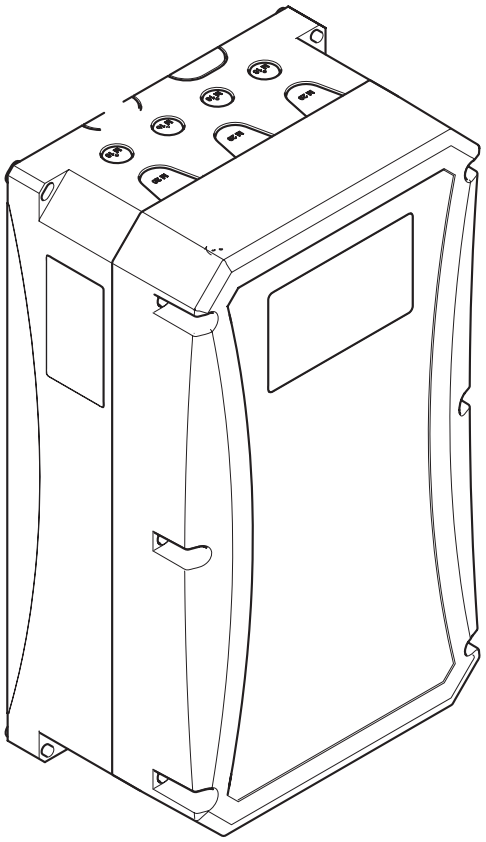
SOMMER

TÜV NORD CERT GmbH
Baumuster geprüft
Freiwillige Zertifizierung



# GIGAcontrol A

**EN Translation of the Original Installation and Operating Manual**

HomeLink® compatible

# Table of contents

# General information

## Symbols

**CAUTION SYMBOL:**
**Important safety instructions!**
**Caution - to ensure the safety of personnel, it is important to observe all instructions. Save these instructions!**

**IMPORTANT INFORMATION SYMBOL:**
**Information, useful advice!**

**1 (1) Refers to a respective picture in the introduction or main text.**

## Safety instructions

### General

- This installation and operating manual must be read, understood and complied with by persons who install, use or perform maintenance on the control unit.
- Installation, connection and initial commissioning of the control unit may only be carried out by a trained electrician.
- The system manufacturer is responsible for the complete system. The system manufacturer must ensure that all applicable standards, directives and regulations applicable at the installation site are observed. In addition to other items, the system manufacturer must test and maintain the maximum approved closing forces in accordance with EN 12445 (Safety in use of power operated doors, test methods) and EN 12453 (Safety in use of power operated doors, requirements). The system manufacturer is responsible for preparation of technical documentation for the complete system, and the documentation must accompany the system.
- All electrical wires must be fitted tightly and secured against shifting.
- The manufacturer accepts no liability for damage or malfunctions resulting from non-observance of the installation and operating manual.
- Before commissioning, ensure that the mains connection matches the specifications on the type plate. If this is not the case, the control unit must not be operated.
- In case of a three-phase current connection, make sure that the direction of rotation is clockwise.
- Installations with a fixed mains connection require an all-phase mains circuit breaker with appropriate fuses.
- Keep the installation instructions within reach.
- Always ensure compliance with accident prevention regulations and current standards in each respective country.
- Read and comply with the 'ASR A1.7 Technical Regulations for Workplaces' of the committee for workplaces (ASTA). (Applicable for the operator in Germany, observe and comply with the applicable regulations in other countries).
- Before working on the control unit, always disconnect the power plug or disconnect the mains voltage at a main switch (lock to prevent reactivation).
- Regularly check power cables and wires for insulation defects or cracks. If a wiring fault is found, switch off the power immediately and repair the faulty cable or wire.
- Before switching on the power supply for the first time, make sure that the plug-in terminals are in their correct positions, otherwise the control unit may malfunction or be damaged.
- Observe the requirements of the local power supplier.
- Only use permissible mounting materials appropriate for the supporting surface.
- Only use original spare parts from the manufacturer.

### Storage

- The control unit must be stored in an enclosed, dry area at a room temperature of -25° to +65°C at a maximum relative humidity of 90% (non-condensing).

### Operation

- When using the automatic close function, ensure compliance with standard EN 12453; install safety device (e.g. photocell).
- After installation and commissioning, all users must be instructed in the function and operation of the system. All users must be informed of the hazards and risks inherent in the system.
- Open and close the door only if there are no persons, animals or objects within its area of movement.
- Continuously monitor the door while it is in motion and keep all persons away from it until the door is completely opened or closed.
- Do not drive through the door until it has been fully opened.
- The control unit must be adjusted to ensure safe operation in conformity with the standards.

### Radio remote control

- The remote control may only be used for equipment and/or systems where interference in the transmitter or radio receiver does not pose a risk to humans, animals or objects, or where the risk is covered by other safety devices.
- The radio remote control may only be used if the movement of the door can be watched and no persons or objects are within the range of movement.
- Store the handheld transmitter so that unintended operation, e.g., by children or animals, is impossible.
- The operator of the radio system is not protected against interference due to other telecommunications equipment or devices (e.g.: radio-controlled systems that are licensed to operate in the same frequency range). If substantial interference occurs, please contact your appropriate telecommunications office which has radio interference measuring equipment (radio location)!
- Do not operate the handheld transmitter in areas with sensitive radio technology or systems (e.g. airports, hospitals).

# General information

## Type plate

- The type plate is attached to the control unit housing.
- The type plate shows the exact type designation and the date of manufacture (month/year) of the control unit.

## Intended use

**CAUTION! RISK OF DEATH!**
**Remove all cords or straps necessary to operate the door by hand.**

- The GIGAcontrol A control unit is intended exclusively for opening and closing industrial doors, such as sectional, roller, folding, fast membrane and roll-up grille doors. Any other use does not constitute intended use. The manufacturer accepts no liability for damage resulting from use other than intended use. The user bears the sole responsibility for any risk involved. It also voids the warranty.
- Only command devices and sensors in perfect technical condition may be connected, and they must be used for the intended purpose, with an awareness of the hazards involved and in accordance with the instructions in the installation and operating manual.
- Doors automated with an operator must comply with all valid standards and directives, e.g. EN 13241-1, EN 12604, EN 12605.
- The door must be stable and torsionally stiff, i.e. it must not bend or twist during opening or closing.
- Only use the control unit in dry, non-explosive areas.
- The control unit conforms to the requirements of protection class IP54 (optionally IP65). The control unit must not be operated in areas with acorrosive atmosphere (e.g. salty air).

## Types

The GIGAcontrol A control unit is available in the following types:

- GIGAcontrol A R1
  with one relay up to 1.1 kW (only suitable for operation with a SOMMER frequency converter)
- GIGAcontrol A R3
  with three relays up to 1.1 kW (universal control unit, reversing mechanism with 2nd shut-off path. Also suitable for operation with a SOMMER frequency converter)
- GIGAcontrol A C3
  With mechanically locked reversing contactor and mains relay up to 2.2 kW (universal control unit, reversing mechanism with 2nd shut-off path. Also suitable for operation with a SOMMER frequency converter)

All control unit types can be (optionally) fitted with

- a radio receiver
- a traffic light module (two way traffic control)
- an induction loop module (2 loops) with direction recognition.

### The following optional control unit types are available:

- Triplex sensing device with conventional buttons
- Key switch
- Emergency STOP switch
- Main switch

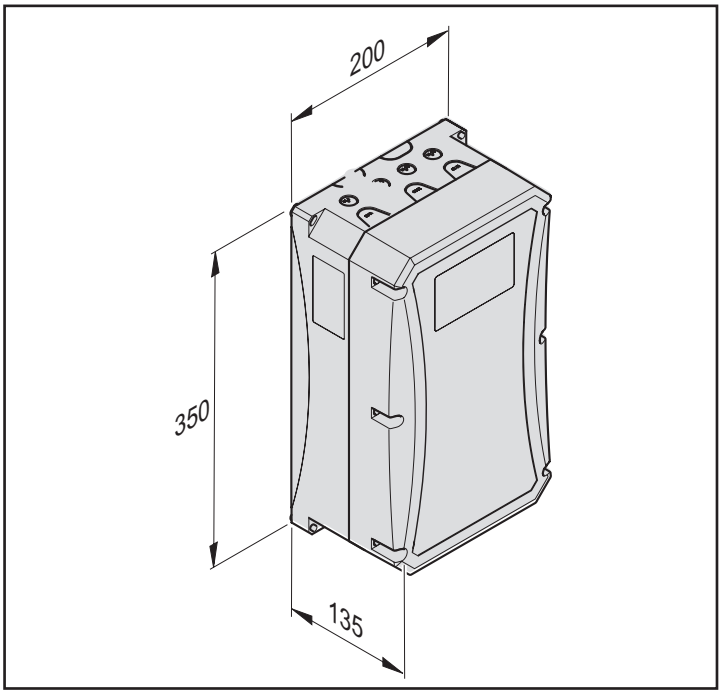
## Scope of delivery

The actual scope of supply may vary depending on the control unit version.

## Dimensions of housing (W x H x D)

Approx. 200 x 350 x 135 mm

**GIGAcontrol A**




## EU Declaration of Conformity

### (for the SOMMER Radio Control System)

www.sommer.eu/mrl

## GIGAcontrol A R1, R3 control unit (Relay)

| | |
|---|---|
| Dimensions | 350 x 200 x 135 mm (H x W x D) |
| Operating voltage* | 1 ~ 230V AC (+/-10%) 50/60Hz<br>3 ~ 230V AC (+/-10%) 50/60Hz<br>3 ~ 400V AC (+/-10%) 50/60Hz |
| Mains feed fuse | 10A T (internal) |
| Control voltage | 24 V DC max. load 250mA*<br>12 V DC max. load 100mA*<br>5 V DC only for internal expansion modules<br>*(including all additional modules) |
| Control voltage fuse | 125 mA T |
| Temperature range | –25ºC to +65ºC |
| Connection cross-section | 1.5 $mm^2$ |
| Switching capacity | 1.5 kW / 2 kVA max. |
| Protection class | IP54 / optionally IP65 |

*Depending on operator

## GIGAcontrol A C3 control unit (Contactor)

| | |
|---|---|
| Dimensions | 350 x 200 x 135 mm (H x W x D) |
| Operating voltage* | 1 ~ 230V AC (+/-10%) 50/60Hz<br>3 ~ 230V AC (+/-10%) 50/60Hz<br>3 ~ 400V AC (+/-10%) 50/60Hz |
| Mains feed fuse | 10A T (internal) |
| Control voltage | 24 V DC max. load 250mA*<br>12 V DC max. load 100mA*<br>5 V DC only for internal expansion modules<br>*(including all additional modules) |
| Control voltage fuse | 125 mA T |
| Temperature range | –25ºC to +65ºC |
| Connection cross-section | 1.5 $mm^2$ |
| Switching capacity | 2.2 kW / 3 kVA max. |
| Protection class | IP54 / optionally IP65 |

*Depending on operator

# Declaration of Conformity

for the installation of an incomplete machine in accordance with the in accordance with the Machinery Directive 2006/42/EC, Annex II, Section 1 A

SOMMER Antriebs- und Funktechnik GmbH
Hans - Böckler - Straße 21 - 27
73230 Kirchheim unter Teck
Germany

hereby declares that the industrial gate control unit

## GIGAcontrol A

have been developed, designed and manufactured in conformity with the

- Machinery Directive 2006/42/EC
- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU
- RoHS Directive 2011/65/EU

The following standards were applied:

| | |
|---|---|
| • EN ISO 13849-1, PL "C" Cat. 2 | Safety of machines - safety-related parts of controls – Part 1: General design guidelines |
| • EN 60335-1, where applicable | Safety of electrical appliances |
| • EN 61000-6-3 | Electromagnetic compatibility (EMC) – interference |
| • EN 61000-6-2 | Electromagnetic compatibility (EMC) – interference resistance |

The following requirements of Annex 1 of the Machinery Directive 2006/42/EC are met:

1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.6, 1.3.2, 1.3.4, 1.3.7, 1.5.1, 1.5.4, 1.5.6, 1.5.14, 1.6.1, 1.6.2, 1.6.3, 1.7.1, 1.7.3, 1.7.4

The special technical documentation was prepared in accordance with Annex VII Part B and will be submitted to regulators electronically on request.

The incomplete machine is intended for installation in a gate system only to form a complete machine as defined by the Machinery Directive 2006/42/EC. The gate system may only be put into operation after it has been established that the complete system complies with the regulations of the above EC Directives.

The undersigned is responsible for compilation of the technical documents.

Kirchheim, 20-04-2016

CE

i.V.

Jochen Lude
Responsible for documents

# Installation preparations

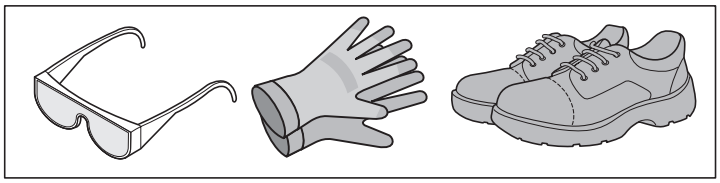
## Safety instructions

**CAUTION!**
**Important instructions for safe installation. Observe all installation instructions – improper installation can lead to serious injuries!**

**CAUTION! RISK OF DEATH!**
**Remove all cords or straps necessary to operate the door by hand.**

- Use only suitable tools.
- The power cord that has been provided must not be shortened or extended.
- Before commissioning, ensure that the mains connection matches the specifications on the type plate. If this is not the case, the control unit must not be operated.
- The contacts of all devices to be connected externally must be safely isolated from the mains voltage supply in accordance with IEC 60364-4-41.
- Wiring for external devices must be installed in accordance with IEC 60364-4-41.
- Live parts of the control unit must not be connected to earth or to live parts or protective earthing conductors of other electrical circuits.
- The control unit should be mounted on a low-vibration surface (e.g., a brick wall) to eliminate vibrations that could have a negative effect on it over time.

