directly connected to the drive unit if the locking time is less than 4 seconds. In order to ensure the safe operation of the combined drive unit and locking device, the locking device must meet the following specifications:

Minimum requirements:

Operating voltage when supplied by the drive unit:
24 V DC +/- 5 %

Operating voltage with an external supply:
max. 48 V DC/AC

Load of the contact relay locking:
max. 1 A

Switch-on time electrical door opener:
min. 30 %

Switch-on time motor lock:
100 %

3.7 Technical data

Application conditions

Ambient temperature	- 15 – + 50 °C
Only for dry rooms	Relative air humidity max. 93 % non-condensing
Power supply	230 V AC +10 %/-15 %, 50 Hz
Protection class	IP 20

General

Dimensions (WxHxD)	685 x 70 x 130 mm
Max. power input	120 Watt
Closing torque EN 1154	EN 2–4 infinitely variable
Max. door panel weight up to a lintel depth of 250 mm door panel width	160 kg, depending on the up to a lintel depth of 250 mm door panel width
Door panel width	700–1,100 mm
Max. opening speed	**50° (27°*)/second
Max. closing speed	**50° (27°*)/second
Axis extension	30/60 mm
Lintel depth standard arm	0–225 mm
min. clearance between hinges 2-panels	1,400 mm
min. clearance between hinges 2-panels with door coordinator	1,450 mm
min. clearance between hinges 2-panels with full casing	1,500 mm
Drive unit weight	12 kg
Power supply for external consumers	24 V DC +/- 5 %, 1,5 A
Door opening angle	Max. 95° – 110°, depending on the type of installation
Fuse protection provided by the customer	16 A
Operating noise	Max. 50 dB(A)

Inputs

Connecting terminals	Max. 1.5 mm ²
Potential-free activator	Internal and external (NO contact)
Night/bank (intercom)	8 – 24 V DC/AC + 5 %
Night/bank (key switch)	Make contact/NO/NC contact
Safety sensor	Hinge side and opposite hinge side (NC contact)
Test signal safety sensor	Hinge side and opposite hinge side
Shutdown drive function	NC contact/NO contact

Outputs

Connecting terminals	max. 1.5 mm ²
Potential-free status contact	Door closed Door open Error Door closed and locked

Integrated functions

Latching action	Force is adjustable
Hold-open time in case of automatic opening	0 – 30 seconds
Hold-open time night/bank	0 – 30 seconds
Hold-open time in case of manual opening	0 – 30 seconds
Blocking behavior	Reversing/ door closing function
Unlocking time door opener	0 – 4 seconds
Locking response	Motor lock
Wind load control	Up to 150 N
Voltage independent braking circuit	Adjustable with potentiometer
LED status display	green - Operating control voltage red - Error message yellow - Service interval display
Integrated program switch	Off Automatic Permanent open Exit only (only for 1-panel systems)
User interface with information display	Status display and parameterization
Slot for ISEO Upgrade Card	Extension of the functional range
Update interface	Update firmware
TMP – Temperature Management Program	Overload protection
IDC – Initial-Drive-Control	Driving cycle optimization
Cycle counter	0 – 1,000,000 (meaningful division)
Power-Assist function	Servo assist in case of a manual opening
Push & Go function	Door opening in case of a manual movement of 4°

* Values in brackets show the maximum speed in the operating mode Low-Energy without Upgrade Card Full Energy.

** Depending on the door panel weight automatically limited according to EN 16005 or DIN 18650, BS 7036-4 and ANSI 156.19.

3.8 Torque Overview

Installation type	Lintel mounting on hinge side, pull version of slide channel		Lintel mounting on opposite hinge side, push version of standard arm/ push version of slide channel	
	minimum	maximum	minimum	maximum
Closer size pursuant to EN 1154	EN 2	EN 4	EN 2	EN 4
Manual closing torque (Nm)***	13	34	13	37
Automatic closing torque (Nm)**	20	FE: 150/LE: 67	20	FE: 150/LE: 67
Manual opening torque (Nm)	30	50	35	55
Automatic opening torque (Nm)**	20	FE: 150/LE: 67	20	FE: 150/LE: 67
Opening torque of manually activated power-assist function (Nm) *	23	23	23	23

FE With installed Full-Energy Upgrade Card, LE Low-Energy basic device without Upgrade Card

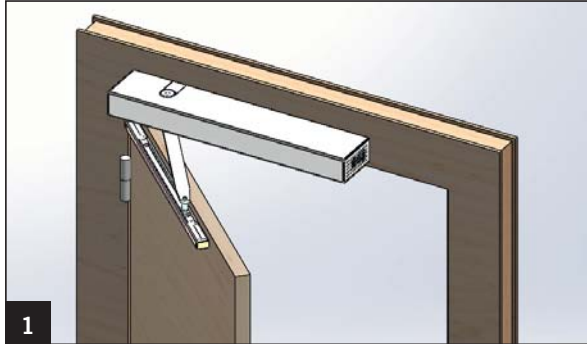
* If power-assist support set to maximum, effective from an opening width of approx. 3°.

** The torque is available in the event of automatic opening in automatic mode.

*** In the push version of the slide channel installation type, the forces reduce by approx. 33%

4. Preparing for installation

1. Depending on the installation situation, select the corresponding drilling pattern on pages 9-12.



Assembly on the hinge side pull version with slide channel
pages 9 and 10



Assembly on the opposite hinge side push version with slide channel
page 11



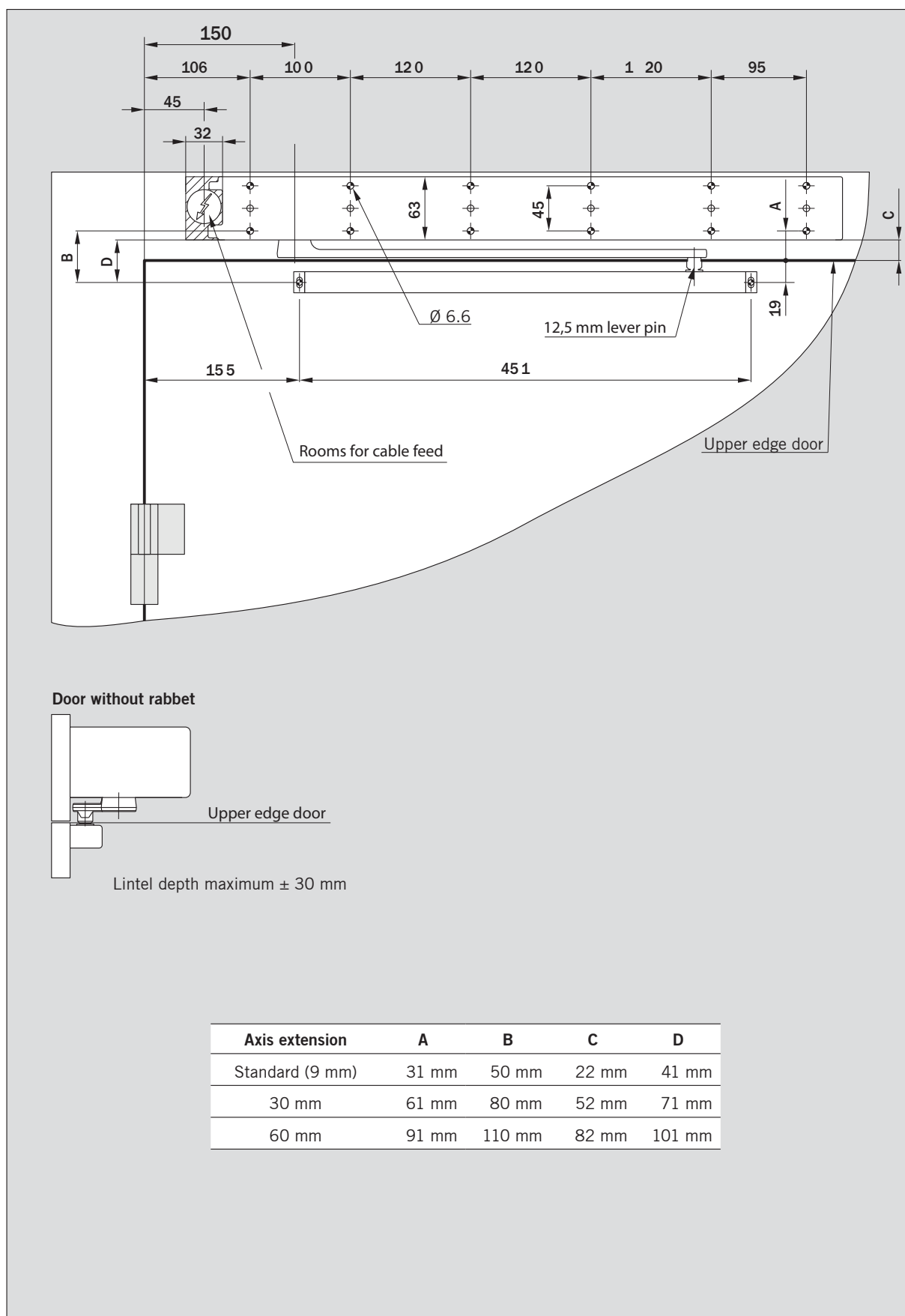
Warning : mounting on opposite hinge side with slide channel is not suitable on fire and smoke doors.



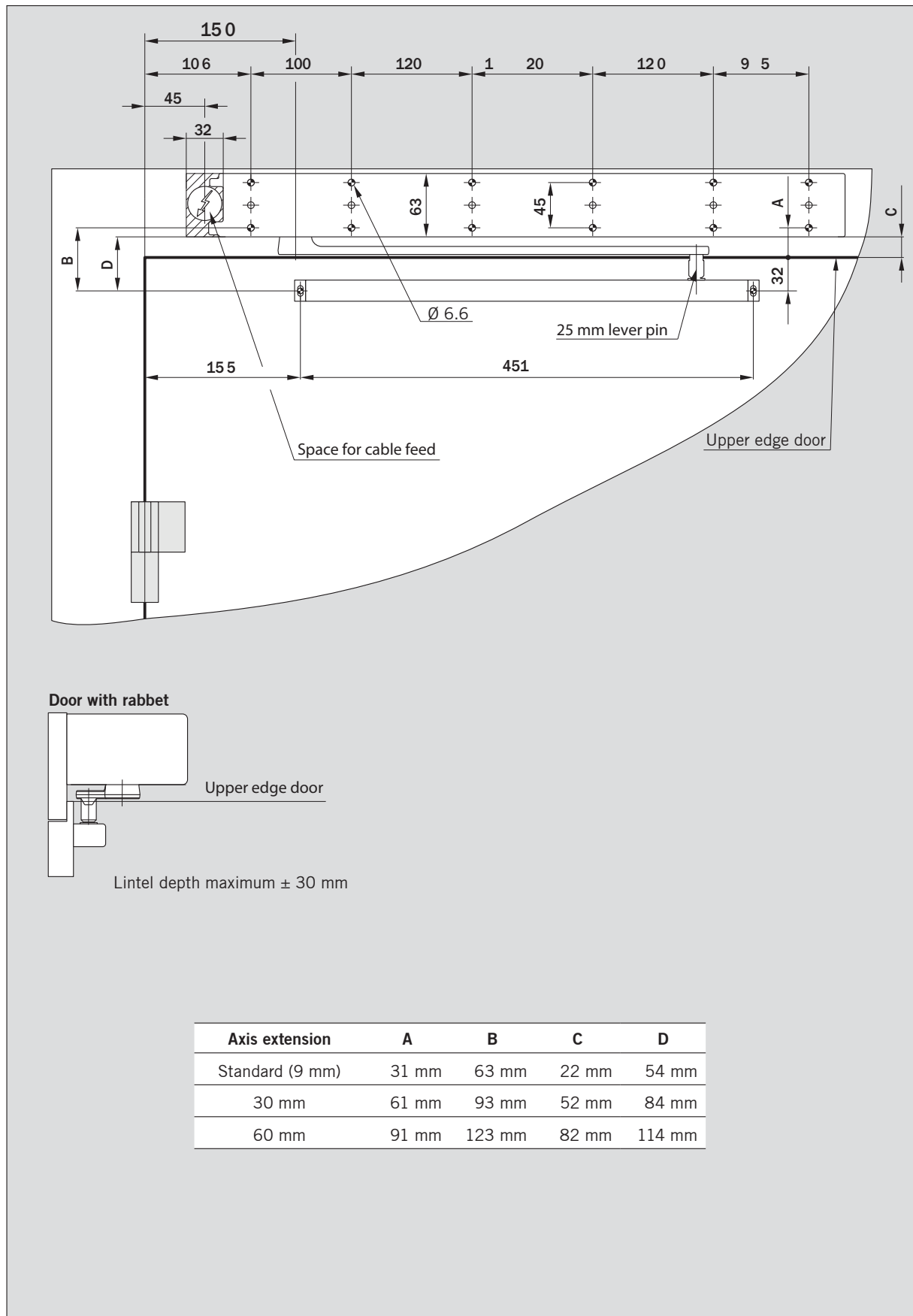
Assembly on the opposite hinge side push version with standard arm
page 12