## Personal protective equipment



- safety glasses (for drilling).
- work gloves
- safety shoes

# Installation preparations

## Safety instructions

**CAUTION!**
**Important instructions for safe installation. Observe all installation instructions – improper installation can lead to serious injuries!**

**CAUTION!**
**Control or regulating units (buttons) in a fixed position must be mounted within sight of the door. However, they must not be mounted close to moving parts and must be at least 1.6 m above the ground.**

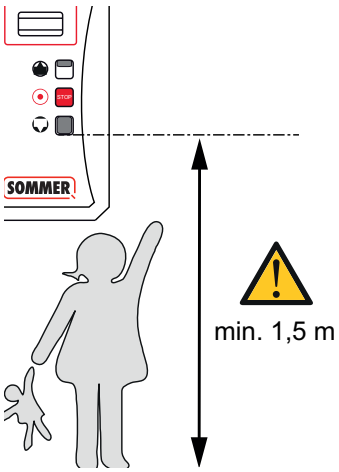
**CAUTION!**
**After installation, it is imperative that you check that the operator has been correctly adjusted and that it reverses at the specified measuring points.**

- The operator must be installed, connected and commissioned by competent personnel.
- Do not move the door if there are persons, animals or objects in the area of movement.
- Keep disabled persons and animals away from the door.
- Wear safety glasses when drilling the fastening holes.
- When drilling, cover all openings to prevent the ingress of dirt.
- Before opening the housing, make sure that drilling chips or other material cannot fall into the housing.
- All electrical wires must be fitted tightly and secured against shifting.
- Before installing the control unit, inspect it for transport damage and any other damage.
  ⇒ Never install a damaged control unit! Serious injuries may result!
- Keep the system disconnected from the power supply when installing the control unit.
- Electronic components may be damaged by electrostatic discharge when touched.
  ⇒ Do not touch the electronic components of the control unit (boards etc.)!
- Close off unused cable inserts with suitable material to maintain protection class IP54 and/or IP65!

## Information on installation

**CAUTION!**
**Before working on the control unit, always disconnect the power plug or disconnect the mains voltage at a main switch (lock to prevent reactivation).**

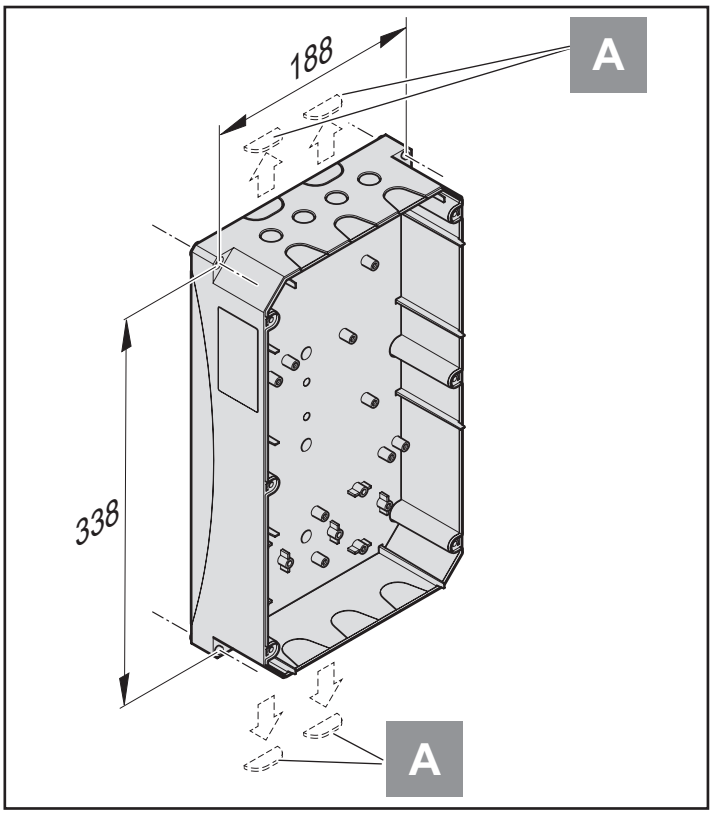
**CAUTION!**




- For indoor use (see data regarding temperature and IP protection class).
- The supporting surface must be flat and low-vibration.
- Mount the control unit housing vertically.

# Installation preparations

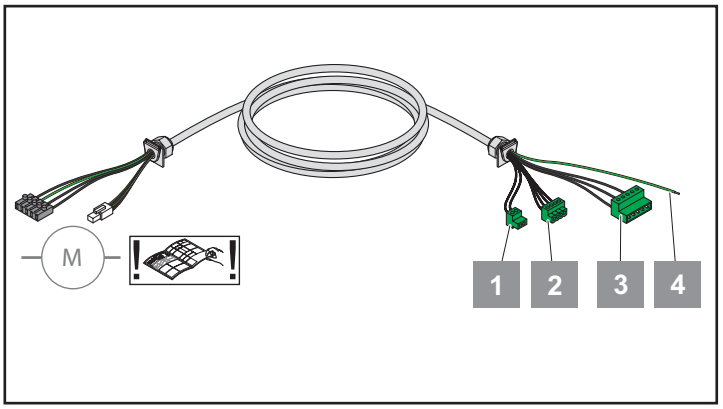
**NOTE:**
**The dimensions specified here are the dimensions for drilling the fastening holes.**
**Housing dimensions: See the "Dimensions" section.**




**NOTE:**
**The cable feedthroughs (A) can be easily opened without damaging the housing! This allows cables to be routed behind the control unit housing and fed in from below!**

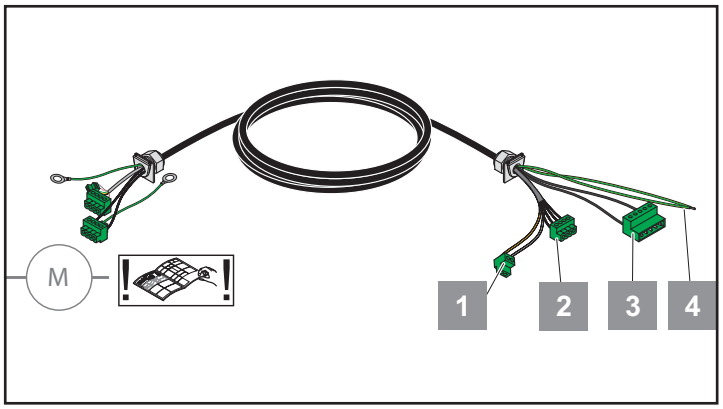
- Only use permissible mounting materials appropriate for the supporting surface.
- Attach housing to the supporting surface correctly.
- Use suitable tools.

## Standard connection cable for GIGA operators:



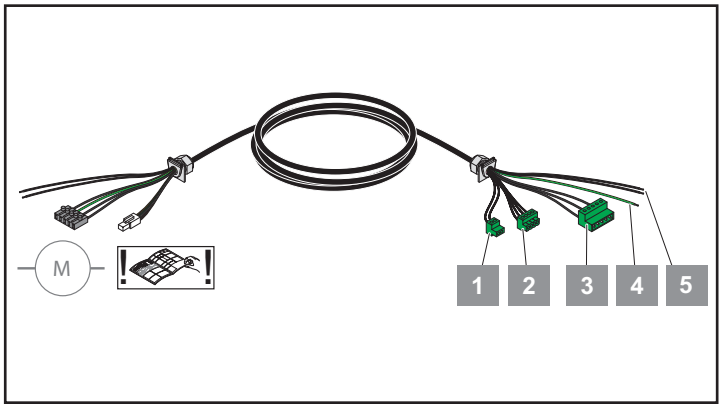

1. Safety chain "Door stop 1" (2-pole terminal)
2. Encoder "RS485" (+/-/A/B; absolute value encoder; 4-pole terminal)
3. Motor (1~ 230 V / 3 ~ 230 V / 3 ~ 400 V; 5-pole terminal)
4. Protective earthing conductor (PE)

## Connection cable for GIGA operators with frequency converter:



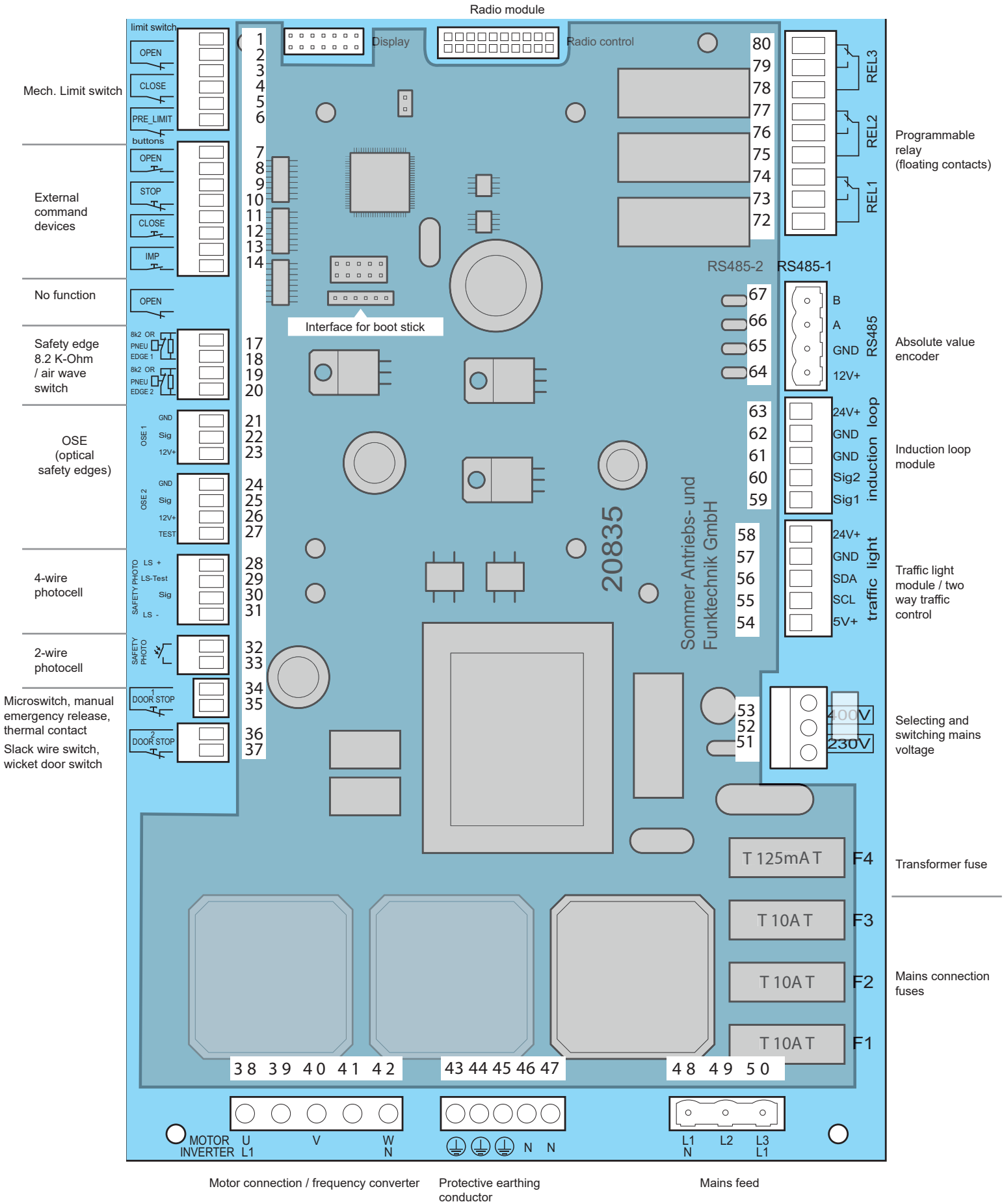

1. Safety chain "Door stop 1" (2-pole terminal)
2. Encoder "RS485" (+/-/A/B; absolute value encoder; 4-pole terminal)
3. Motor (1~ 230 V; 5-pole terminal)
4. Protective earthing conductor (PE)

## Connection cable for GIGAspeed operators without frequency converter:




1. Safety chain "Door stop 1" (2-pole terminal)
2. Encoder "RS485" (+/-/A/B; absolute value encoder; 4-pole terminal)
3. Motor (3 ~ 230 V / 3 ~ 400 V; 5-pole terminal)
4. Protective earthing conductor (PE)
5. Brake (rectifier)

# Electrical installation




Mech. Limit switch

External command devices

No function

Safety edge 8.2 K-Ohm / air wave switch

OSE (optical safety edges)

4-wire photocell

2-wire photocell

Microswitch, manual emergency release, thermal contact

Slack wire switch, wicket door switch

Programmable relay (floating contacts)

Absolute value encoder

Induction loop module

Traffic light module / two way traffic control

Selecting and switching mains voltage

Transformer fuse

Mains connection fuses

Motor connection / frequency converter

Protective earthing conductor

Mains feed

# Electrical installation

**CAUTION!**
**Electrical work must be performed by qualified electricians only!**

**CAUTION!**
**Observe the requirements of the local power supplier.**

**CAUTION!**
**The mains cable may only be replaced by the manufacturer, customer service or other qualified electrician!**

## Mains connection

**NOTE:**
**The connection depends on the mains and the operator with which the control unit will be used!**

**The control unit is suitable for the following mains voltages: 1~230V, 3~230V or 3~400V!**

**NOTE:**
**Caution! Check the jumper on the board before switching mains voltage. An incorrectly positioned jumper may destroy the control unit!**

The control unit must be protected from short-circuit and overload by a nominal fuse value of max. 10 A per phase.

- A 3-pole automatic circuit breaker must be used with three-phase mains.
- A 1-pole automatic circuit breaker must be used with AC power supplies.