2. Drill the holes shown in the drilling pattern in the door leaf and frame/wall.

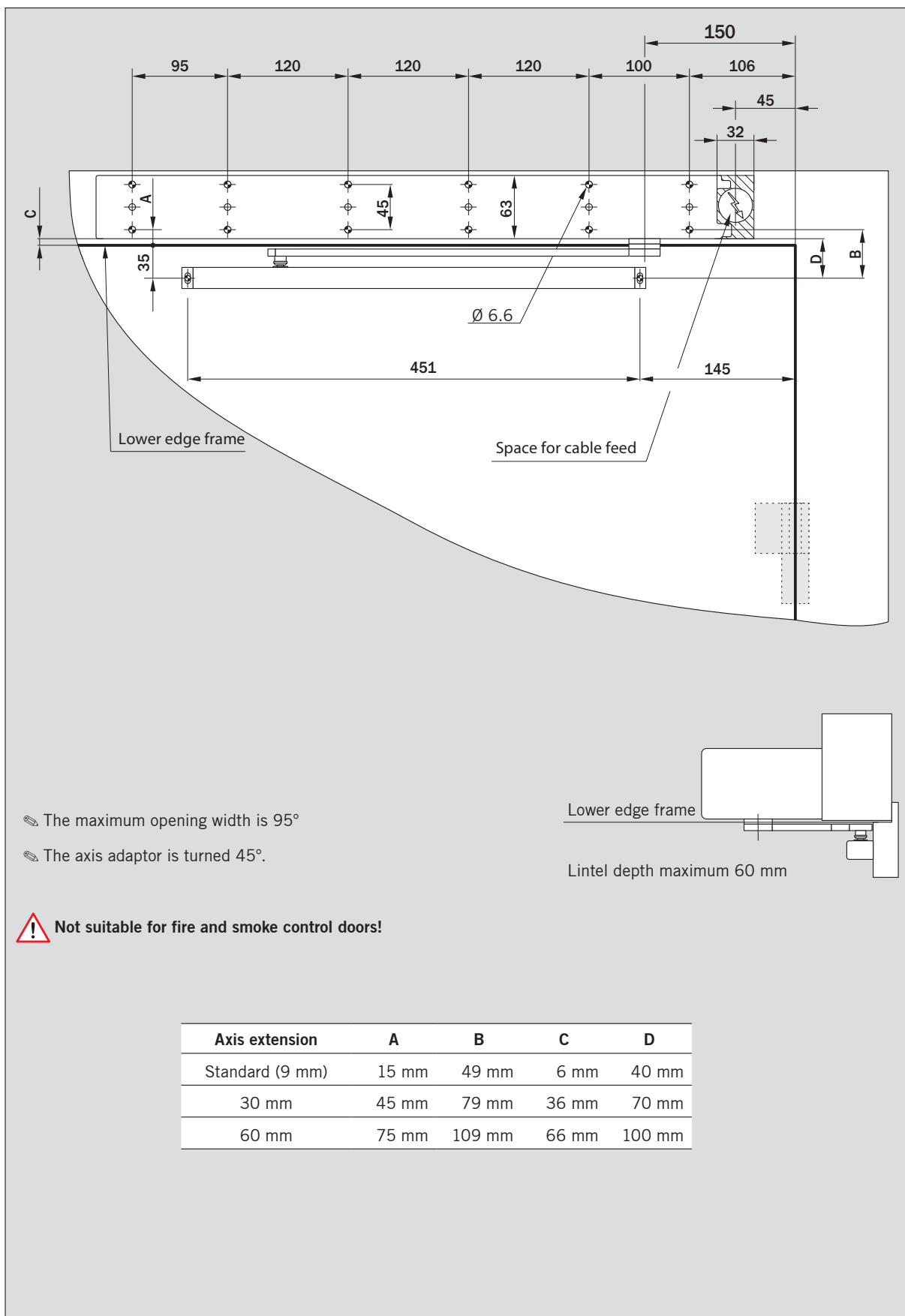
Assembly on the hinge side pull version with slide channel and 12.5 mm lever pin



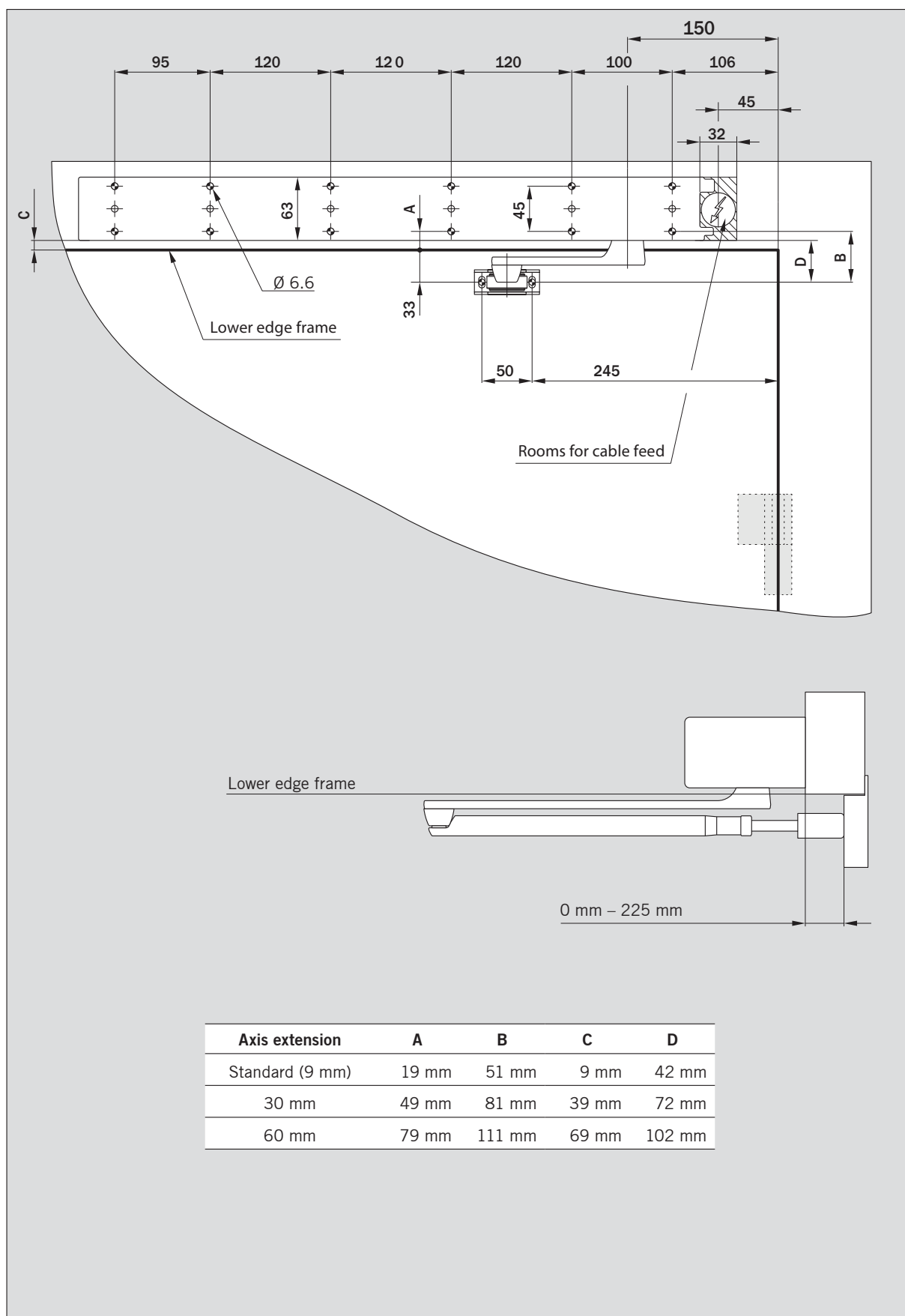
Assembly on the hinge side pull version with slide channel and 25 mm lever pin



Assembly on the opposite hinge side push version with slide channel and 12.5 mm lever pin



Assembly on the opposite hinge side push version with standard arm



5. Installing the drive unit

! Secure the workspace against trespassing. Dropped parts or tools may result in injuries.

The described procedure is only an example.
A different procedure might be preferable due to structural or local conditions, available tools or other circumstances.

Requirements

- A 230 V/50-60 Hz connection with a fuse protection of 16 A must be available at the place of installation.
- The door panel must be in a sound mechanical condition and smooth-running.

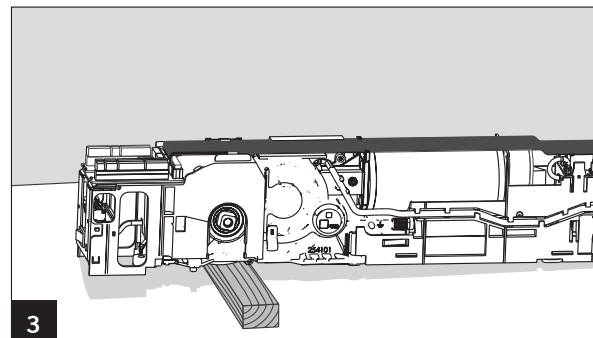
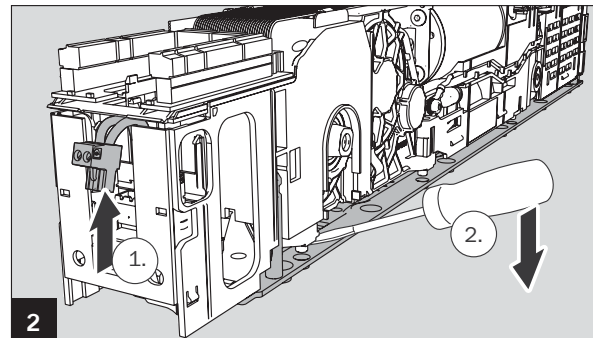
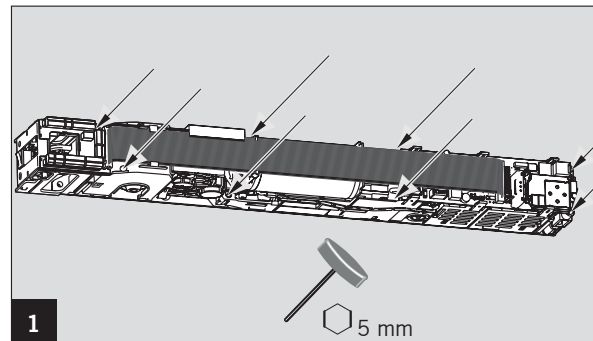
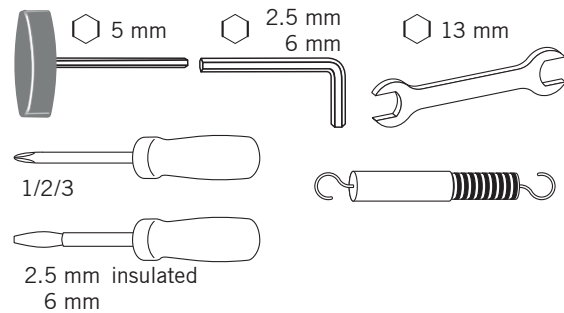
Standard tightening torques

M 5		5 Nm
M 6		9.5 Nm
M 8		23 Nm
M 10		46 Nm
M 12		79 Nm

5.1 Removing the drive unit from the mounting plate

1. Loosen the 8 fastening screws.
2. Unplug the 230 V connector. ①
3. Disconnect the drive unit from the mounting plate.
Use a screwdriver as a lever between the drive unit and the base plate. ②
4. Place a piece of wood or similar underneath the drive unit so that the connecting part cannot become loose.

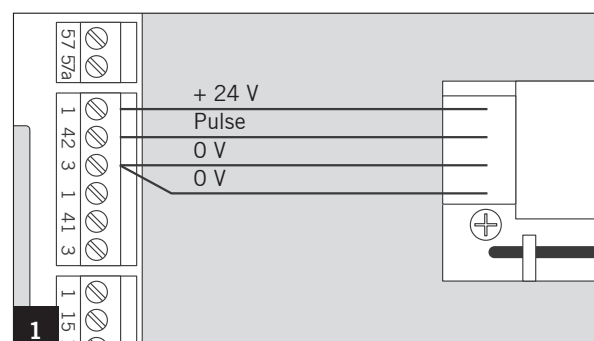
Required tools



5.2 Mounting the receiver (optional)

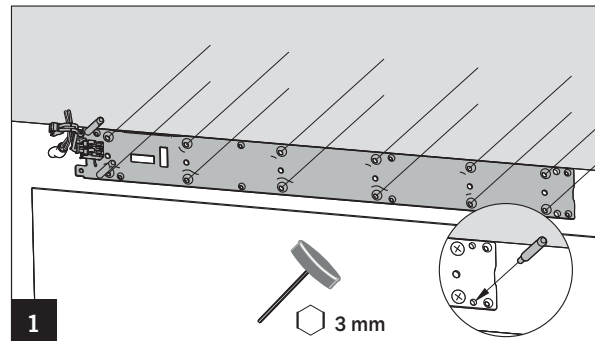
1. Connect the receiver, if you need.

For more information on installation, refer to its mounting instruction.



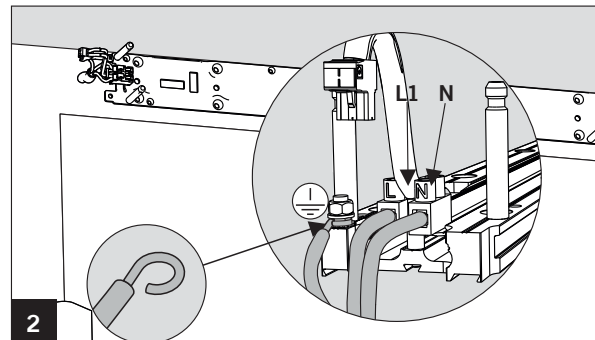
5.3 Mounting the mounting plate

1. Fasten the mounting plate with 12 screws into the prepared holes.
- ✎ For the fastening, use dowels and screws that match the background.
2. Use 3mm allen key to drive the supplied holding pin into the lower one of the 2 holes.



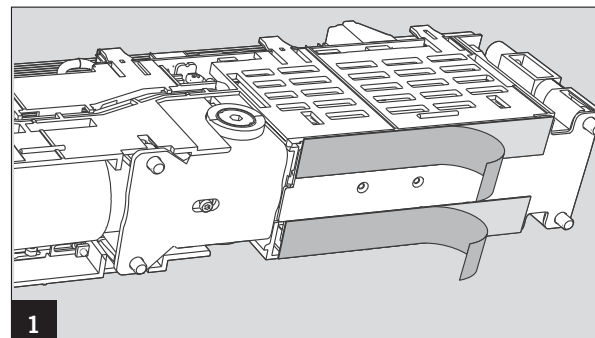
3. Connect the 230 V connecting cable.
4. Bend the cable end of the ground conductor to form an eye and fasten it to the grounding screw.

⚠ Work on electrical equipment must be performed by qualified electricians only.

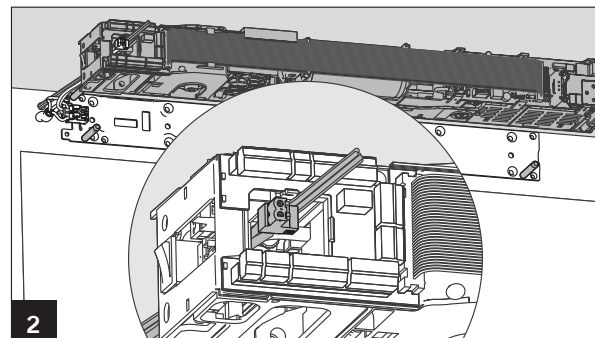


5.4 Fastening the drive unit to the mounting plate

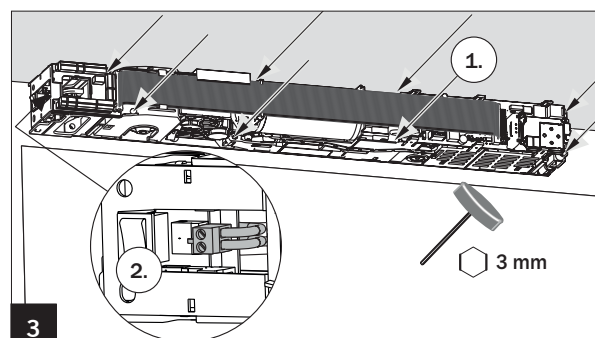
1. Remove the protective sheet from the thermally conductive pads on the bottom side of the mains adaptor.
- ✎ The thermally conductive pads may not become soiled.



2. Feed the connecting cables through the housing and place the drive unit onto the bolts on the base plate.
3. Push the drive unit until it clicks into place.



4. Tighten the 8 screws. ①
5. Plug in the mains connector. ②



5.5 Driving the axis extension into the lever

1. Drive the axis extension into the lever.

- ✎ Mounting position on the hinge side in case of an installation with slide channel and on the opposite hinge side in case of a normal arm assembly.



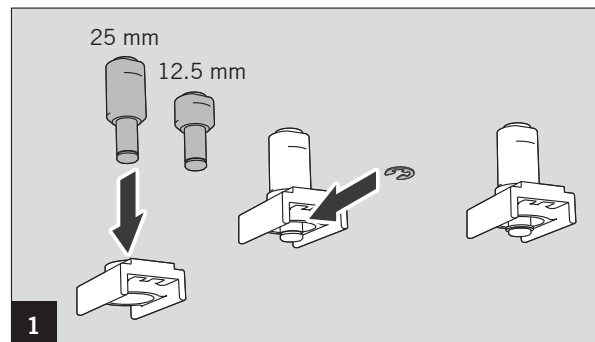
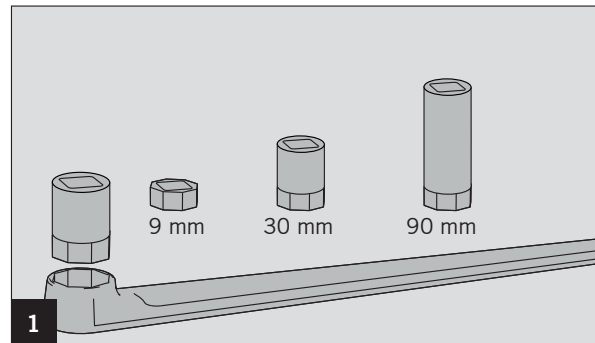
- ✎ Mounting position on the opposite hinge side in case of an installation with slide channel, the square must be turned by 45°.



5.6 Mounting the slide channel

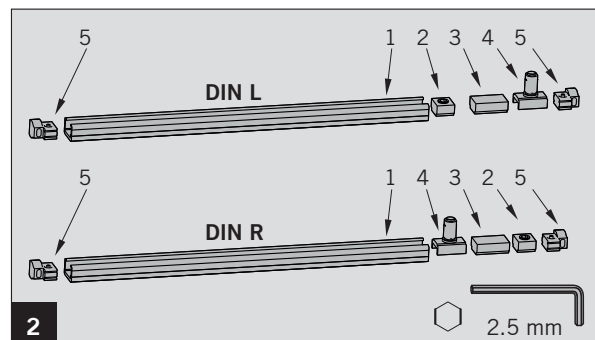
1. Insert the lever pin (12.5 or 25 mm) into the sliding piece and fasten it with the retaining washer.

- ✎ The short pin is used for doors without rabbet.



2. Place the individual parts into the slide channel as shown in the illustration and fasten the mounting part.

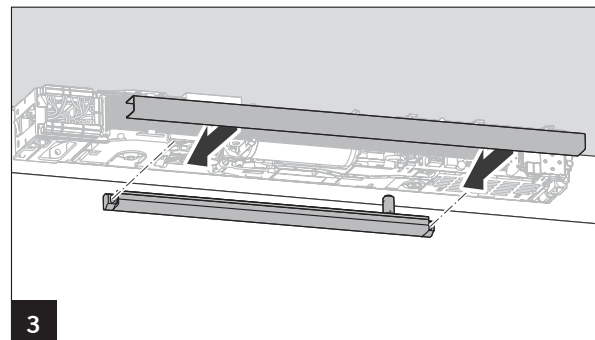
- 1 Slide channel
- 2 Latching action
- 3 Buffer
- 4 Sliding piece
- 5 Mounting piece



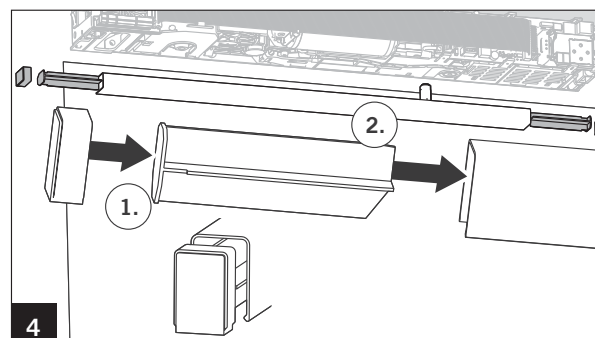
3. Screw the slide channel with 2 screws into the prepared holes.

- ✎ For the fastening, use dowels and screws that match the background.

4. Insert the casing onto the slide channel.

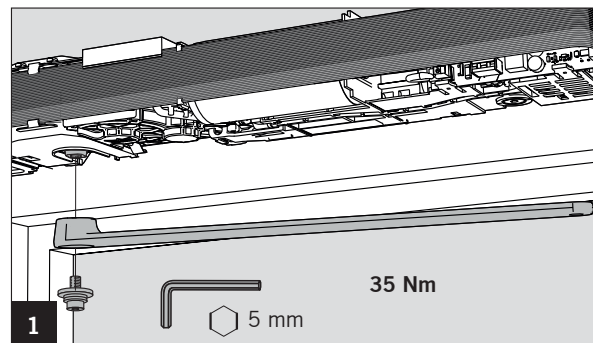


5. Insert the end caps onto the spacers. ①
6. Insert the spacers with the end caps into the casing. ②
- ✎ Ensure the correct mounting position; the spacers and end caps must be installed as shown in figure 4.
7. Align everything so that the end caps are flush with the casing on both sides.

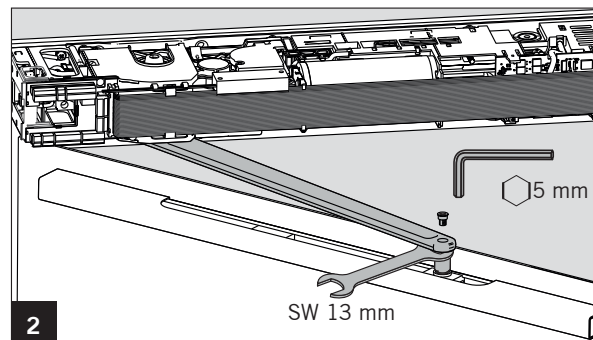


5.6 Mounting the lever of slide channel set.-pull version

1. Screw disk using a high tightening torque (35 Nm) to the drive shaft.
- ☞ Use only the supplied self-locking screw. If this screw is loosened during repair or maintenance work, it needs to be replaced with a new self-locking screw.