The control unit must have an all-phase mains circuit breaker conforming to EN12453!

This can be:

- a plug connection (max. 1.5 m cable length)

or

- a main switch

.

**NOTE:**
**The mains circuit breaker must be easily accessible at a height of between 0.6 m and 1.7 m!**

The following fuses are required depending on the as-delivered condition:

**Control unit without mains plug**:
Main switch, automatic circuit breaker on mains side, all poles (max. 10 A).

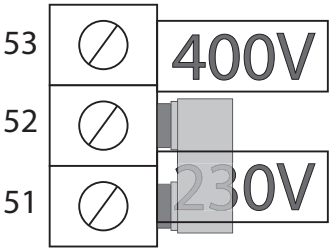
**Control unit with 5-pole CEE plug (16 A):**
16A socket (fuse-protected with 3-pole three-phase automatic circuit breaker 3 x 10A).

**Control unit with 3-pole CEE plug:**
16A socket (fuse-protected with 1-pole automatic circuit breaker 1 x 10A).

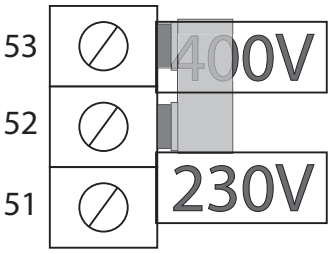
## Selecting and switching mains voltage

**CAUTION!**
**When setting the control unit for frequency converter operation, the mains voltage must not be set to 400 V.**

**NOTE:**
**It is essential to ensure that the jumper on the board conforms to the actual voltage used. Otherwise the board may be destroyed!**




**For 1 ~ 230 V and 3 ~ 230 V**




**For 3 ~ 400 V**

# Electrical installation

## Mains feed

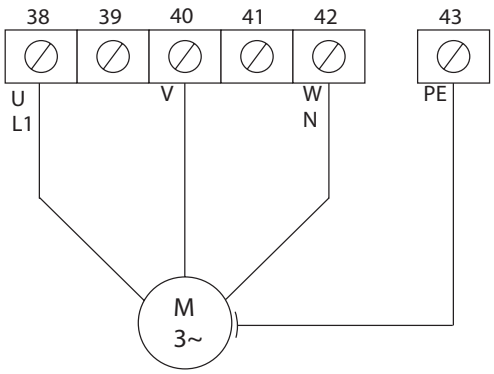
**NOTE:**
**If ground fault interrupters are integrated into the building installation, the control unit must not be connected unless the ground fault interrupters are class B devices (all-current-sensitive ground fault interrupters). If other ground fault interrupters are used, circuits may be interrupted incorrectly or not at all!**

### 3-phase operation

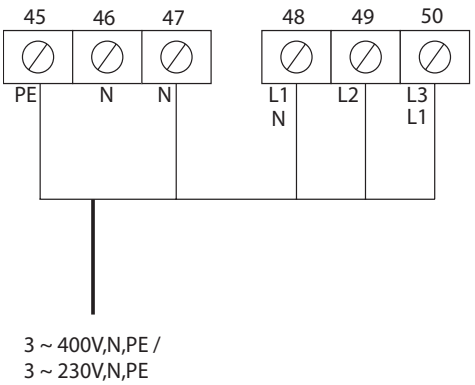
3 ~ 400 V / Y

3 ~ 230 V / Δ

Motor connection




Mains connection



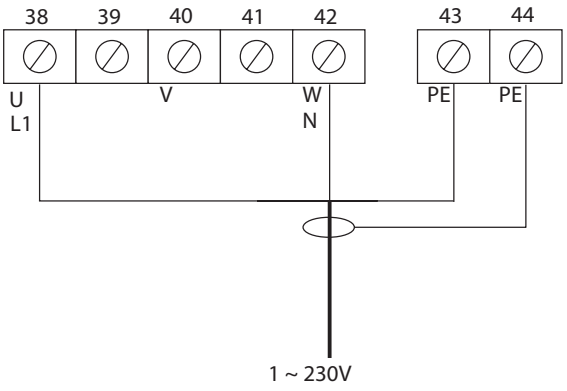

### Operation with frequency converter

1 ~ 230 V / Δ

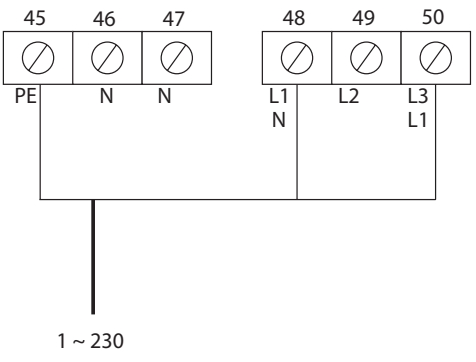
**NOTE:**
**If a frequency converter is used, the entry "Frequency converter" must be set under menu item "MOTOR CONTROLLER" (2533) in the Service menu! see ("Service (2500)" on page 41)**

**NOTE:**
**Use only the cable provided!**

Frequency converter connection




Mains connection



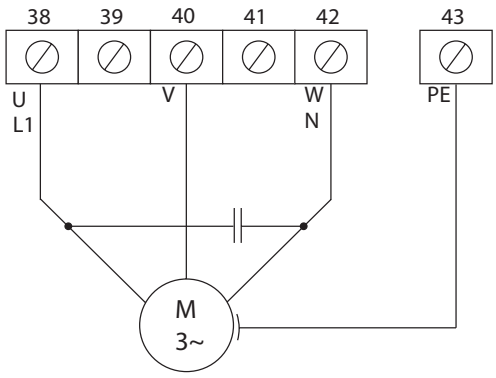
# Electrical installation

## Operation with Steinmetz circuit (capacitor)

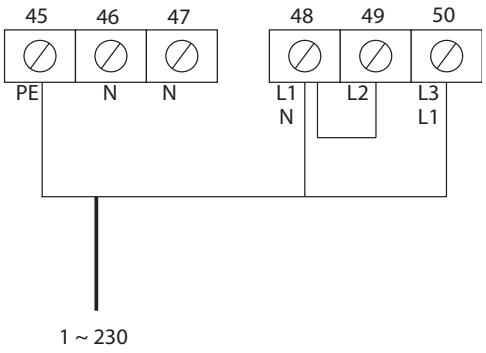
1 ~ 230 V / Δ

**NOTE:**
**If a motor with a capacitor is used, the F1 fuse must be removed!**

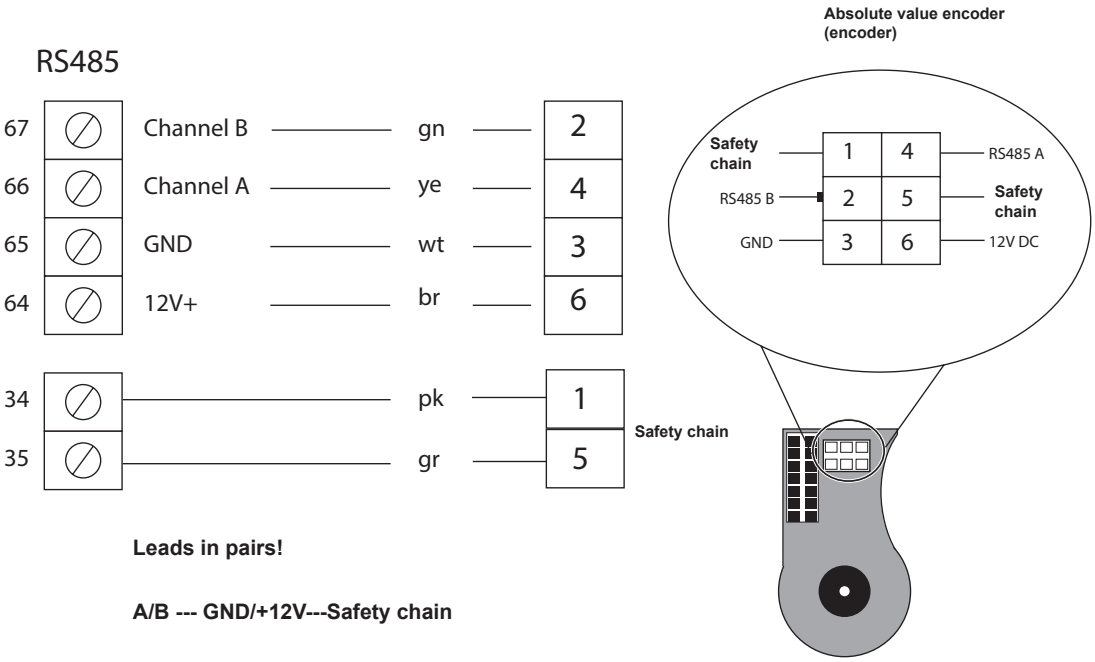
Motor connection




Mains connection




# Absolute value encoder







**Leads in pairs!**

**A/B --- GND/+12V---Safety chain**

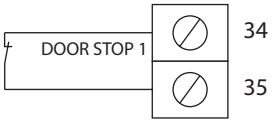
# Electrical installation

## Safety chain

### Manual emergency release, thermal contact and slack wire switch, brake

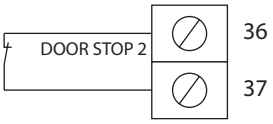
**NOTE:**
**If one of the devices connected to DOOR STOP 1 has triggered, the following error message appears on the display: Security Chain. See the "Error messages" section.**

DOOR STOP 1 = Manual microswitch emergency release and thermal contact (connection with pink + grey motor cable).

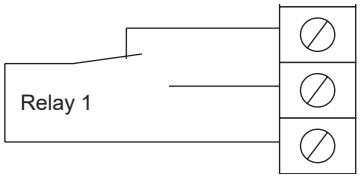



**NOTE:**
**If one of the devices connected to DOOR STOP 2 has triggered, the following error message appears on the display: Safety chain 2. See the "Error messages" section.**

Door STOP 2 = Slack wire switch (connection with spiral cable/door socket) and wicket door contact.



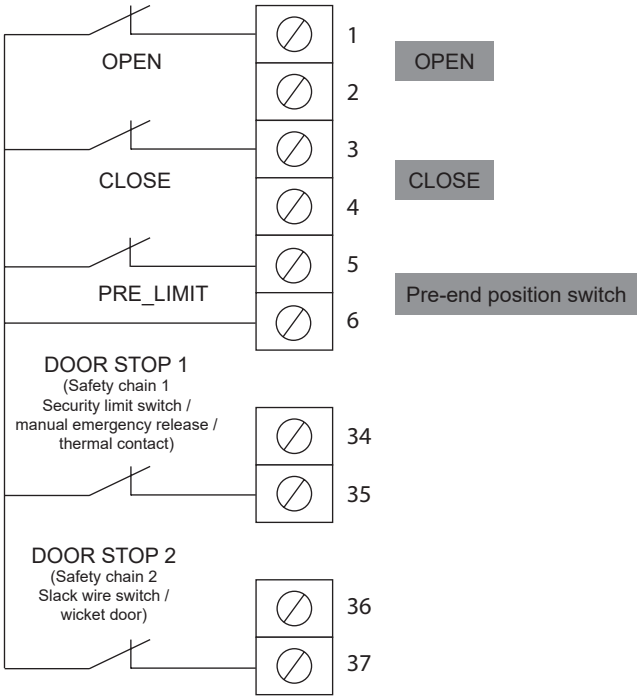

Brake via relay 1




## Mechanical limit switches

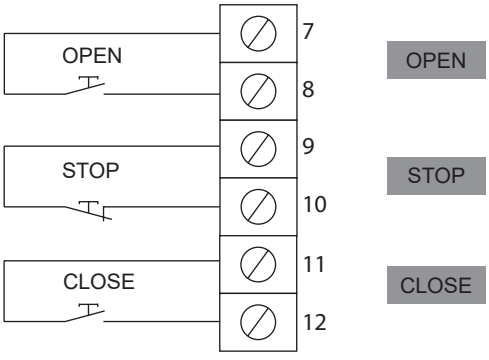
**CAUTION!**
**Incorrect adjustment work could lead to injuries!**
**All settings must be carried out according to the current installation instructions for the GIGAcontrol A!**

**CAUTION!**
**If no pre-end position switch can be connected, terminals 5 + 6 must be jumpered so that the safety device works properly.**



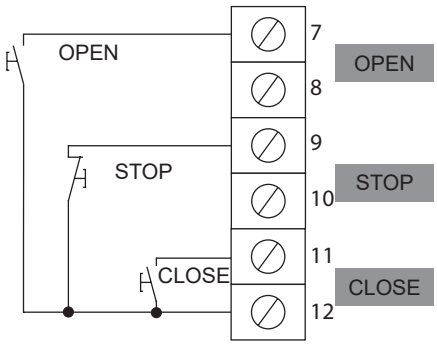

## External command devices

### Multiple button with 6 wires

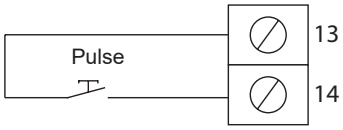


## Multiple button with 4 wires

Also available from SOMMER.




## Pulse button




**NOTE:**
**If the traffic light module (two way traffic control) is used, the external buttons have the following effect:**

**"OPEN" button (terminals 7 + 8): Request for the traffic light signal "Green Outside."**

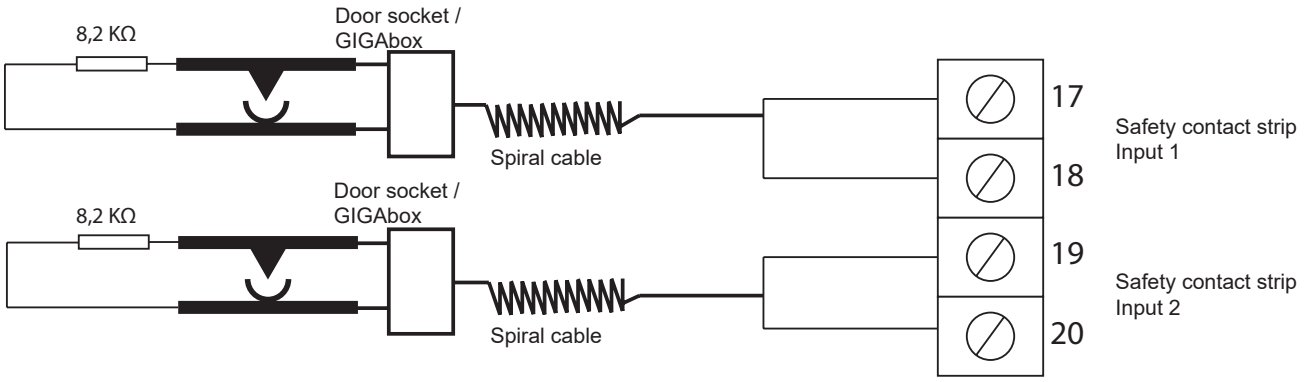
**Pulse button (terminals 13 + 14): Request for the traffic light signal "Green Inside."**

**NOTE:**
**"TWO WAY TRAFFIC" can only be selected if the traffic light module is connected. If the connection to the traffic light module is severed, the control unit automatically switches to pulse mode.**

# Safety edge

## Safety contact strip - 8.2 kOhm

Programming from menu item 1240 et seq.; 1260 et seq.

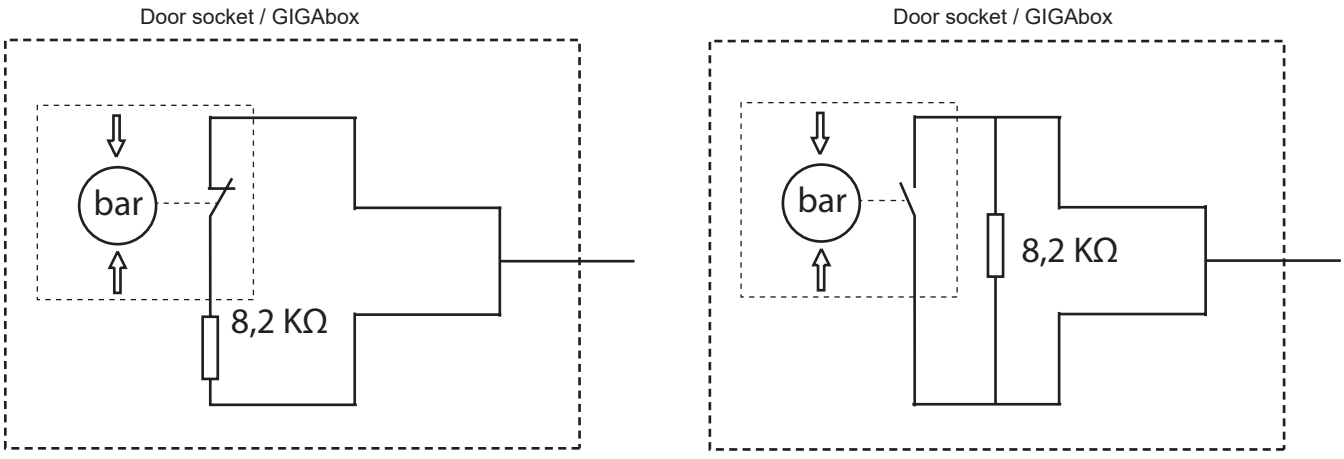



## Air wave switch

Programming from menu item 1240 et seq.; 1260 et seq.

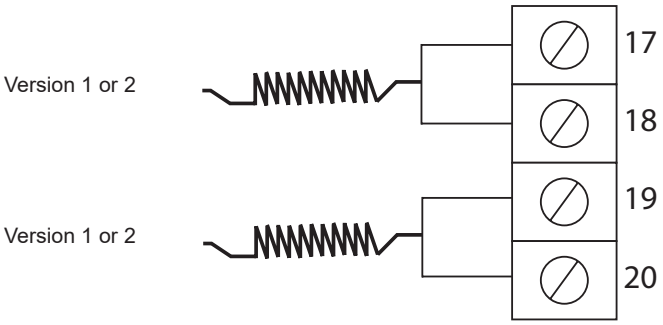
**NOTE:**
**The air wave switch is available in two different versions. Both versions can be connected to connections 17 + 18 and 19 + 20. A combination of both versions is possible!**

**To test the air wave switch, it must be triggered in door DOWN end position.**




Version 1

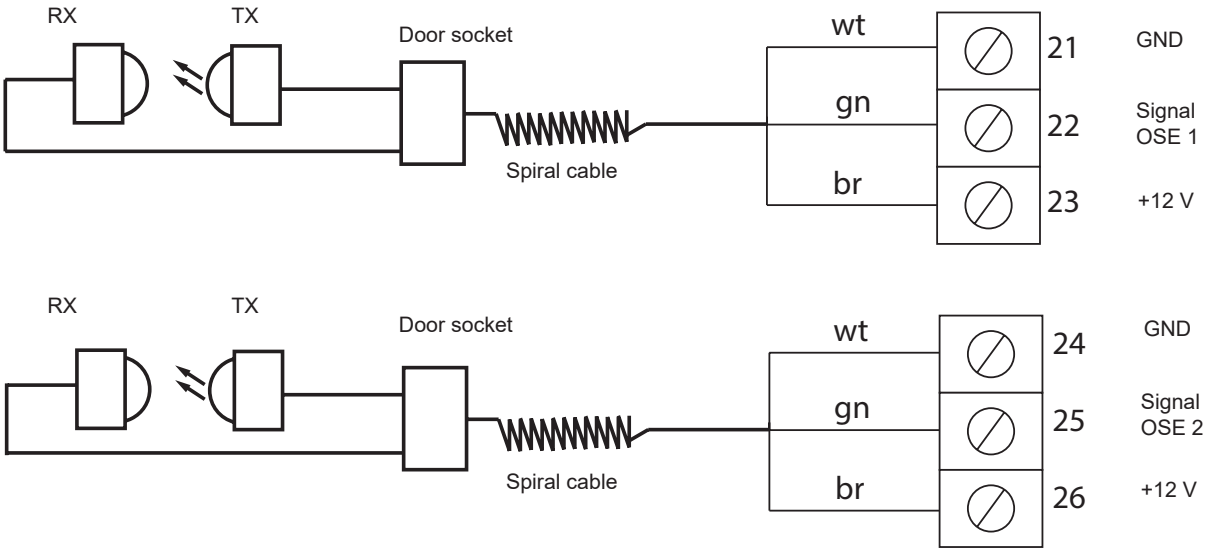
Version 2



# Electrical installation

## Optical safety edge (OSE), light curtain or leading photocell

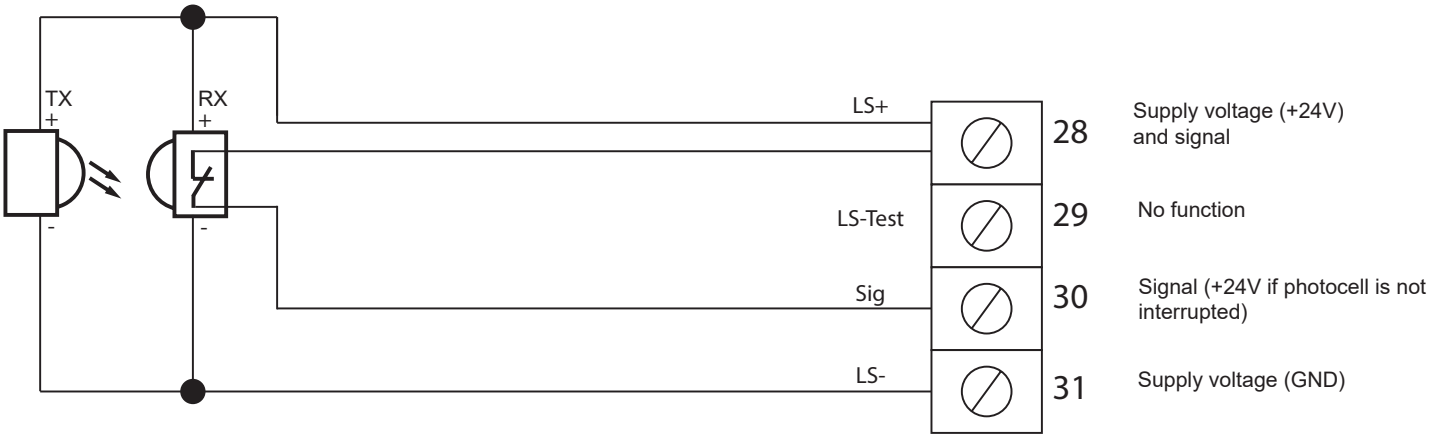
Programming from menu item 1200 et seq.; 1220 et seq.



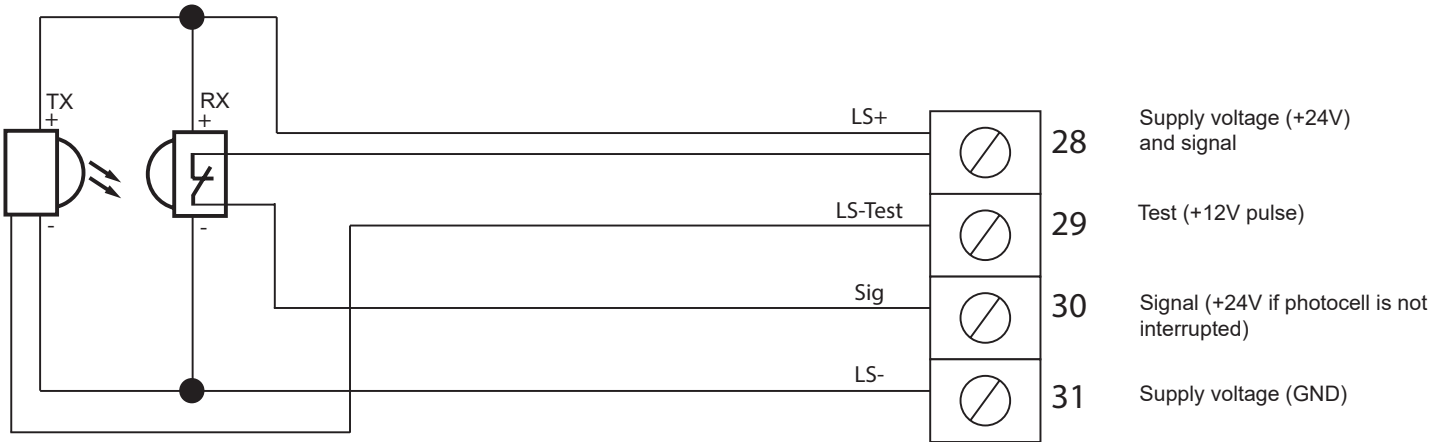

## 4-wire photocell without testing

Programming from menu item 1111 et seq.

**CAUTION!**
**The maximum mounting height for photocells is 20 cm!**



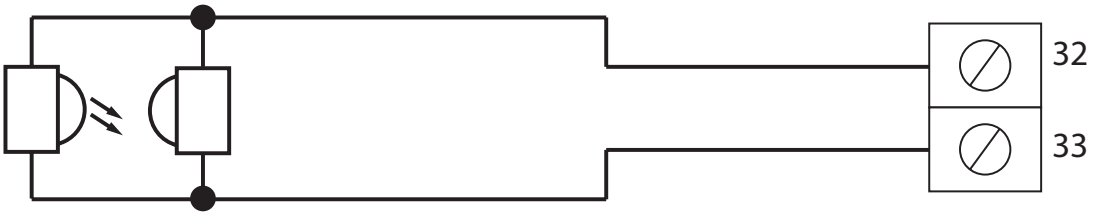

## 4-wire photocell with testing (retraction safety)



## 2-wire photocell or frame photocell (SOMMER product only)

Programming from menu item 1115 et seq.

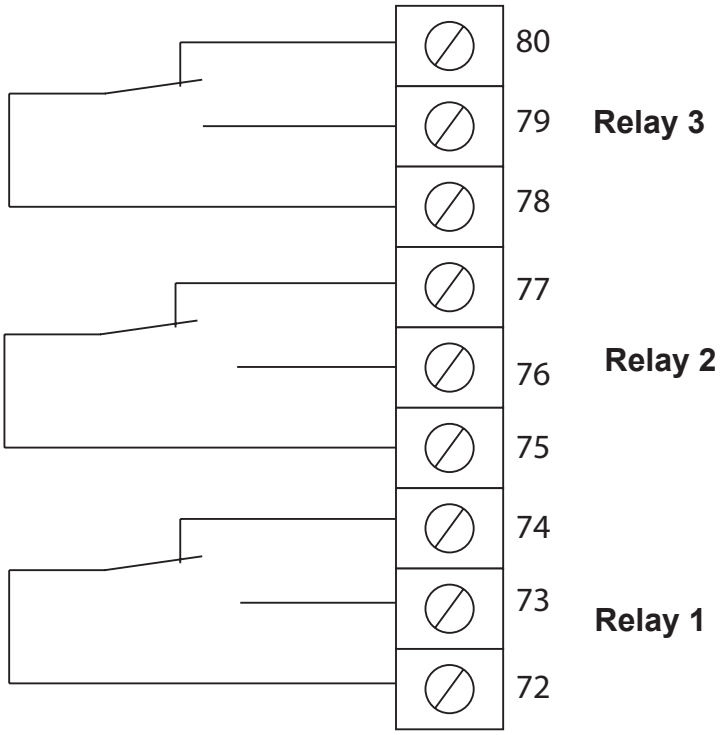
**CAUTION!**
**The maximum mounting height for photocells is 20 cm!**




# Programmable relays

Programming from menu item 1600 et seq.