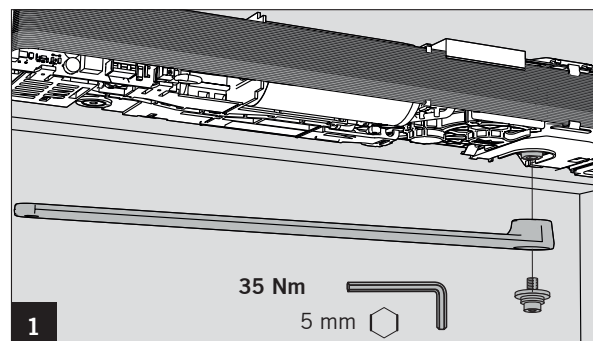


2. Screw the lever to the sliding piece.

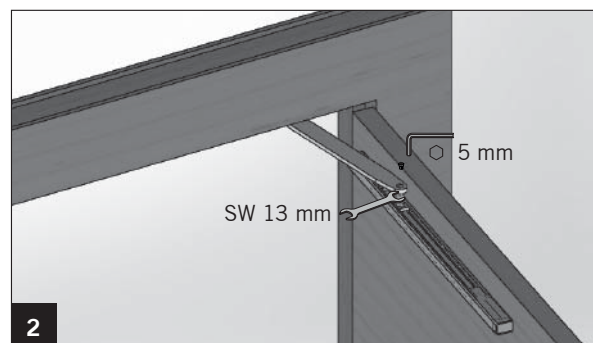


5.7 Mounting the lever of slide channel set.-push version

1. Screw disk using a high tightening torque (35 Nm) to the drive shaft.
- ☞ Use only the supplied self-locking screw. If this screw is loosened during repair or maintenance work, it needs to be replaced with a new self-locking screw.

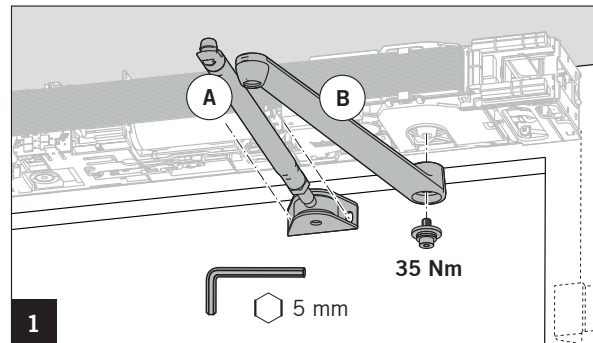


2. Screw the lever to the sliding piece.

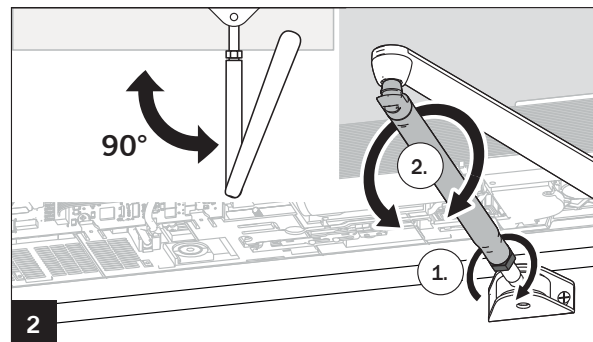


5.8 Mounting the normal arm assembly

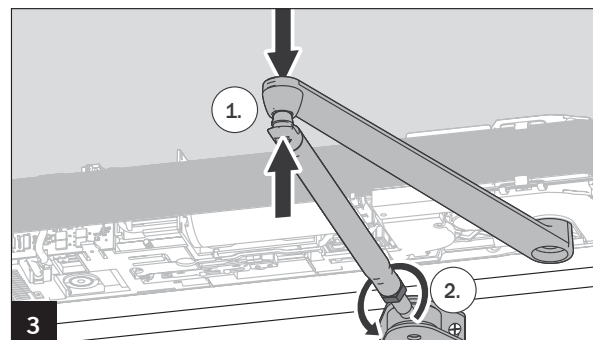
1. Screw the tensioning screw (A) with 2 screws into the prepared holes.
 2. Screw the lever (B) using a high tightening torque (35 Nm) to the drive shaft.
-  Use only the supplied self-locking screw. If this screw is loosened during repair or maintenance work, it needs to be replaced with a new self-locking screw.



3. Align the tensioning screw perpendicular to the door panel with the door closed.
4. Loosen the counter nut on the tensioning screw. ①
5. Screw or unscrew the tensioning screw until the tensioning screw is perpendicular to the door panel in the clipped together state of the arm assembly. ②



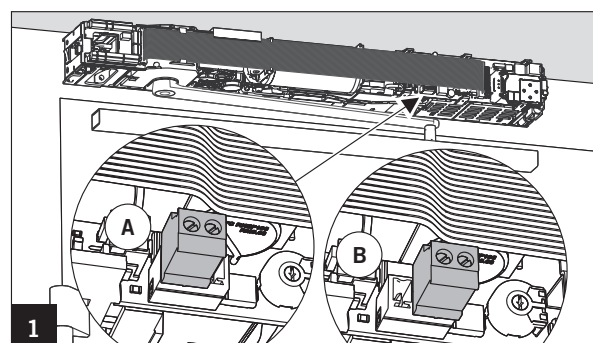
6. Push the ball head of the tensioning screw into the receiver on the lever. ①
7. Tighten the counter nut. ②



5.9 Setting the braking circuit

1. Ensure that the mains voltage is disconnected.
2. Insert the connector depending on the type of installation.
(A) = installation pulling
(B) = installation pushing

 The braking circuit will not be effective if the connector is not correctly connected. The door can close with a high speed.



5.10 Adjusting the spring force

The spring is not tensioned when delivered. A primary tension of at least 10 rotations is required for the operation. The adjustment will be tested during the teach-in run. The teach-in run will be aborted if the spring force is too low. A new teach-in run must be carried out if the spring has been readjusted.

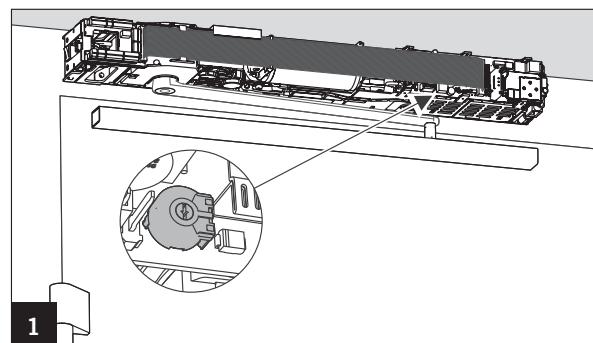
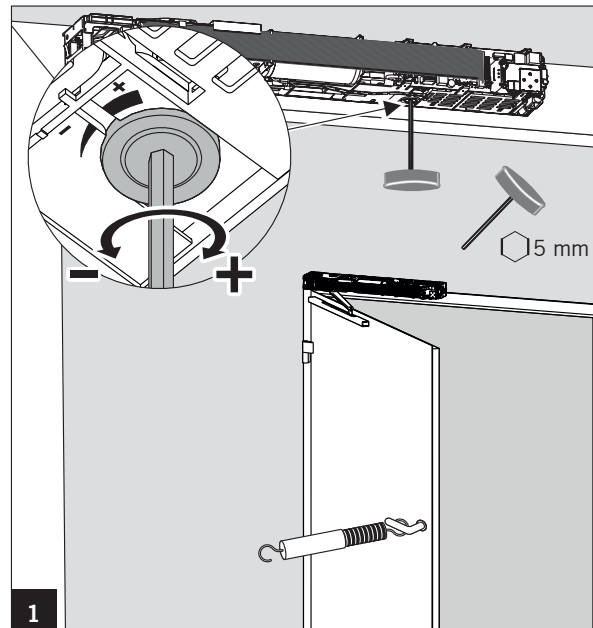
1. Refer to the table to find the required rotations for the spring adjustment and adjust the spring force.

	Selection EN class		
Door panel width in mm	850	950	1100
EN class	EN 2	EN 3	EN 4
min. closing torque in case of 2°	13 Nm	18 Nm	26 Nm
Rotations for the spring adjustment	10	14	16

- ⓘ The table shows approximate values. You must therefore test and correct, if necessary, the closing torque at 2° in accordance with EN 1154. In case of lintel depths larger than 225 mm, you must also check the minimum closing torque between 88° – 92°.

5.11 Adjusting the closing speed in an deenergized state

1. Adjust the closing speed on the potenziometer.
- ⓘ The speed must be adjusted. If the door closes in less than 3 seconds, it will lead to the error message 73 (braking circuit test).



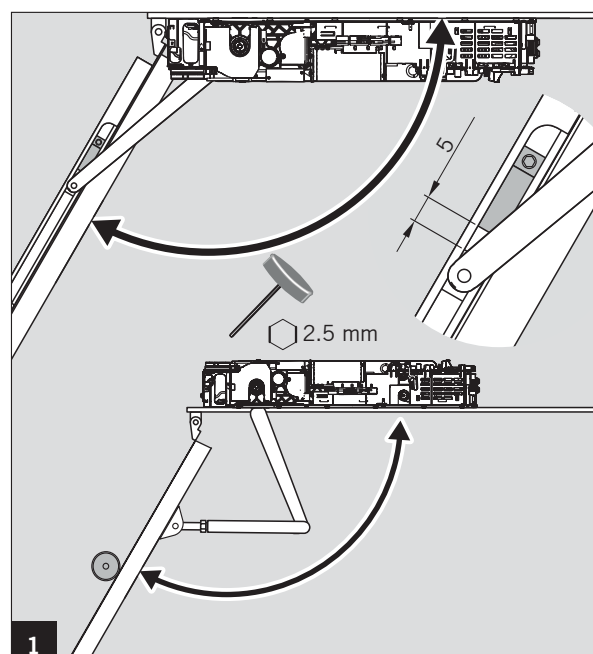
5.12 Commissioning the drive unit

1. Commissioning the drive unit. See commissioning on page 21

5.13 Adjusting the end stop on the slide channel

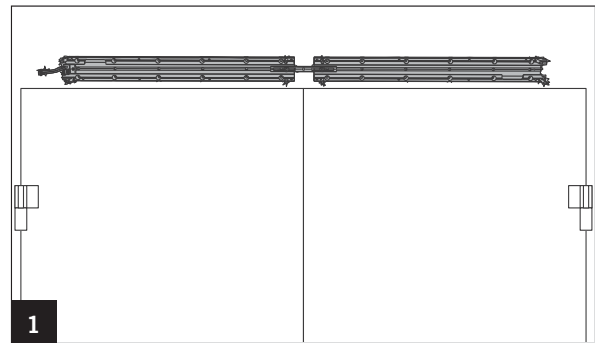
The end stop must be adjusted so that the set opening angle cannot be exceeded when manually pushed.

1. Turn the program switch to the PERMANENT OPEN position.
 - The door will open to the adjusted opening width.
2. Move the buffer and the end stop to 5 mm to the sliding piece.
3. Tighten the end stop.
 - ⓘ We recommend the use of a door stop.
 - ⓘ In case a normal arm assembly is used, you must use a door stopper.



5.14 Installing the 2-panel door

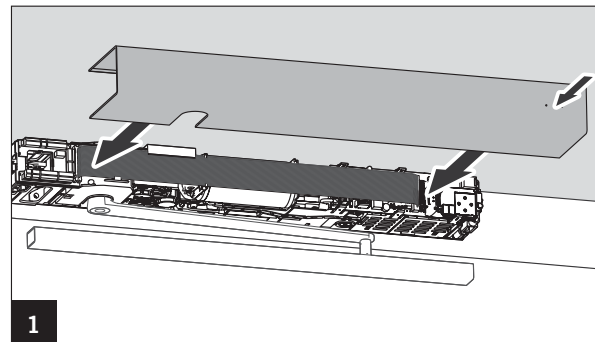
1. For more information on installation, refer to mounting instruction of extra cover for double door.



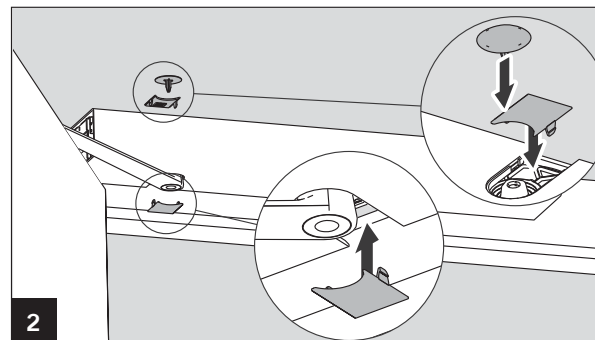
5.15 Installing the casing

1. Push the cover onto the drive unit and press until it clicks into place.

⚠ Do not connect any cables.

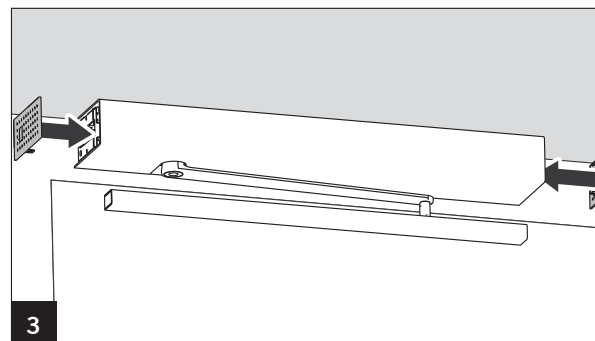


2. Attach the axis covers.



3. Attach the side covers.

🔧 On the side with the program switch, you can vary the insertion depth using the notches in order to compensate for slight differences in length of the cover.



6. Connecting the accessories

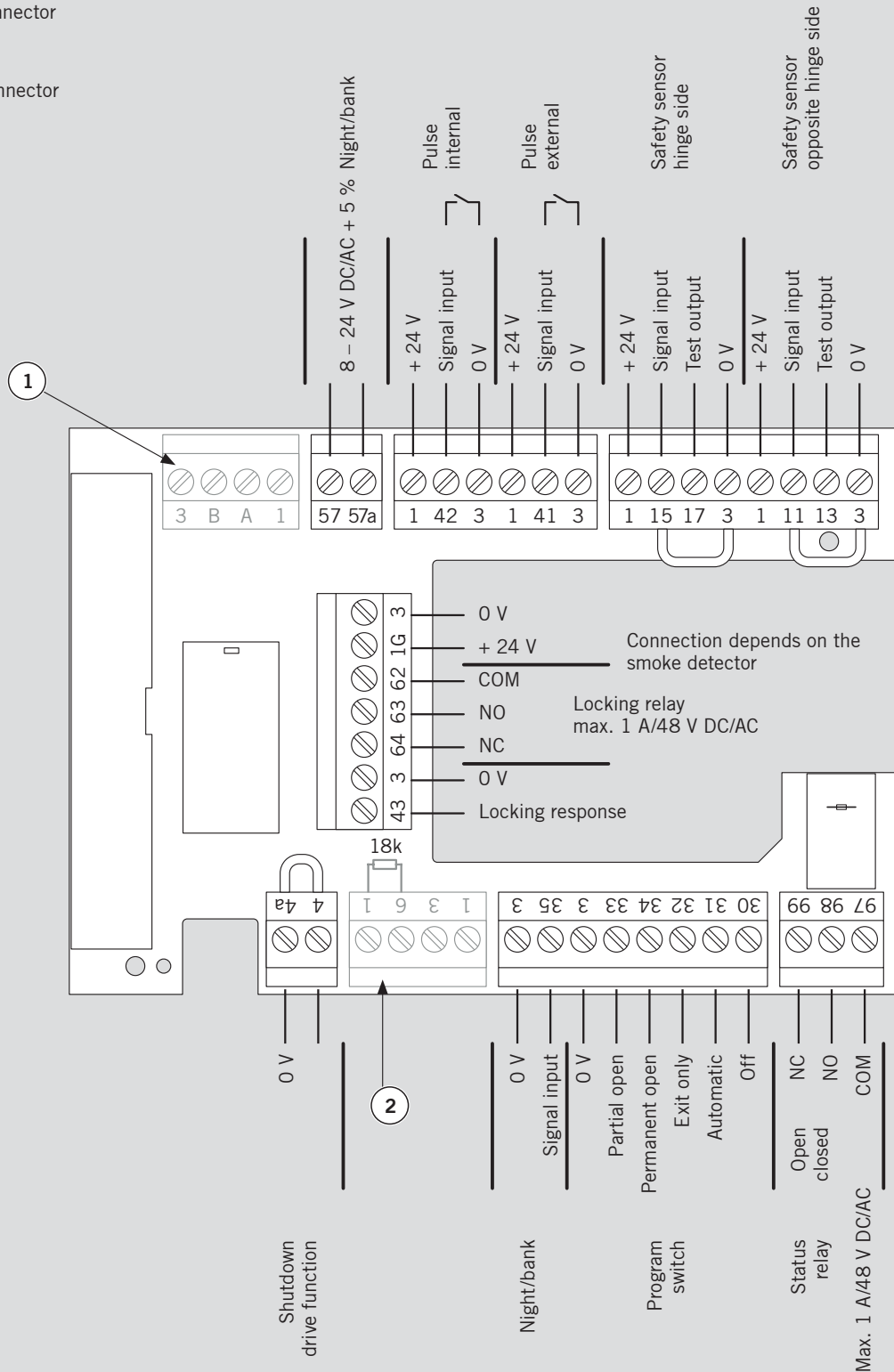
1 Connect the connecting cables to the connector and insert the connector into the connection board.

- Maximum 1.5 A total load on the terminals 1, 1G and 3.
- Cable length maximum 30 m for J-Y(ST)Y 0.8 mm

6.1 Terminal assignment

1 No connector

2 No connector



7. Commissioning

(also after a reset with factory setting (Fact-Setup))

7.1 Requirements

- The drive unit is completely installed and correctly connected to the door panel.
- The parts delivered separately such as the program switch and activator (microwave detector, night/bank key switch) are installed and connected.
- The motor is cold.

7.2 Commissioning the drive unit

1. Turn the program switch to the OFF position.



2. Turn on the drive unit using the power switch.

- The display shows a sequence of characters that indicate the current processing status.



The system is being tested.



2 segments in the center moving back and forth indicate that the control unit is waiting for internal signals (maximum 1 second).



2 underlines moving up and down indicate the mounting position can be entered. In case of an incorrect input, the characters on the display are upside down.

3. Press the lower pushbutton (possible only during the initial commissioning).



The device identification will "run" through the display. IS 9100 and the firmware version (indicated by XX XX).



A small, spinning "o" and "P" indicate that a further parameterization is required (only during the initial commissioning or after a reset with factory setting).

4. Set the following parameters: type of mounting (AS), lintel depth (rd) and door width (Tb). For the meaning and the value ranges of the parameters, please refer to the table on page 23.



Even factory setting are the good values, a validation is necessary.

7.3 Changing the parameters

1. Press the pushbutton for 3 seconds in order to call up the parameter menu.	►
2. Press the pushbuttons in order to select the desired parameter.	▼ or ▲
3. Press the pushbutton in order to display the parameter value.	►
4. Press the pushbutton in order to select the value for the change. => The value flashes.	►
5. Press the pushbuttons in order to set the desired value.	▼ or ▲
6. Press the pushbutton in order to save the changed value.	►
7. Press the pushbutton in order to return to the parameter menu.	◀
8. Press the pushbuttons in order to select the next parameter.	▼ or ▲



After leaving the parameterization mode, the display will show a small, spinning "o" and "P".

7.4 Performing a teach-in run



The teach-in run must be carried out while the motor is cold. The door panel may not be moved manually and stopped during the teach-in run. The control unit would otherwise not be able to correctly determine the parameters.

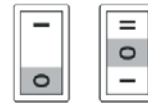


The safety sensors and activators are shut off during the teach-in run so that they do not interfere with the teach-in process.



The smoke detector and the shutdown drive function are active.

1. Secure the movement range of the door panels.
2. Close the door and turn the program switch to the OFF position.



A spinning "o" and "0" indicate that a teach-in run is required.

3. Press the pushbutton ▼ for 3 seconds.

- The door performs various movements and the display shows a sequence of characters. Do not stop the movements of the door panel.



The door is in the 70° position and waiting for the opening width to be set.

4. Push the door to the desired open position and press the pushbutton ▼.



In case the spring force is too low, the display will show the small spinning "o" and "F".

5. In this case, increase the spring force and restart the teach-in run.



The door is now operational.



Due to system tolerances, the actual forces on the door panel have to be measured after the teach-in run and adjusted, if necessary, in order to comply with the local standards and regulations.

7.5 Commissioning of a 2-panel system

1. Commission the active panel.
2. Switch the program switch to PERMANENT OPEN after the teach-in run.
3. Commission the inactive door panel.

Additional parameterization

- On the active panel:
Set parameter >dL< (door type) to "1".
Set parameter >Ad< (caster angle) to the set value.
- On the inactive panel:
Set parameter >dL< to "2".

7.6 Zero point search after mains reset



During the zero point search, the display will show the small spinning "o" and "b".

8. Installing Upgrade Cards

8.1 Requirements:

- The drive unit is completely installed.
- The teach-in run has been successfully completed.
- The mains voltage is turned on.
- The program switch is in the OFF position.
- The information display indicates an inactive state.

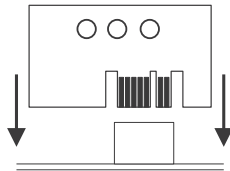


8.2 Use in 2-panel systems

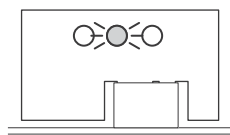
Full Energy: The Upgrade Card Full Energy can be installed on 1 or both drive units.

8.3 Installing the Upgrade Card

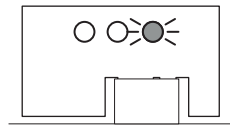
1. Insert the Upgrade Card into the slot (see page 4 position 9).



- The yellow LED flashes once during the insertion.



- The data are transmitted. The communication between the modules is indicated by a slow flashing of the green LED.



- The corresponding function is now enabled and can be activated (see page 27, Parameter F1 – F8).
- The system is now operational.
- The Upgrade Card assumes the function of the container module.

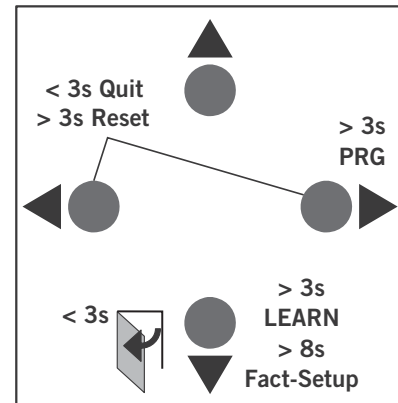
The following is also to be considered during the installation:

- If the container module is removed, the previously enabled functions will be deactivated after some time.
- For a new installation of the Upgrade Cards, it is necessary to carry out an extended factory setting.
- In case the control unit is replaced, the container module will be taken from the old control unit and attached to the new one. The new control unit synchronizes with the container module and all functions will be available again.
- The Upgrade Card will be rejected if an already enabled Upgrade Card is attached. This is indicated by a fast flashing of the yellow LED. The module is then not devalued.
- If the container module of an external control unit is inserted, the container module will be rejected. This is indicated by a fast flashing of the yellow and the green LED. The module can be synchronized only with a control unit.

9. Parameterization/Service

After a completed teach-in run, the drive unit can be operated with the basic parameters.

The system also offers the option to adapt the moving parameters to the actual conditions and to activate the enhanced functions. These parameters should already be set during the commissioning according to the preferences of the user.



	Parameter/display	Value range	Unit Factory setting = Bold	Explanation
MOUNTING AND DOOR INFORMATIONS	Assembly type 	0 – 2	0	Lintel installation hinge side, slide channel pull version
			1	Lintel assembly opposite hinge side, arms push version
			2	Lintel assembly opposite hinge side, slide channel push version
	Lintel depth 	3 – 30	0	The lintel depth is set in 10 mm steps. The required measure can be taken from the assembly drawings. In case the CPD lever is used, 30 mm must be deducted from the real lintel depth.
	Door panel width 	7 – 11	10	The rabbet will be included in the door panel width. The door width is shown in 100-mm steps.
SPEED ADJUSTMENT	Door type 	0 – 4	0	1-panel door
			1	2-panel door, active panel, overlapping door panel
			2	2-panel door, inactive panel, overlapping door panel
			3	2-panel door, active panel, non-rebated door panel
			4	2-panel door, inactive panel, non-rebated door panel
HOLD-OPEN ADJUSTMENT	Opening speed 	8 – 50 (in case of low energy reduced to a maximum of 27°/sec.)	Degrees/ second 25	The opening speed relates to the automatic mode. Country-specific limits must be complied with and tested after the setting. The full setting range is available only if an Upgrade Card Full Energy has been installed. The speed can be changed using this parameter. The permissibility of the setting is checked via internal monitoring. If exceeded, the set value is shown alternating with the active value.
	Closing speed 	8 – 50 (in case of low energy reduced to a maximum of 27°/sec.)	Degrees/ second 25	The closing speed relates to the automatic mode. Country-specific limits must be complied with and tested after the setting. The full setting range is available only if an Upgrade Card Full Energy has been installed. The speed can be changed using this parameter. The permissibility of the setting is checked via internal monitoring. If exceeded, the set value is shown alternating with the active value.
	Hold-open time 	0 – 30 (in case of low energy min. 5 s)	Seconds 5	The hold-open time should be adjusted so that people have enough time to pass through the door. The hold-open time starts once the contact/voltage on the activator inputs, internal, external, safety, Push & Go is opened/drops and the door is in the open position. The signal can be retriggered. In the operating mode Low Energy, the hold-open time may not fall below the minimum hold-open time of 5 s. The values of 0 – 30 seconds can be set in 1 second steps and values over 30 seconds in 5 seconds steps.
	Hold-open time Night/Bank 	0 – 30	Seconds 10	The hold-open time night/bank (key switch button) can be set separately. The hold-open time night/bank starts once the contact on the activator input night/bank is opened and the door is in the open position. The signal can be retriggered.
	Hold-open time in case of a manual opening 	0 – 30	Seconds 1	The hold-open time after a manual opening is in effect with any purely manual opening, even in case of an activated power-assist function and after a stop by the sensor bar.