**NOTE:**
**Relay 1 is available only if it is not being used to control the brake (factory setting: brake active).**




**NOTE:**

**Allowable contact load:**

**max. 8 A 250 V AC 30 V DC**
**max. 3 A 250 V AC cos ϕ = 0.4**
**max. 2000 VA / 300 W**

The relays can be programmed as required for the following functions:

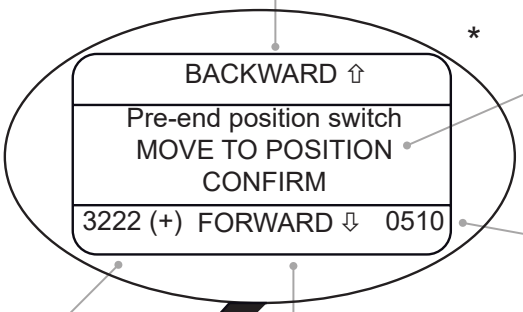
- not active (every relay)
- message when end positions reached (Pos.: top / bottom / both + permanent / pulse) (every relay)
- active during movement up / down / both + permanent / blink + 1 - 5s pre-warning time (every relay)
- switch brake (relay 1 only)
- switch electric lock (every relay)

  ⇒ For further information, see the parameter settings
- radio commands (relay 3 only)

# Initial operation

* These are display examples. They are intended to help explain the individual areas of the display and its function.

Depending on context, the upper line shows the possibility to scroll back in the menu, change a value or parameter upwards using the ⇧ key or select an option

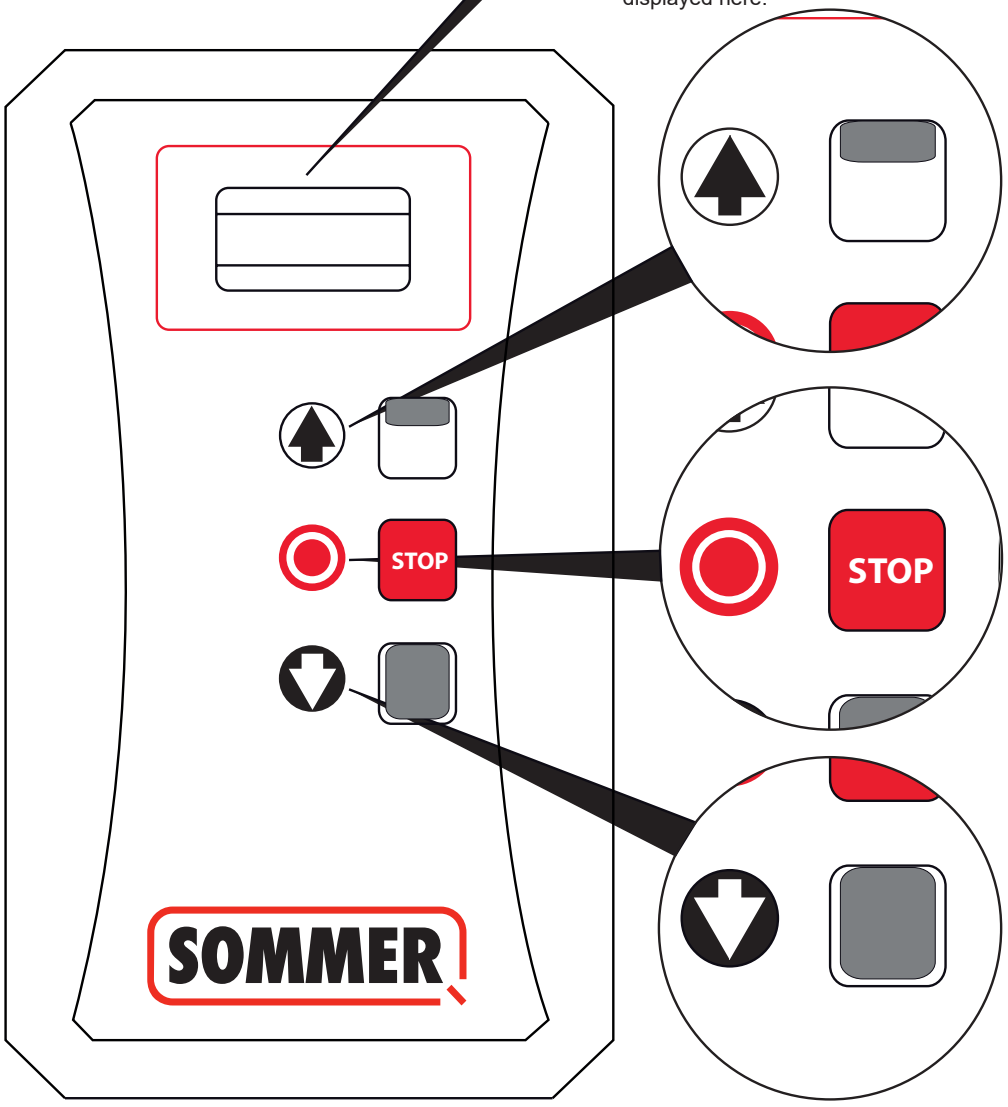



The middle line contains information (such as the date, mode of operation, etc.) and instructions (e.g. confirm end position, abort current procedure, etc.)

Here, the current position in the menu is shown. This display serves as an orientation aid. By means of a comparison with the instructions, you can quickly find out where you are in the menu at the moment

Here, the position of the door is shown in increments. If there is a plus sign (+) after the number, this means that the door is in the pre-end position switch area.

Depending on the context, the possibility to scroll forward in the menu, change a value or parameter downwards using the ⇩ key, or selecting an option is displayed here.




- Door UP
- Door STOP while the door is moving DOWN
- "Back" in main menu
- "Change parameters/values" in submenus

- STOP door
- Select from parameters in the menu and confirm values/settings

- Door DOWN
- Door STOP while the door is moving UP
- "Forward" in main menu
- "Change parameters/values" in submenus

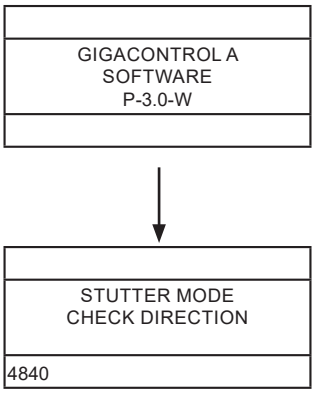
# Initial operation

## Starting commissioning

**NOTE:**
**The door must be moved manually to approximately the centre position before starting commissioning so that a detection of the motor direction is possible.**

**NOTE:**
**If the error message "Security Chain" appears during activation, check whether the manual emergency release is enabled.**

1. Switch on control unit

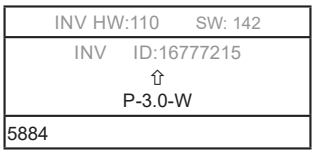



**NOTE:**
**After a few seconds, the display of the software version disappears and the system switches automatically to the display of the currently set mode of operation.**

**NOTE:**
**During commissioning, the set mode of operation is displayed.**

## Enter password (0110)

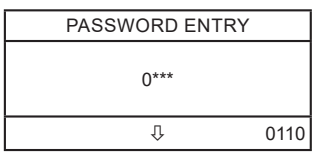
1. Press STOP button for approx. 5 seconds.
   ⇒ The display becomes blank.
2. Then also press ⇧ or ⇩ for 4 seconds.
   ⇒ ⇧ The following appears:




3. Release all buttons.

**NOTE:**
**The factory-set main password is 0000.**

**For security reasons, it should always be changed by a trained person (menu: "Service -> Passwords no. 2570")**




   ⇒ The prompt to enter the password appears on the display.
   ⇒ The active position flashes.
4. Select the applicable digit with ⇧ or ⇩ and confirm with "STOP."
   ⇒ The next position is automatically selected.

# Menu level 1

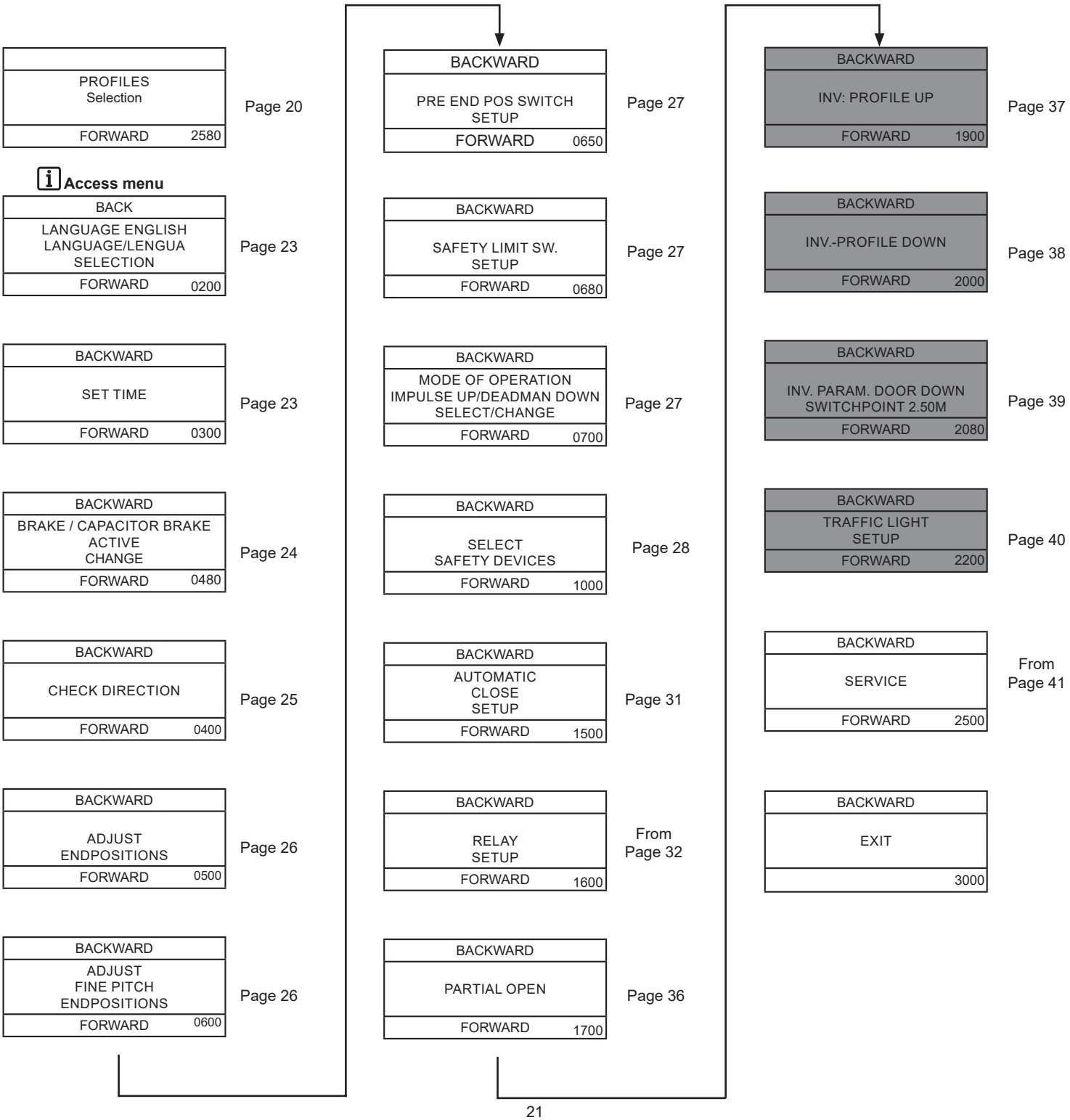
**(From software version 3.0)**

**NOTE:**
**For a clearer display, this overview shows level 1 of the menu. The pages listed next to the menu items contain precise information and setting options.**

**NOTE:**
**The door must be moved manually to approximately the centre position before starting commissioning so that a detection of the motor direction is possible.**

**NOTE:**
**If the error message "Security Chain" appears during activation, check whether the manual emergency release is enabled.**

**NOTE:**
**The menu structure is dynamic. Menus of unused components are hidden (e.g., functions that are not available when mechanical limit switches, frequency converters, and traffic light modules are used).**