	Parameter/display	Value range	Unit Factory setting = Bold	Explanation
SAFETY SENSOR	Wall suppression BS 	60 – 99 99 = deactivated	Degrees 80	Once the set angle has been reached, the input signal of the safety sensor hinge side will be ignored. The wall suppression is required if the door opens against an obstacle. The wider the detection range of the used safety sensor, the larger the range has to be within which the detection is ignored. To protect people, we recommend to minimize this range. If during the opening of the door the wall suppression angle is exceeded, a fast flashing point will appear on the top left on the display of the control unit. This display will disappear when the angle is smaller.
	Test Safety sensor 	0 – 6	0	Test off. The safety sensors will not be tested. In combination with safety sensors according to EN 16005 or DIN 18650, one of the parameters 1 – 6 must be used. The test level Low and High active depends on the sensor and must be set on the sensor to the same value as the drive unit.
			1	Test sensor on hinge side - Level High active
			2	Test sensor on opposite hinge side - Level High active
			3	Test sensor on hinge side & sensor on opposite hinge side - Level High active
			4	Test sensor on hinge side - Level Low active
			5	Test sensor on opposite hinge side - Level Low active
			6	Test sensor on hinge side & sensor on opposite hinge side - Level Low active
	Pulse by safety sensor opposite side hinge 	0 – 1	0	The input signal of the safety sensors will be ignored as soon as the door is closed.
			1	With the door closed, the safety sensor can trigger an opening pulse.
	Suppression safety sensor BS during initial run 	0 – 1	0	The safety sensor on hinge side is not active during the initial run (will be suppressed).
			1	The safety sensor on hinge side is active during the initial run.
UNLOCKING	Unlocking time 	0 – 40	100 ms 1	The unlocking time starts after the pulse. The door will be opened only after the unlocking time has lapsed. When set to "0", the pushing will not be carried out before the unlocking. Depending on the locking device used and in combination with the response contact, the process will change.
	Unlocking force 	0 – 9	0	The unlocking force determines the force with which the door is pushed in the "CLOSED" direction prior to the opening. The time is determined by the unlocking time parameter. The pushing in the "CLOSED" direction can be practical in order to relieve a possibly existing e-opener and to ensure its opening. The higher the value is set, the higher the load on the arms mounting. In order to have a long service life of the system, adjust this force only as high as really required.
	PR module test 	0 – 1	0	Test off
			1	The test of the PR module is carried out every 24 hours, 10 minutes after the mains has been turned on. In case of an error, no more unlockings will be carried out and therefore also no more automatic door movements will be started.

Parameter/display	Value range	Unit Factory setting = Bold	Explanation
STATIC FORCE	Static force in the opening direction (basic parameter for wind load control) 	2 – 15 (reduced in case of Low Energy) 6	10 N 6 The forces acting on the closing edge can be changed using this parameter. The permissibility of the setting is checked via internal monitoring. If exceeded, the set value is shown alternating with the active value. Due to system tolerances, the actual forces on the door panel have to be measured after the automatic drive teach-in run and adjusted, if necessary, in order to comply with the local standards and regulations.
	Static force in the closing direction (basic parameter for wind load control) 	2 – 15 (reduced in case of Low Energy) 6	10 N 6 The forces acting on the closing edge can be changed using this parameter. The permissibility of the setting is checked via internal monitoring. If exceeded, the set value is shown alternating with the active value. Due to system tolerances, the actual forces on the door panel have to be measured after the automatic drive teach-in run and adjusted, if necessary, in order to comply with the local standards and regulations.
END CLOSING	Latching action pulse 	0 – 9 0	In addition to the mechanical latching action, there is a motor-driven latching action available for the automatic mode. The motor-driven latching action allows you to overcome door seals or locking devices during the closing. Starting with a small value, the setting is to be increased in order to prevent damage to the door. It must be ensured that the door itself and the arm assembly/slide channel mounting is suitable for the additional and permanently introduced forces. In case of doubt, we recommend to select the smallest possible setting.
	Latching action angle 	2 – 10 3	Degrees 3 The door opening angle is determined by the latching action angle after which the motor-driven latching action pulse is effective.
	Locking force 	0 – 9 0 = off 1 – 9 = on	The locking force will be permanently applied after the latching action. This force is to keep the door in the CLOSED position even if wind pushes against the door. The locking force can be set between 0 (off) and 9 (maximum).
	Push & Go 	0 – 1 0 = off 1 = on	Once activated, the door will be automatically opened when the door is manually moved from the "CLOSED" position by an angle of 4° into the direction of "OPEN". For this function, the value "hd" must also be set to 0.
PROGRAM SWITCH	Program switch type 	0 – 4 0	The internal program switch is active.
		1	An external program switch with contacts on the connection board is connected. The connector of the internal program switch must be unplugged.
		2	Not applicable
		3	Not applicable
		4	Not applicable
	Behavior after a mains reset 	0 – 1 0	In case of a power failure or after a shutdown of the drive unit, the program switch will be automatically switched to the last known position once the mains is switched on. Important: The switching on of the mains may also take place outside business hours and will therefore affect the insurance requirements.
	Internal program switch – switch on delay 	1	In case of a power failure or after a shutdown of the drive unit, the program switch will be automatically switched to the OFF position when the mains is switched on. This function should be used if the insurance-company approved lock must be provided.
		0	The function of the internal program switch will be applied by the drive unit immediately after the switching.
	Internal program switch – switch on delay 	1	After the switching of the internal program switch, the function will be applied with a delay of 10 s. This function is practical if the PGS is to be repositioned and the person must pass the door through the standard detectors after the switching. An additional pushbutton night/bank is not required.

Parameter/display	Value range	Unit Factory setting = Bold	Explanation
Day activation 	0 – 1	0 1	The door will always be locked when it reaches the CLOSED position. In the automatic operating mode, the door will not be locked when the CLOSED position is reached. The locking contact is permanent. This results in a faster opening in combination with motor locks. When an e-opener is used, this opener must be suitable for a 100 % switch-on time in order to prevent damage.
Status relay function 	0 – 6	0 1 2 3 4 5 6	The status relay is deactivated. The status relay will be switched as soon as the set CLOSED position has been reached. The status relay will be switched as soon as the set OPEN position has been reached. Error All errors that result in a message to the internal display will be output on the status relay. Door CLOSED and locked. Error or information All errors or any information that result in a message to the internal display will be reported through an output on the status relay. The status relay will be switched if the open door exceeds the parameter "Status contact angle". The value of the parameter can be changed only via the hand terminal.
Control unit output 1G, with the input 4/4a 	0 – 1	0 1	Output 1G is independent of contact 4/4a. The locking output (terminal 1G) switches as soon as the contact 4/4a is opened. The contact switches permanently. Therefore, an e-opener with a 100% switch-on time is required for the application, e.g. a closed current contact.
INFORMATION/UPKEEP	Cycle counter 	0 – 99 10.000 Cycles	The display takes place in increments of 10,000 cycles. Example: display 4 = 40,000 cycles, display 53 = 530,000 cycles. The value 99 on the internal display will therefore mean 990,000 or higher.
	Delete error memory 	0 – 1 0 1	Without function. The error memory will be deleted. The parameter will then be automatically reset to 0.
	Resetting the service interval display (LED yellow) 	0 – 1 0 1	Without function. The service cycle and time counter will be reset to the values 200,000 cycles and 12 months.
	Factory setting level 	1 – 2 1 2	By pressing the Fact-Setup pushbutton on the user interface > 8 seconds, the drive unit can be reset to the factory setting. The SI parameter can be used prior to the factory setting to determine which data are to be deleted. Standard factory setting: All parameters will be reset to the factory setting. However, the installed Upgrade Cards are kept and do not have to be reinstalled. Extended factory setting: All parameters will be reset to the factory setting. The installed Upgrade Cards will be deleted from the memory of the control unit. The control unit and Upgrade Card can be used independently from each other again (delivery state).
	Opening angle 	0 – 110 Degrees	The opening angle set during the teach-in run will be displayed here. It can be changed only by performing a teach-in run. Due to assembly and parameter tolerances, the display may differ from the actual door position.

	Parameter/display	Value range	Unit Factory setting = Bold	Explanation
	Door closer/ automatic mode 	0 – 1	0	The automatic mode should be used if the door is preferably opened automatically and if motion sensors are used. In case of blockages during the closing, the drive will automatically reverse. The movement has been optimized for a safe closing. The wind load control and the Push & Go function can be used only in the automatic mode.
			1	The door closer mode should be used if the door is opened manually most of the time and only rarely automatically. In case of blockages during the closing, the door will remain in the current position. The movement has been optimized for the manual opening. The Power-Assist function is to be used only in the door closer mode.
POWER ASSIST	Power-assist- starting angle 	1 – 5	Degrees 3	Sets the angle after which the Power-Assist function is to be effective. The smaller the value, the more sensitive the response of the Power-Assist function.
	Power-assist power assistance 	0 – 10	0	Sets the Power-Assistance The higher the value, the easier it is to open the door manually. At 0, the function is deactivated. The Power-Assist function is available only in the door closer mode (hd=1). If the assistance has been set too high, the door can open automatically.
	Assistance manual mode in CLOSED position 	0 – 10	0	Setting of the strength of the Power-Assist in the CLOSED position. The higher the value, the easier it is to manually open the door from the CLOSED position. The Power-Assist function is available only in the door closer mode (hd=1).
UPGRADE CARDS	Upgrade Cards			
		0 – 3	0	Upgrade-Card not installed, function not available.
			1	Upgrade-Card installed, function not activated.
			2	Upgrade-Card installed, function activated.
			3	L'Upgrade Card has been removed, function is no longer available.
	Upgrade Card Fire Protection 		0,2,3	Not Available
	Upgrade Card Full Energy 		0, 2, 3	After the installation of the Upgrade Card, the value 2 will be automatically activated. The full setting range will be available for the parameters So, Sc, Fo and Fc after the activation.
	Upgrade Card Professional			
	Impulse relay 		0, 1, 2, 3	Not Available
	Extended hold-open time 		0, 2, 3	Not Available
	Nurse beds 		0, 1, 2, 3	Not Available
	Upgrade Card Handicapped WC 		0, 1, 2, 3	Not Available
	Upgrade Card DCW 		0, 2, 3	Not Available

Parameter/display	Value range	Unit Factory setting = Bold	Explanation
Configuration of the interface COM1 (upright connector) 	0 – 1	0	Not applicable
		1	Not applicable
Opening dampening when opened manually 	5 – 40	10°	In this case, enter the angle after which the door is braked when manually opened. The entered value counts backward from the set opening angle. Example: Opening angle: 90° Parameter bc: 12° => opening dampening starts at 78°
Door thickness 	0 – 99	0... 35 ...99 mm	The door thickness affects the measured door opening angle. If a more accurate resolution is required, you can enter the actual door width.
Shutdown drive function effective direction (4,4a) 	0 – 1	0	Normally closed contact In case of a normally closed contact, the drive function will be shut down. This effective direction must be used for door lock switches which are equipped with a changeover contact or normally closed contact.
		1	Normally open contact In case of a normally open contact, the drive function will be shut down. This effective direction must be used for door lock switches which are equipped with a normally open contact.
Night/bank effective direction 	0 – 1	0	Normally open contact The night/bank function will be triggered in case of a normally open contact. This effective direction is preferred for a key switch button or access control.
		1	Normally closed contact The night/bank function will be triggered in case of a normally closed contact. This effective direction is often used for the connection to a smoke went and heat exhaust system or building management system in order to activate doors with a normally closed contact.
Triggering the hold-open system by disengaging the door panel 	0 – 1	1	Function switched on If the drive is operated as a hold-open system, the manual triggering can be carried out via the manual closing of the door panel by 10° (+/- 2°) from the taught hold-open time. A manual release button is not required.
		0	Function switched off If the drive is operated as a hold-open system, a manual release button will be required for the manual activation.
Castor angle for 2-panel doors 	0 – 30	0... 30°	Here you can adjust the angle that the active panel has to travel before the inactive panel begins to open.
Clearance between hinges 	+ 5 – – 5	3	The clearance between hinges is crucial for the calculated door angle. It may only have a small effect but it can be adjusted in extreme cases to increase the accuracy. The basic setting of the parameter HS is 3, for 30 mm. In case of center-pivoted doors, the setting must be changed to the negative. A teach-in run is then required as the system creates an angle table as a function of the set parameters.

10. Diagnosis/Troubleshooting

ISEO drive units meet a high safety standard and comply with all technical regulations and requirements. Internal as well as external safety circuits managed by the drive unit will be periodically monitored.

During the operation of the devices, situations may arise that lead to an error message.

The drive unit tries to determine the cause and react accordingly. The reaction takes place depending on the severity of the cause and ranges from an information to the shutdown of the automatic functions of the drive unit.

In this case, the drive unit switches into the emergency mode and acts as a door closer.

The door can be manually passed through.

Information "In" and error messages "E0" ... "E9" will be output on the display of the user interface and the red LED on the internal program switch.

The output to the LED is coded and can be taken from the error table.

Error messages "E0" ... "E9" will be saved in the error memory and can be read off the display of the interface. A current error information will always occupy the error message memory cell E0. In case of another error or its acknowledgement, it will be moved to the error message memory cell E1.

A maximum of 9 errors can be saved in the error memories E1 – E9. The same error messages occurring successively will not be saved again.

To call up the error messages E0 ... briefly ► press E9.

Information "In"

Information is provided for the easy servicing of the drive unit and points to both faulty states and operating states that suppress the automatic operation of the drive unit.

Example:

In 08 -> Emergency stop is pressed; the drive unit does not perform automatic functions.

In 01 -> A blocking has been detected; the drive unit keeps operating.

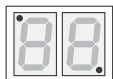
An information can become an error message in case of a repeated occurrence.

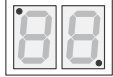
Error messages "E0" ... "E9"

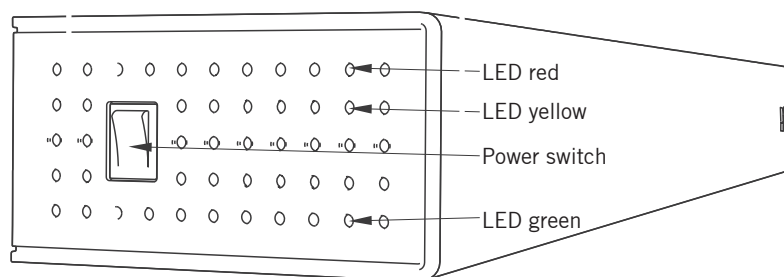
Error messages indicate a hardware defect. However, installation errors and the manual operation during safety tests can also cause error messages, and the system will switch into the emergency mode. The following options are available for the reset of error messages:

- Switching the program switch to off or resetting by pressing the reset button of the user interface with the casing open.
- Mains reset. Switching off the power switch. Restart after 10 seconds.

The cause should be analyzed and eliminated before an error message is acknowledged. The following table will provide assistance.

Error	Possible cause	Remedy
The door can be passed only manually or the door does not open automatically after an opening pulse.	Testing of the green LED.	The power switch must be switched on.
	If the green LED is not on, there is a problem with the power supply.	The power supply must be tested and restored, if necessary.
	Testing of the red LED.	If power is supplied but 24 V DC is not available, the mains adaptor must be replaced.
	If the LED flashes on the power switch, the control unit found an error and the emergency mode is activated.	The troubleshooting is described in the "Information and error messages" list.
	The program switch is in the Off or Exit only position.	Put the program switch into the Automatic or Permanent Open position.
	There is a signal from the safety sensor on the hinge side. This signal prevents the opening.	The signals of the safety sensors will be displayed for the diagnosis directly with the 2 decimal points of the LED display on the user interface.  In case of a detection, the respective decimal point will light. The wiring and function of the system must be tested. If the LED at the top left flashes, the wall suppression will be active. There is no error.

Error	Possible cause	Remedy
During the installation: It is difficult to manually open the door and the closing movement takes place at a high speed.	The connector of the braking circuit is in the incorrect position.	The connector must be positioned correctly depending on the arms assembly used. See page 17 point 5.9.
The teach-in run cannot be started.	The program switch is in the incorrect position. The signal shutdown drive function (4/4a) is active.	Turn the program switch into the "OFF" position. Test the wiring of the smoke detector or the stop signal on 4/4a.
The internal/external program switch does not work or incorrectly	The parameter program switch type is incorrectly set. The cable of the internal program switch is not attached.	The type used must be correctly set as parameter program switch type. Test the cable and connect, if necessary.
	Connection error or switch defect.	The wiring and function of the switch must be tested.
The door opens automatically but closes only after a long time or not at all.	The hold-open time is too long. The program switches in the Permanent Open position. There is a signal from the safety sensor on the opposite hinge side and it prevents the closing.	Reduce the hold-open time. Switch the program switch. The signals of the safety sensors will be displayed for the diagnosis directly with the 2 decimal points of the LED display on the user interface.  In case of a detection, the respective decimal point will light. The wiring and function of the system must be tested. If the LED at the top left flashes, the wall suppression will be active. There is no error.
	There is a signal from a connected activator that prevents the closing.	The wiring of the connected activator must be tested. A normally open contact is to be used in all cases. The signal input 57/57a may be operated with external voltage. Remove the signal lines 35, 57, 42 and 41 one after another in order to localize the error.
The speeds differ strongly from the set parameters.	The teach-in run was performed with a warm motor and the door panel weight was therefore incorrectly determined.	Repeat the teach-in run with the motor cold.



11. Error messages

Display	Display LED	Meaning/cause	Troubleshooting
In 01	none	Blockage The door is blocked due to an obstacle and the door movement was stopped by the drive unit.	The door movement should be tested in a deenergized state and a possibly existing stiffness must be eliminated. The permanent operation of a defective door may damage the drive unit. A blocking is also often triggered by people. The reason for this might be that the detection range of the sensors are not suitable for the drive unit and that the door will inevitably be touched during the passage. In this case, the detection range of the sensors and/or the opening speed of the drive unit should be increased. The effectiveness is to be verified by passing through the door.
In 08	none	Shutdown drive function The contact 4/4a is opened. The drive unit switches into the emergency mode and only a manual passage is possible.	An emergency command mechanism, a door lock switch or other safety system may be connected to the input. Either the system has actually triggered or there is a defect. The activation must be reset. The drive unit starts the operation automatically. If this is not the case, the wiring and the systems causing it must be tested.
In 09	none	Upgrade Card signal error The installed Upgrade Card was removed or the initially installed Upgrade Card (container module) had not been inserted during the installation of 2 Upgrade Cards.	Installed Upgrade Cards must remain permanently in the control unit and must not be removed. If several Upgrade Cards are installed, the Upgrade card used first has the function of a container module and must be the last one to be attached to the control unit (see chapter Upgrade Card). In case of a defective container module, a new set of functional modules must be used.
In 11	The red LED lights	Resolution hold-open system The hold-open system was triggered.	The hold-open system can be triggered automatically by the smoke detector and manually by a hand trigger button or by disengaging the door panel. According to DIN 18263-4, the recommissioning must be deliberately performed. Depending on the configuration of the system, this is done by the manually opening the door up to the taught opening angle, via the PGS by switching into the OFF position or by a reset via the pushbuttons ◀ and ▶ on the internal user field. It has to be ensured that the smoke detector has not been triggered. If a reset has not been successful, there may be a defect on the smoke detector connection and the system must be inspected by qualified personnel.
In 23	none	Locking alarm The door is blocked in the CLOSED position. An opening is not possible.	The most frequent cause is a closed door. The error can be avoided if a door lock switch is installed. The door lock switch detects the switching state of the deadbolt and switches the drive unit off, if necessary. A door lock switch is recommended as the permanent opening against the closed door may damage the drive unit or the door.
In 61	none	Communication error in case of a 2-panel operation The communication between the 2 devices is interrupted.	The communication cable between the 2 drive units must be checked. After a visual inspection, check if the correct interface on the control unit has been used.
In 72	none	Current measurement circuit The periodically performed test of the internal current measurement circuit could not be successfully performed.	System tolerances and environmental conditions influence the current measurement. That is why it cannot always be successfully completed with the first time. The information is shown in this case. This, for example, is the case if the door is manually passed through during the measurement. The test will be automatically repeated.
In 73	none	Braking circuit test The periodically performed test (every 24 hours) of the internal braking circuit could not be successfully performed.	System tolerances and environmental conditions influence the braking circuit test. That is why it cannot always be successfully completed with the first time. The information is shown in this case. This, for example, is the case if the door is manually passed through during the measurement. If the test has been negative 10 x in a row, the error message E 73 will be output.
In 91	none	DCW communication At least 1 registered DCW device is missing.	Reconnect the corresponding DCW device. If this is not possible, you must restart the drive unit. Press simultaneously the pushbuttons ◀ and ▶ on the internal user field for a minimum of 3 seconds.

Display	Display LED	Meaning/cause	Troubleshooting
E 02	2 x flashing	Locking error The drive unit tries to open or close a locking device with a feedback contact or a DCW locking device. An error occurred.	In this case, you have to assume a defect on the locking device or an error in the wiring. The locking feedback contact must be tested and replaced, if necessary.
E 03	3 x flashing	DCW program switch is missing	Check and replace, if necessary, the DCW program switch.
E 04	4 x flashing	Test error safety sensor The test of the corresponding safety sensors has not been successful. A test signal is sent to the corresponding sensor prior to each opening or closing movement. The drive unit expects a response within a certain time window.	First, it must be checked whether the parameter "Test safety sensor" is configured accordingly. Then it is to be checked whether the test has also been activated on the sensor itself and whether it is operated with the same level. The test is turned off when the sensors are delivered.
E 12	12 x flashing	EEPROM error The internal memory check could not be successfully completed. The drive unit operates in the closer mode.	You can try a reinitialization by reloading the current firmware. If that fails, the control unit must be replaced.
E 13	13 x flashing	Excess current detection More power is taken from the system than the mains adaptor can provide.	The motor consumes too much power or the control end stage is defective. In case of recurrence, the components motor gear unit and/or control unit are to be replaced.
E 15	15 x flashing	Faulty teach-in run The teach-in run could not be completed.	The error can occur if the teach-in run has been interrupted, e.g. through manipulation of the door during the process. The teach-in run must be restarted.
E 25	5 x flashing	SVP DCW PR module The test was negative.	Check the wiring and, if necessary, replace the PR module.
E 51 E 52 E 53	5 x flashing	Incremental encoder error The incremental encoder monitoring has detected a faulty state.	In case of an error, the plug connections of the incremental encoder and the motor as well as the circuit of the locking device are first to be checked for a short circuit. If no error can be found, the motor gear unit must be replaced. The error can be caused by a defective motor or a short circuit in the electric circuit of the locking device. The motor gear unit must be replaced in case of a defective motor.
E 62	6 x flashing	The second system has an incompatible firmware version for the 2-panel operation.	Both control units are to be fitted with the same firmware version.
E 63	6 x flashing	The second system has an incompatible fire protection setting.	In case of 2-panel systems, the Upgrade Card Fire Protection must be installed in both control units.
E 71	7 x flashing	System error 1 (2nd Switch-off path) In order to switch off the drive unit always reliably, several switching elements are used. They are periodically tested for its functioning.	If the test is always negative, the control unit must be replaced.
E 72	7 x flashing	System error 2 (current measurement circuit) The current measurement circuit is part of the safety mechanisms and will be periodically tested for its functioning. The drive unit operates in the emergency mode.	If the test is always negative, the control unit must be replaced.
E 73	7 x flashing	System error 3 (braking circuit) The braking circuit is a safety element in the closer mode and will be tested every 24 hours. During the test, the motor is shut down during the closing movement and the door closes a set angle in the emergency mode. The test can be noticed as a short jerk on the door panel and is no reason for a complaint.	The door closes in the deenergized state too fast (in under 3 seconds). Check and reduce, if necessary, the closing speed (see page 18 point 5.11). If the test is always negative despite the correctly set closing speed, the control unit must be replaced.
	- 1	Energy management The motor is too hot (e.g. due to an excessive ambient temperature).	The movement dynamics in the CLOSED direction will be reduced.
	- 2	The system responds automatically.	The movement dynamics in the OPEN and CLOSED direction will be reduced.
	- 3		The system shuts down for 3 minutes (door closer mode).
	- 4		The hold-open time will be extended.