# Menu level 1 for mechanical limit switches

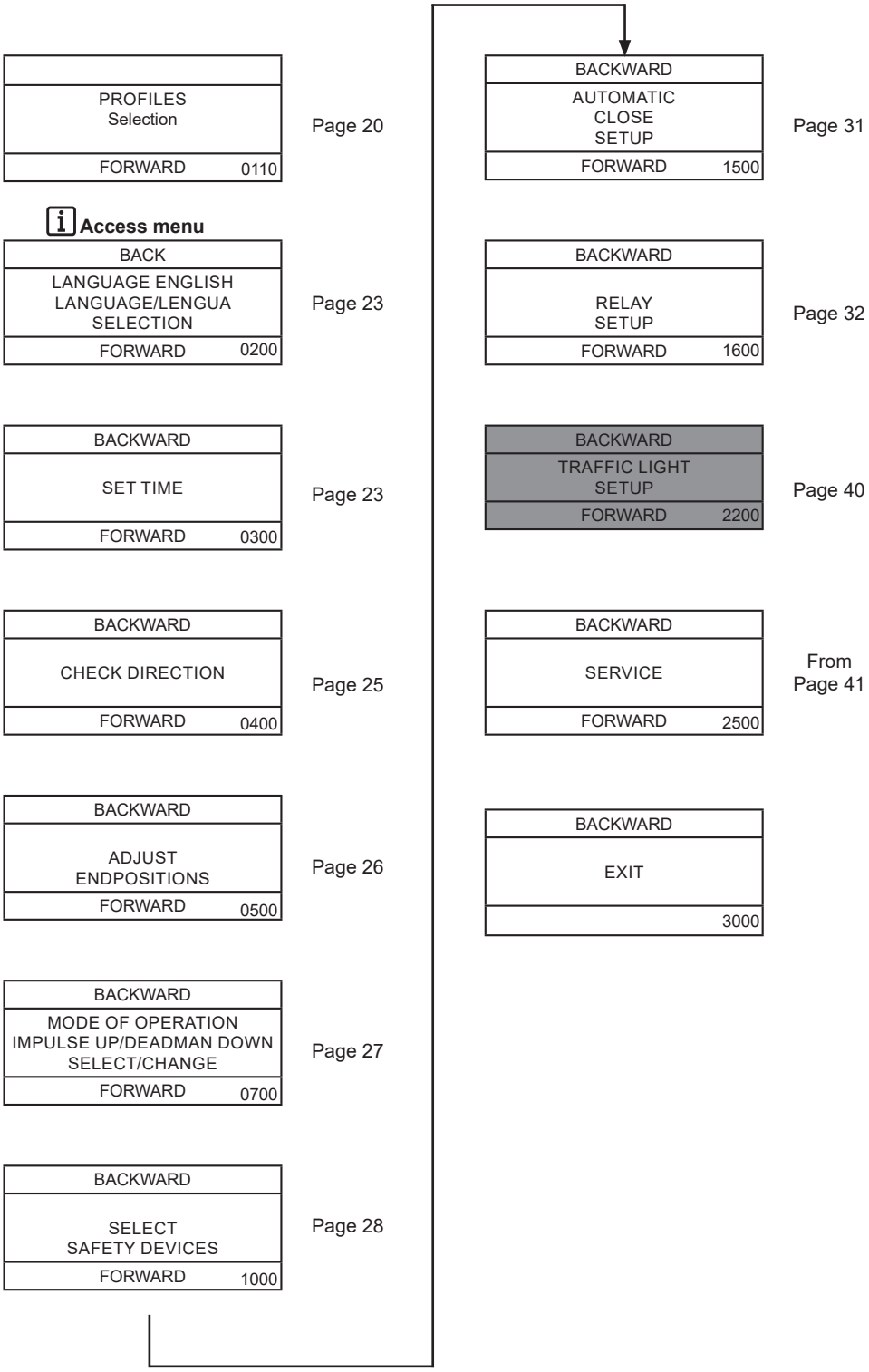
**(From software version 3.0)**

**NOTE:**
**For a clearer display, this overview shows level 1 of the menu. The pages listed next to the menu items contain precise information and setting options.**

**NOTE:**
**The door must be moved manually to approximately the centre position before starting commissioning so that a detection of the motor direction is possible.**

**NOTE:**
**If the error message "Security Chain" appears during activation, check whether the manual emergency release is enabled.**

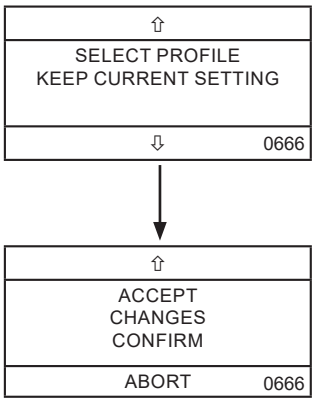
**NOTE:**
**The menu structure is dynamic. Menus of unused components are hidden (e.g., functions that are not available when mechanical limit switches, frequency converters, and traffic light modules are used).**



Select / change the values using ⇧⇩

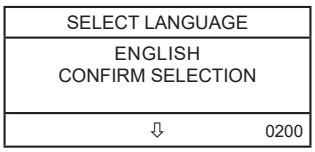
Confirm with STOP button

## Select profile (2580)




**NOTE:**
**Customer profiles are presettings for safety devices and modes of operation set at the factory.**

## Select language (0200)

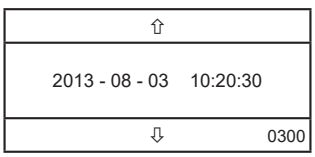



Select the language using ⇧⇩

Confirm with STOP button

## Set date and time (300)

**NOTE:**
**The date and time are retained for a maximum of 10 days in the event of a power failure and are correctly displayed when the power supply is restored.**




Select the digits using ⇧⇩

Confirm with STOP button

**NOTE:**
**YYYY-MM-DD HH:MM:SS**

**The active number flashes!**

## Switch brake / start-capacitor via relay 1 (0480)

**NOTE:**
**In the following cases, relay 1 is not required for the brake function:**

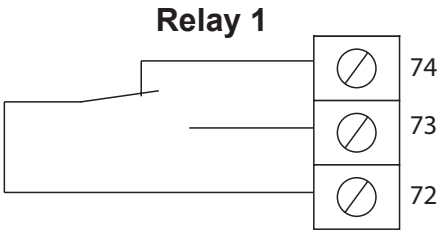
**- If no brake is present**

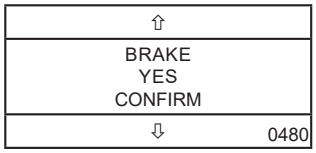
**- If the brake is switched beyond the neutral point**

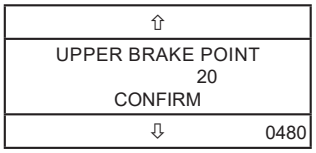
**- If the control unit is operated with the frequency converter**

**If one of these points applies, "INACTIVE" should be selected in the first window.**

**NOTE:**
**Relay 1 is available only if it is not being used to control the brake or the start capacitor (factory setting: brake active).**

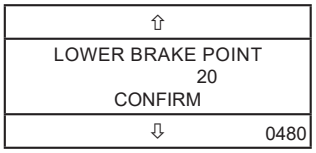


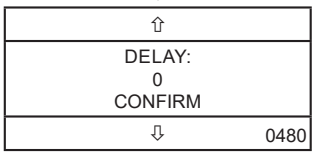

**Setting range:**
0 to 500 inc.

**NOTE:**
**The value set here is the difference from the upper end position (Figure A).**



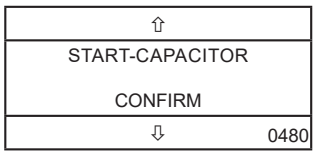

**Setting range:**
0 to 500 inc.

**NOTE:**
**The value set here is the difference from the lower end position (Figure A).**

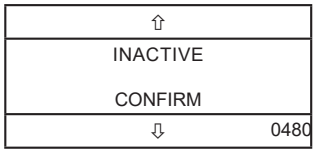



**Setting range:**
0 to 500 ms.

**NOTE:**
**The value set here is the difference between the motor startup and release of the brake (Figure A).**




**NOTE:**
**If the function "Start-capacitor" is activated, relay 1 switches briefly with every start command.**




**NOTE:**
**If "Inactive" is selected, relay 1 can be actuated via menu item 1620.**

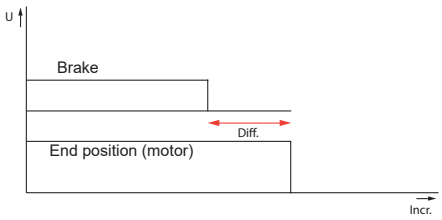



Figure A

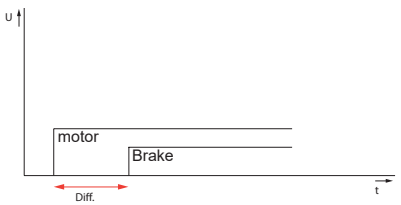



Figure B

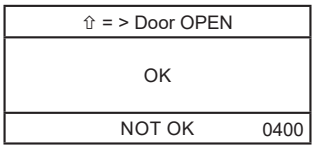
## Check direction (0400)

**NOTE:**
**The motor direction must be checked during initial commissioning to allow the OPEN/CLOSE buttons to be correctly assigned.**

**This step is an important part of initial commissioning. All following steps are based on this.**

**If mechanical limit switches are used, they must be enabled in menu item 2550 before checking the motor direction.**

**This requires the door to be in an approximately central position between the end positions to allow sufficient travel distance for checking the motor direction. If this menu item is selected, the door can only be moved with the ⇧ button in the housing cover. The ⇧ button must be pressed and held pressed until the movement is automatically limited by the control unit (approx. 1 sec.). If the direction of movement of the door is in the OPEN direction, this must be confirmed with the STOP button. If the direction of movement of the door is in the CLOSE direction, the ⇩ button for incorrect motor direction must be pressed. The control unit again offers the option of moving the door in the OPEN direction with the ⇧ button and changed door direction. Confirm with the STOP button.**




If direction of movement was OK: Confirm with STOP button

If the direction of movement was NOT OK: ⇩ Press

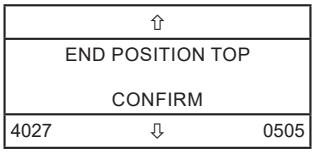
## Adjust endpositions (0500)

### (via mechanical limit switches)

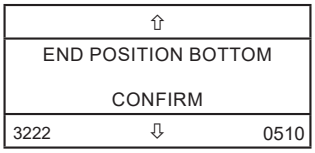
**NOTE:**
**Mechanical limit switches must be enabled in the Service menu (menu item 2500).**

**NOTE:**
**The settings of the limit switches can now only be confirmed on the control unit if the mechanical limit switches for the respective end position have tripped.**

**NOTE:**
**Control unit automatically moves to "END POSITION BOTTOM."**




1. Move to positions using ⇧⇩
2. Adjust the mechanical limit switch and security limit switch at the top
3. Confirm with STOP button




1. Move to positions using ⇧⇩
2. Adjust the mechanical limit switch and security limit switch at the bottom
3. Confirm with STOP button

# Adjust end positions (0500)

## (via encoder)

**NOTE:**
**The end positions can also be corrected later using the fine pitch (menu item 600).**

**NOTE:**
**Control unit automatically moves to "END POSITION BOTTOM."**

| ⇧ |
|---|
| END POSITION TOP<br>CONFIRM |
| 4027 ⇩ 0505 |

↓

| ⇧ |
|---|
| END POSITION BOTTOM<br>CONFIRM |
| 3222 ⇩ 0510 |

Move to the desired position using ⇧⇩

Confirm with STOP button

# Adjust fine pitch of end positions (0600)

## (via encoder)

**NOTE:**
**After commissioning of the system, the end positions can be more finely adjusted using this item.**

**NOTE:**
**A maximum of only 50 increments can be finely adjusted in both directions.**

**NOTE:**
**The door does not move during adjustment of the fine pitch of the end positions!**

| ⇧ |
|---|
| FINE PITCH TOP<br>5110*<br>CONFIRM |
| F1=5100** ⇩ 0610 |

↓

| ⇧ |
|---|
| FINE PITCH BOTTOM<br>1480*<br>CONFIRM |
| F1=1500** ⇩ 0620 |

Change values using ⇧⇩

Confirm with STOP button

* New position

** Current position

# Overrun correction

The control unit is fitted with automatic position correction. If the gate run-on time changes, e.g. as a result of temperature fluctuations, changes in the spring tension of sectional doors, binding as a result of mechanical damage, the control unit automatically corrects the stopping distance to the defined position value.

The first correction takes place in the first 2 to 3 complete gate cycles after setting the end positions.

**NOTE:**
**The end position is intentionally not reached during the first movement after setting the end positions!**

## Adjust pre end position switch (0650)

**CAUTION!**
**DIN EN 12453 allows the closing edge to be blanked in an area max. 50 mm above the ground or switching from "Stop Emergency Reverse" to "Stop only." It is essential to comply with the requirements of this standard.**
**The optical safety edges are blanked in this area, whilst the 8.2 KΩ safety edges are switched to "STOP ONLY." The test is enabled for the safety edges with air wave switches. After crossing the pre-end position switch, the control unit expects a signal from the air wave switch within a specified time window. This requires the door with the safety edge to be in contact with the ground.**

| ⇧ |
|---|
| PRE END POS SWITCH<br>MOVE TO POSITION<br>CONFIRM |
| ⇩ 0655 |

Move to the position using ⇧⇩

Confirm with STOP button

## Adjust security limit switch (0680)

**NOTE:**
**The security limit switches are a redundant safety device for the standard limit and end position switches. If the standard limit and end position switches are crossed, the system is stopped by the security limit switches.**

**NOTE:**
**If the security limit switches have tripped, the door stops. The system must be moved back to the normal limit and end position switch area in stutter mode. The error is then automatically corrected.**

| ⇧ |
|---|
| SECU LIMIT SWITCH<br>100<br>CONFIRM |
| ⇩ 0685 |

Move to the position using ⇧⇩

Confirm with STOP button

**Setting range:**

50 to 300 increments

## Select mode of operation (0700)

**CAUTION!**
**The safety edges and photocells are not active in dead man mode.**
**Danger of serious injury!**
**Always ensure that there are no persons, animals or objects in the area of movement of the door.**

**NOTE:**
**- This menu item is used for selection of dead man or pulse mode. If dead man mode is selected, all other menu items are skipped because they are only relevant for pulse mode (with the exception of "Inv. Parametrisation").**