12. Product operating description

12.1 Function description

The IS 9100 is electromechanical automatic swing door drive. It automatically open swing doors once an activator has been activated.

The door closes after the set hold-open time has lapsed.

If a suitable locking device is connected, it will be opened by the movement of the door.

In case of a power failure, people can pass through the door at any time; the drive will then work like a normal door closer.

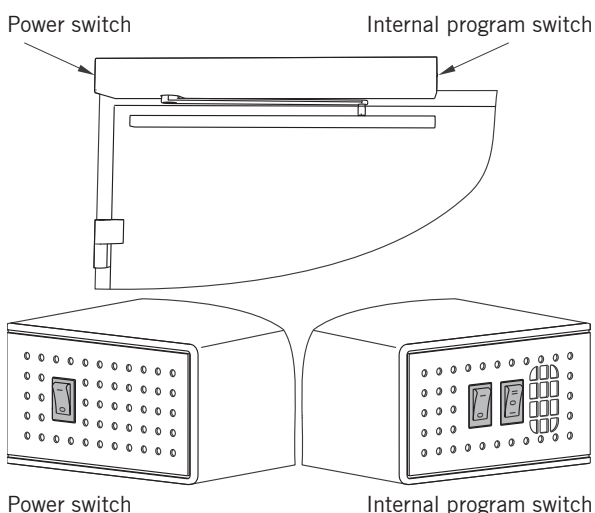
Functions

The drive features 4 different functions. The functions can be selected on the program switch.

Function	Meaning
OFF	The door will be automatically opened once the activator Night/Bank has been activated. The door closes when the open-hold time night/bank has ended.
AUTOMATIC	The door will automatically open once an activator has been activated. The door will close again once the set hold-open time has expired.
PERMANENT OPEN	The door will automatically open and stay open as long as the function is activated.
EXIT ONLY	The door will automatically open only after the inside activator or the activator Night/Bank has been activated. The door will close again once the set hold-open time has expired.

12.2 Operating elements

The power switch is always on the door hinge side; the internal program switch is always on the side of the main closing edge.



Program switch

Use the program switch to select the function. The program switch can be a 4-digit or 3-digit type.

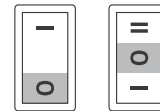
In case of an internal, 3-digit program switch, the function EXIT ONLY is not available for 2-panel systems.

Internal program switch

In order to select the function, you must set a combination of both rocker switches on the internal program switch.

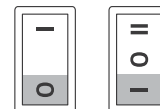
OFF

Both switches are set to "0".



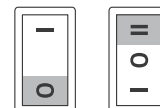
AUTOMATIC

The front switch is set "0", the rear switch is set to "I".



PERMANENT OPEN

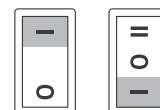
The front switch is set to "0", the rear switch is set to "II".



EXIT ONLY

(only for 1-panel systems)

The front switch is set to "I", the rear switch is set to "I".



12.3 Activator

Activator, inside outside, night/bank and intercom system may be connected to the device. The activator inside is usually found inside a building or room. The activator outside is found on the outside of a building or room. The activator night/bank is installed on the outside and often designed as a card reader or key switch button.

12.4 Manual lock

If the door is closed manually, the drive must be switched to the function OFF in order to prevent damage to the system.

- ✎ If a door lock switch is installed, the drive function will be automatically shut off.
- ✎ IS 9100 recommends the use of a door lock switch.

12.5 Low/Full Energy mode

Drive IS 9100 can be operated in the low and full energy mode.

Low energy mode

The low speed of the door avoids most of the risk posed by automatic movements. The door opens very slowly and offers therefore superior safety.

Full energy mode

The high speed makes it necessary to secure the turning range of the door with sensors. Safety sensors mounted to the door panel monitor the turning range and will prevent people from getting hit by the door as far as possible.

12.6 Safety sensors

If the safety sensors on the hinge side detect an obstacle during the opening, the door will stop.

If the safety sensors on the hinge side detect an obstacle while the door is closed, the door will remain closed.

If the safety sensors on the opposite hinge side detect an obstacle during the closing, the door will reverse.

If the safety sensors on the opposite hinge side detect an obstacle while the door is open, the door will remain in the open position.

If the monitoring range is free again, the drive will resume its normal operation.

12.7 Maintenance interval display

If the internal 4-digit program switch is used, a service interval display will be available. A yellow LED will inform you about required maintenance work.

12.8 Use in a hold-open system

If the drive is used on a smoke control door or fire door, the drive will usually be operated in a hold-open system in combination with smoke detectors. The drive of the door will keep the door open either permanently (PERMANENT OPEN) or temporarily (AUTOMATIC). However, in case of a fire, the door must close in order to prevent smoke and fire from spreading. For this reason, the opening automatic of the drive will be automatically shut off as soon as a connected smoke detector detects smoke; this is indicated on the smoke detector by a red LED. The door can then only be opened manually. The hold-open function will be canceled even if the power supply is interrupted.

Manual activation of the hold-open function

In case of danger, the door can also be closed manually - either by pushing the optional red pushbutton with the label "Close door" or by manually moving the door approx. 10-20 cm in the Closed direction.

Recommissioning the drive unit

In order to reestablish the drive function, the hold-open system must be reset. In accordance with the legal provisions, this must be carried out manually. The reset can be carried out in different ways.

Reset via the door position

1. Reset the smoke detector (LED display is green).
2. Completely close the door.
3. Open the door to the adjusted opening width.
4. Release the door.

Reset via the program switch

1. Reset the smoke detector (LED display is green).
2. Program switch in OFF and back.



Smoke control doors and fire doors are important for your safety. However, this is only the case if the doors will properly close in the case of danger. Therefore, do not use additional wedges or objects that could prevent the closing.

13. Maintenance and care

Maintenance



Maintenance work must be carried out only with the system de-energized (turn off the fuse protection on site).

Acceptance and regular inspection

As the operator of the automatic door, you are responsible for the regular inspection of the system. An initial inspection is required before the initial commissioning. The acceptance must be carried out according to the inspection book by a person trained by ISEO. The door system is then to be inspected and maintained, if necessary, at least once a year by a specialist. All inspections will be documented in the inspection book (from page 8 in these operating instructions). It serves as proof that you have fulfilled your obligations and it must be retained.

Have the door system inspected and maintained, if necessary, at least once a year by a specialist.

The testing and approval must be carried out according to the inspection book by a person trained by ISEO.

The results are to be documented and to be retained by the operator for at least 1 year.

The following parts are wear parts and need to be checked at least once a year and replaced, if necessary (see installation instructions) :

- Arm assembly
- Sliding piece
- Slide channel

Use only original spare parts.

Care



Turn the program switch during the cleaning to the OFF position or PERMANENT OPEN position in order to prevent unintended movements.



Never let water or other liquids enter the drive unit.



Never insert a metal object into the openings of the drive unit. Otherwise, there will be the risk of an electrical shock.

Clean the drive with a moist cloth and common cleaning agents. Do not use any scrubbing agents as they might damage the surface.

Do not start the device before the surfaces are dry.

14. Maintenance by ISEO

A regular maintenance of your system will pay off : weak spots are detected and eliminated early, the service life will be increased.

ISEO and its authorized partners offers a premium maintenance service for automatic doors and catching devices, whereby the official seal of approval provides the operators of the building with reliable safety. If not all door systems are properly tested, the building operator will be liable for property damage and physical injuries in case of an accident. Irrespective of safety aspects, a regular maintenance makes also sense from an economic point of view. This allows you to detect and eliminate possible damage or wear early on. The risk of unforeseeable costs due to, for example, high repair costs can be minimized – and we will help you keeping an eye on your budget. The goal is always to increase the service life of your door systems.

ISEO will assume the complete organization and execution of the maintenance. Your benefits: all installations will be tested by trained experts in regular intervals - even systems from other manufacturers. The building operator does not have to take care of anything; legal requirements will be met in a reliable manner.

A maintenance contract for the door will ensure the tested reliability according to a premium standard.

15. Troubleshooting

Functional errors may have many causes.

The errors are often caused by environmental conditions and the drive unit will therefore try to detect and to react to them accordingly. The drive unit stops the current function and starts again after a waiting period or a new pulse. If it does not work, the automatic function will be shut off and an error message will be output.

This is indicated by a red LED on the program switch.

The display flashes or lights permanently and indicates an error that need to be eliminated by the ISEO Service.

The following options are available to reset error messages:

1. Switch the program switch to the OFF position.
2. Mains reset. Switch off the power switch.
Restart after 10 seconds.

The cause should be analyzed and eliminated before an error message is acknowledged.

Self-help in case of errors

In case errors occur during the operation please check the following:

- Mains voltage available?
- Is the power switch on?
- Can the door be freely moved?
- Is the door manually locked, shutdown (lock switch) activated?
- Has the correct function been selected with the program switch?
- Is the turning range of the door free from obstacles?
- Has the hold-open system been triggered?

Please contact the Service Department if these points are okay and the doors system still does not work.

16. Disassembly, recycling and disposal

The disassembly is carried out in the reverse order of the installation manual and must be carried out by qualified personnel.

De-energize the door system before disassembling the door system.



Dispose the product in an environmentally friendly manner. Electronic parts and batteries may not be disposed via the general trash.
Take them to an appropriate collection point for disposal.

Always comply with the applicable national legal provisions.

17. EC Declaration of conformity

ISEO Serrature s.p.a.

Via San Girolamo 13

25055 Pisogne (BS)

Italy

hereby declares that the products

IS9100

comply with the provisions of the named EC Directive(s) and that the standards and/or technical specifications referred to in the following have been applied.

Directive: 2006/95/EC Low Voltage Directive
2004/108/EC Electromagnetic compatibility

Harmonized European standard, national rule:

EN 13849-1	EN ISO 12100-1	EN ISO 14121-1
BGR 232	EN 61000 - 6 - 2	EN 61000 - 6 - 3
EN 61000 - 3 - 2	EN 61000 - 3 - 3	EN 55022
EN 60335 - 1	EN 60950 - 1	

18. EC Declaration of incorporation

ISEO Serrature s.p.a.

Via San Girolamo 13

25055 Pisogne (BS)

Italy

hereby declares that the incomplete machine

IS9100

complies with the following basic requirements of the Machine Directive (2006/42/EC)- Appendix I, Article: 1.1.3, 1.1.5, 1.2.1, 1.2.3, 1.2.5, 1.2.6, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.7, 1.3.8.1, 1.3.9, 1.5.1, 1.5.2, 1.5.4- 1.5.10, 1.5.16, 1.6.1, 1.6.2, 1.6.3, 1.6.4, 1.7.1.1, 1.7.3, 1.7.4

The incomplete machine also complies with all relevant provisions of the directives 2006/95/EC und 2004/108/EC.

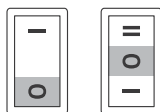
It may be installed and operated in automatic door systems in accordance with the Machine Directive if the manufacturer of the system ensures that all requirements of the Machine Directive are complied with and if the manufacturer issues a EC Declaration of conformity.

Internal program switch

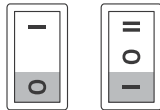
In order to select the function, you must set a combination of both rocker switches on the internal program switch.

OFF

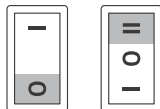
Both switches are set to "0".

**AUTOMATIC**

The front switch is set "0",
the rear switch is set to "I".

**PERMANENT OPEN**

The front switch is set to "0",
the rear switch is set to "II".

**EXIT ONLY**

(only for 1-panel systems)
The front switch is set to "I",
the rear switch is set to "I".