**- In dead man mode, the buttons must be pressed as long as the door is to move.**

Selection using ⇧⇩

Confirm with STOP button

| ⇧ |
|---|
| IMPULSE UP/DEADMAN DOWN |
| ⇩ 0700 |

**Selection options:**

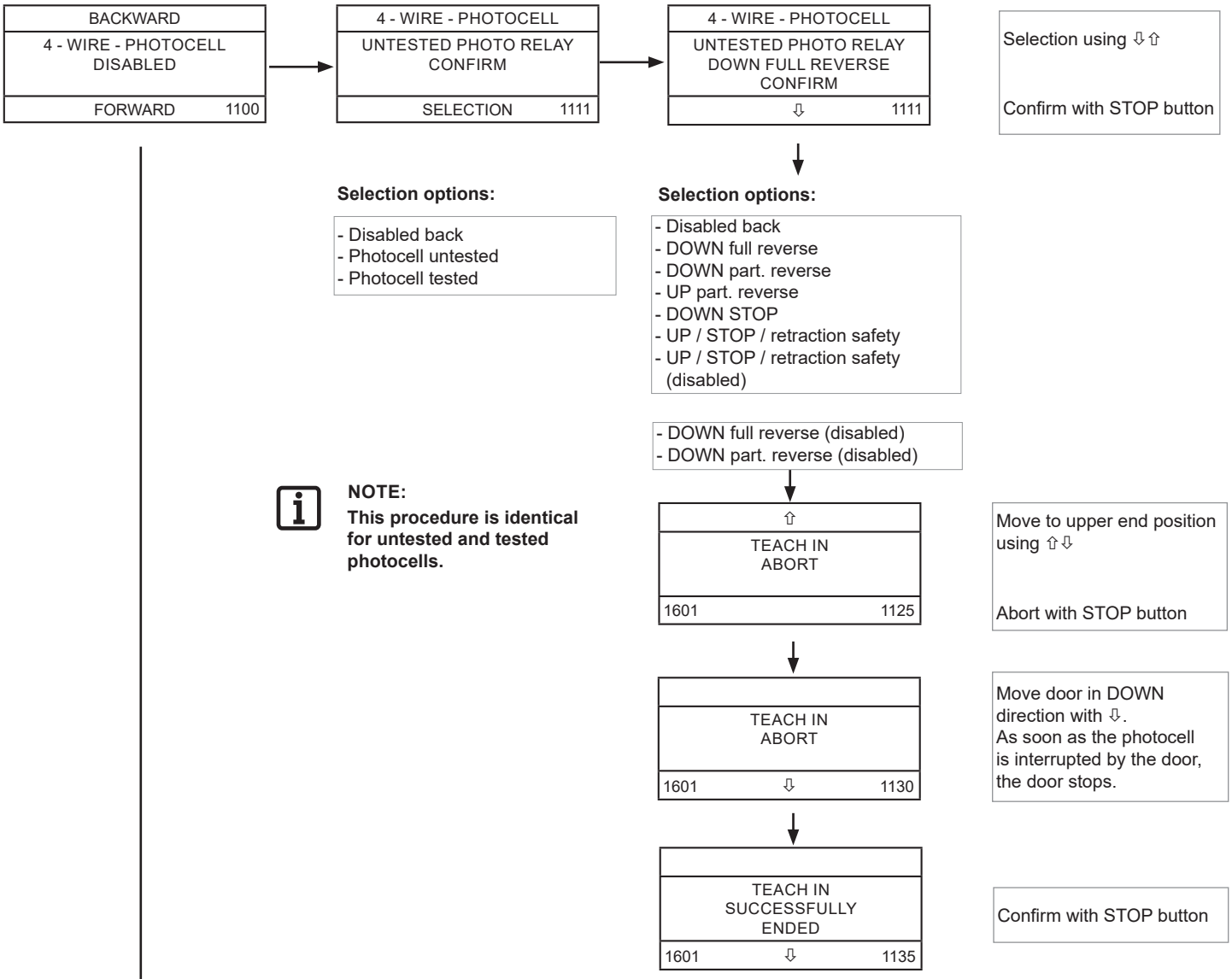
- Impulse UP / Deadman DOWN
- Deadman UP / DOWN
- Impulse UP / DOWN
- Two way traffic

| BACKWARD |
|---|
| GOTO OPERATION |
| 3000 |

**NOTE:**
**If "Deadman" is selected as the mode of operation, the system will jump directly to the last menu item, "Goto operation (3000)."**

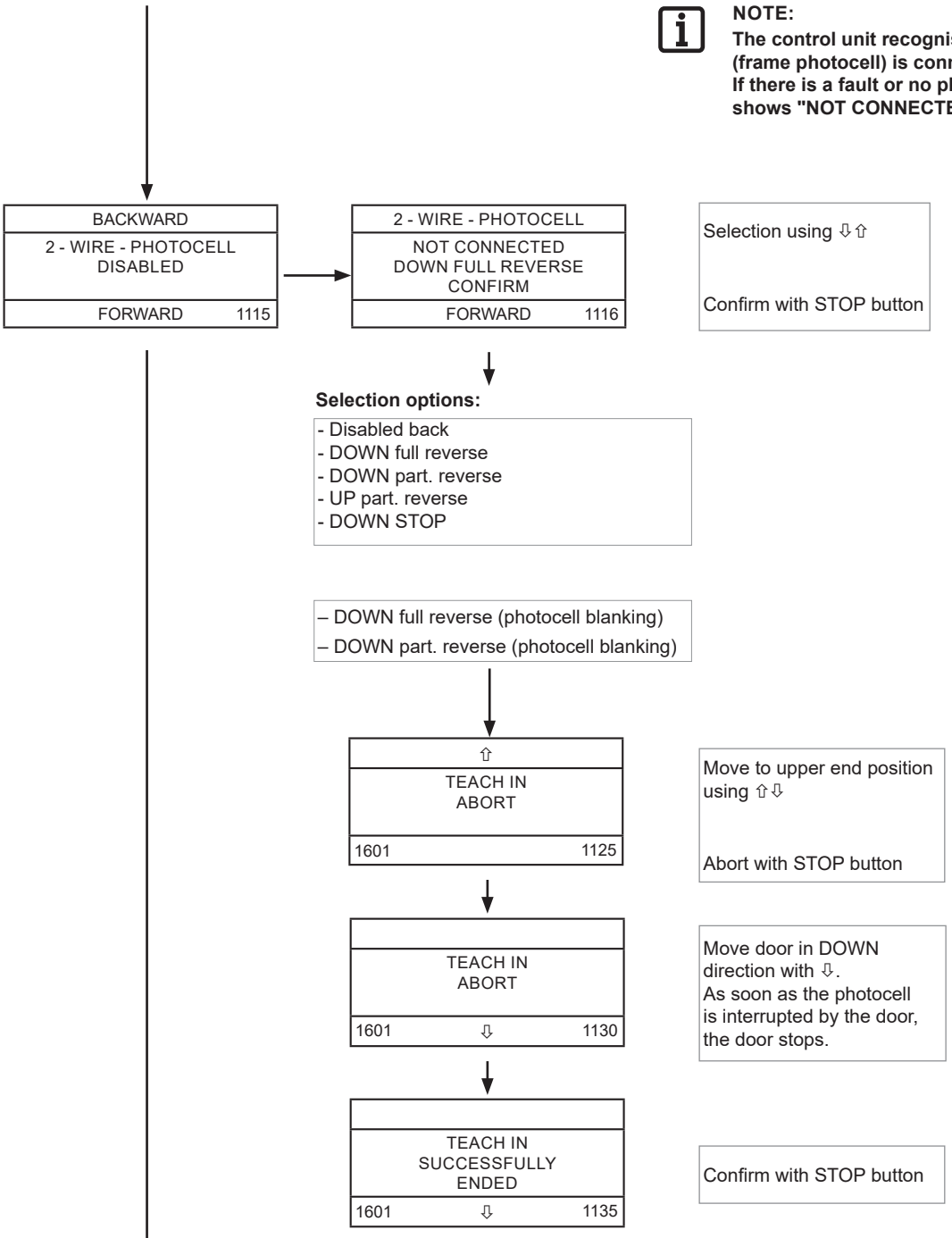
## Select safety device (1000)

**CAUTION!**
**The maximum mounting height for photocells is 20 cm.**



# Initial operation

**NOTE:**
**The control unit recognises whether a 2-wire photocell (frame photocell) is connected and displays "CONNECTED." If there is a fault or no photocell is connected, the display shows "NOT CONNECTED."**



# Initial operation

**NOTE:**
**The optical safety edges are blanked in the pre-end position switch area.**

**NOTE:**
**The control unit recognises at the respective inputs whether optical 8.2 KΩ safety edges or an air wave switch are connected and displays "CONNECTED."**

| BACKWARD |
|---|
| OSE1<br>DISABLED<br>SELECT/CHANGE |
| FORWARD 1200 |

| ose1 |
|---|
| CONNECTED<br>INACTIVE/BACK<br>CONFIRM |
| ⇩ 1205 |

Selection using ⇩⇧

Confirm with STOP button

**Selection options:**

- Disabled back
- DOWN full reverse
- DOWN part. reverse
- UP part. reverse
- DOWN STOP
- UP / STOP / retraction safety

| BACKWARD |
|---|
| OSE2<br>DISABLED<br>SELECT/CHANGE |
| FORWARD 1220 |

| OSE 2 SETTINGS |
|---|
| CONNECTED<br>INACTIVE/BACK<br>CONFIRM |
| ⇩ 1225 |

**CAUTION!**
***When using the automatic closing function, the safety device connected at the OSE 2 input has no limitation for the closing attempts after detection of an obstacle! For this reason, we recommend that it is used in this mode of operation exclusively for approved, contactless safety devices (light curtains)!**

**Selection options:**

- Disabled back
- DOWN full reverse*
- DOWN part. reverse*
- DOWN STOP
- UP part. reverse
- UP / STOP / retraction safety

| BACKWARD |
|---|
| 8K2/PNEU 1 SETUP<br>CONNECTED<br>SELECT/CHANGE |
| FORWARD 1240 |

| 8K2/PNEU 1 |
|---|
| CONNECTED<br>INACTIVE/BACK<br>CONFIRM |
| ⇩ 1245 |

| 8K2/PNEU 1 |
|---|
| CONNECTED<br>INACTIVE/BACK<br>CONFIRM |
| ⇩ 1250 |

**Selection options:**

- Disabled back
- 8K2
– Air wave switch (PNEU)

**Selection options:**

- Disabled back
- DOWN full reverse
- DOWN part. reverse
- DOWN STOP
- UP part. reverse
- UP STOP / retraction safety

**NOTE:**
**the 8.2 KΩ safety edges are switched to "STOP ONLY" in the pre-end position switch area.**

**The test is enabled for the safety edges with air wave switches. After crossing the pre-end position switch, the control unit expects a signal from the air wave switch within a specified time window. This requires the DOOR with the safety edge to be in contact with the ground (pulse).**

| BACKWARD |
|---|
| 8K2/PNEU 2 SETUP<br>CONNECTED<br>SELECT/CHANGE |
| FORWARD 1260 |

| 8K2/PNEU 2 |
|---|
| CONNECTED<br>INACTIVE/BACK<br>CONFIRM |
| ⇩ 1265 |

| 8K2/PNEU 2 |
|---|
| CONNECTED<br>INACTIVE/BACK<br>CONFIRM |
| ⇩ 1270 |

**Selection options:**

- Disabled back
- 8K2
– Air wave switch (PNEU)

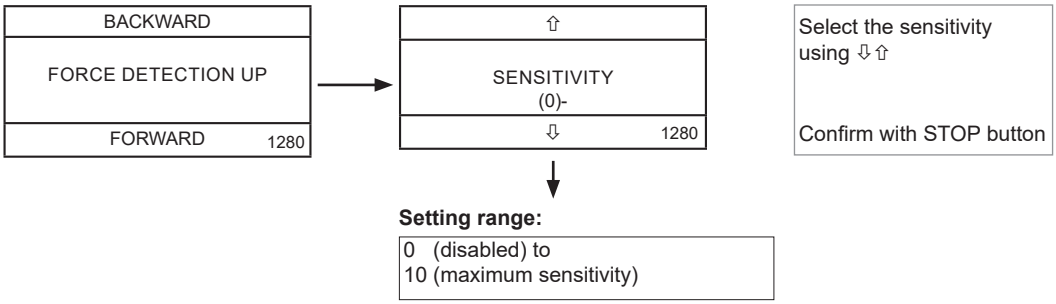
**Selection options:**

- Disabled back
- DOWN full reverse
- DOWN part. reverse
- DOWN STOP
- UP part. reverse
- UP STOP / retraction safety

**CAUTION!**
**The obstacle detection (force detection) is effective only in the UP direction of travel and must be adapted to the respective door! No obstacle detection is effective in the door DOWN direction!**

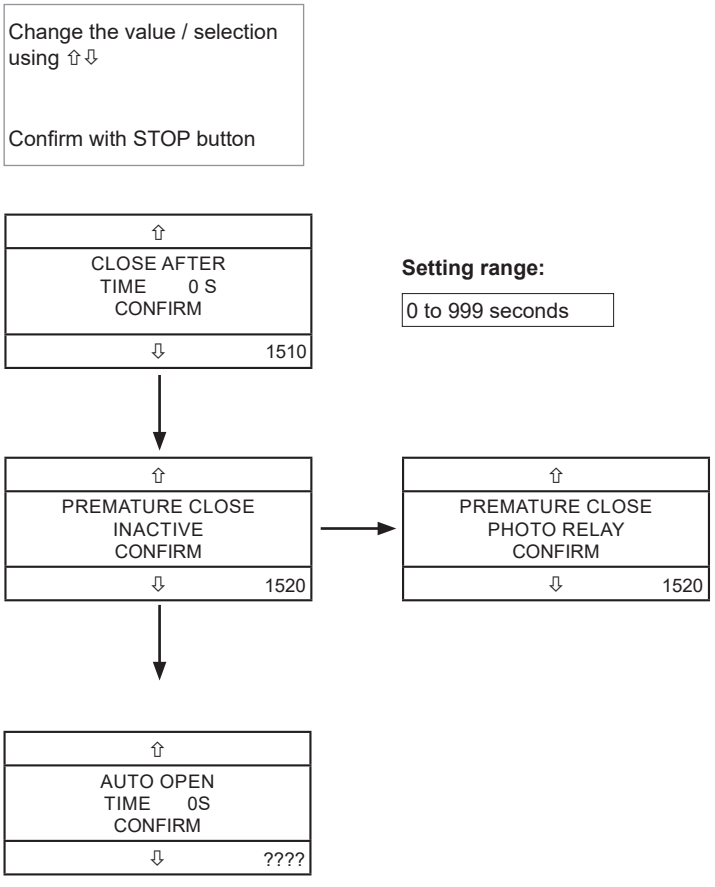
**CAUTION!**
**After the activation of obstacle detection (force detection), at least one complete teach-in run must be performed without interruption in the UP and DOWN directions in goto operation! Only when this has been done is the obstacle detection active and effective!**

**NOTE:**
**The "Obstacle detection during UP" function is only available from software version P - 21d7.8 (May 2015)!**




# Automatic close (1500)

**NOTE:**
**This function is possible only if a photocell is used and it is active for the CLOSE direction of movement (menu item 1100 or 1115).**




**NOTE:**
**When using a light curtain, no additional photocell is required.**
**This input (terminals 28 + 30) can be jumpered.**

**NOTE:**
**The setting 0 s means that automatic closing after time is disabled.**

**NOTE:**
**The effect of this function is that the door closes again immediately after an interruption of the photocell (without the hold open time running out).**
**This function is disabled by default.**

**NOTE:**
**The setting 0 s means that automatic opening after a set timeis disabled.**

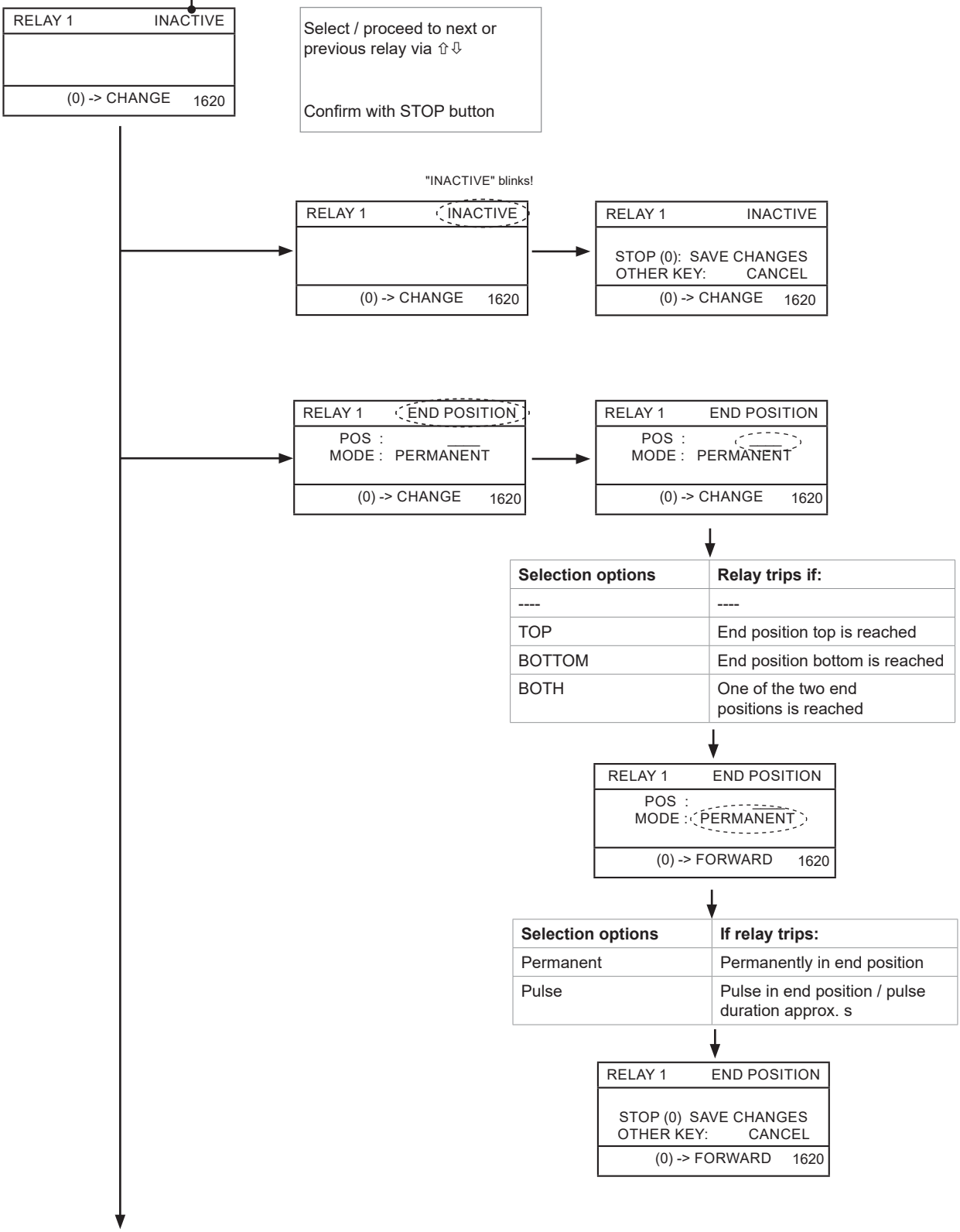
# Relay Setup (1600)

**Selection options:**

- Inactive
- End position
- Movement
- El. lock
- Maintenance

**NOTE:**
**Function field:**

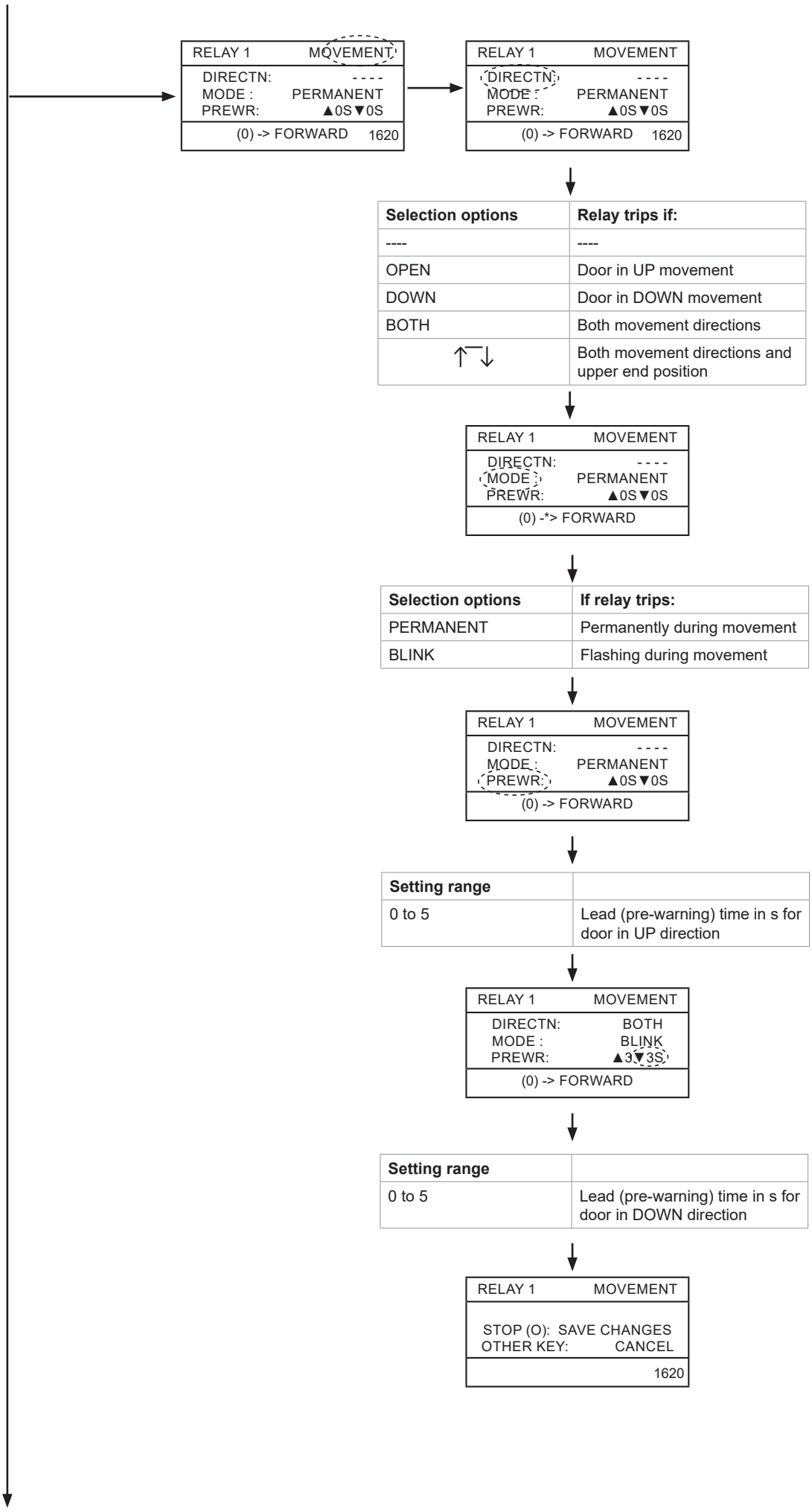
**NOTE:**
**Relay 1 is available only if it is not being used to control the brake or the start capacitor (factory setting: brake active).**




| Selection options | Relay trips if: |
|---|---|
| ---- | ---- |
| TOP | End position top is reached |
| BOTTOM | End position bottom is reached |
| BOTH | One of the two end positions is reached |

| Selection options | If relay trips: |
|---|---|
| Permanent | Permanently in end position |
| Pulse | Pulse in end position / pulse duration approx. s |

# Initial operation



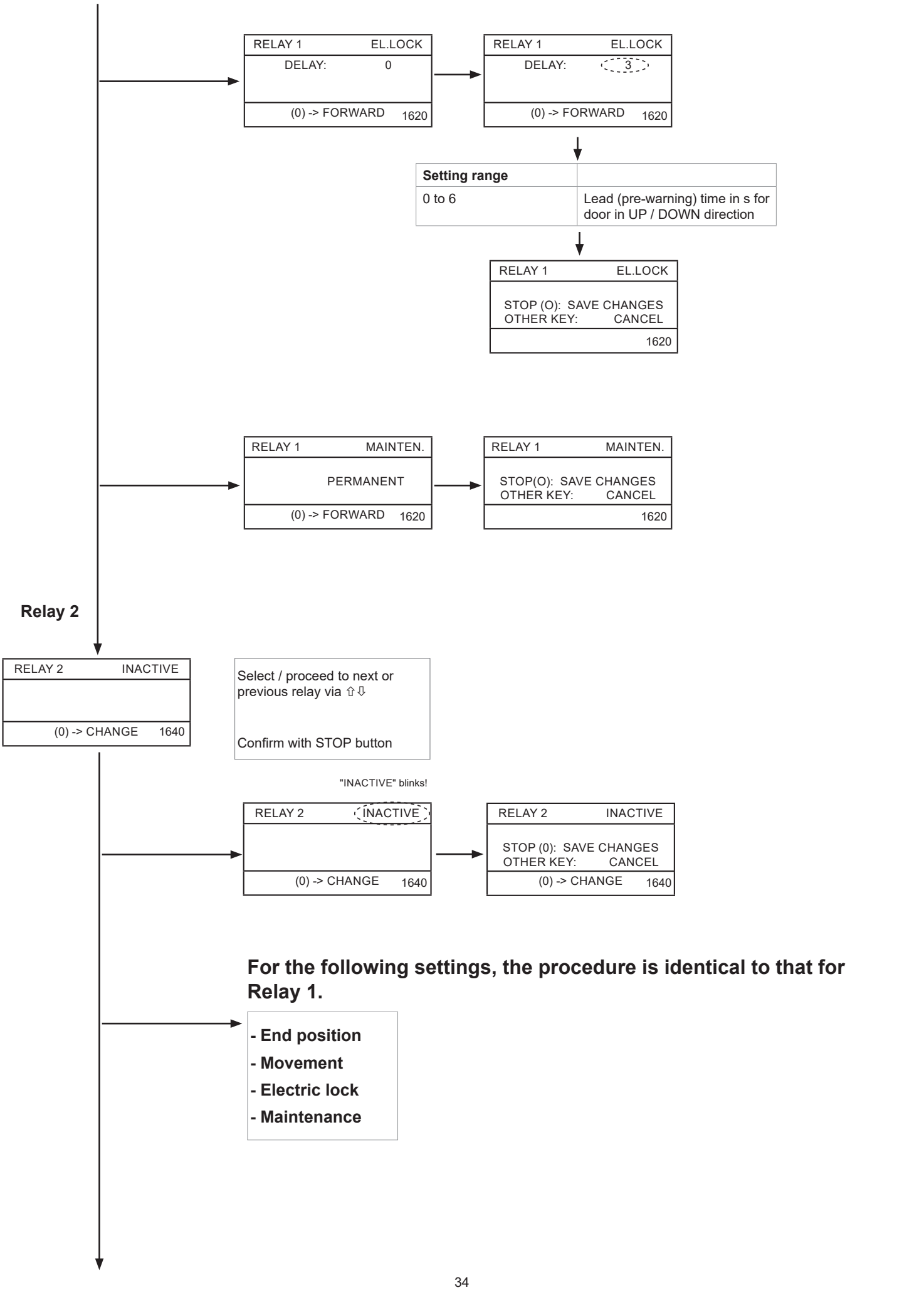

| Selection options | Relay trips if: |
|---|---|
| ---- | ---- |
| OPEN | Door in UP movement |
| DOWN | Door in DOWN movement |
| BOTH | Both movement directions |
| ↑⁻↓ | Both movement directions and upper end position |

| Selection options | If relay trips: |
|---|---|
| PERMANENT | Permanently during movement |
| BLINK | Flashing during movement |

| Setting range | |
|---|---|
| 0 to 5 | Lead (pre-warning) time in s for door in UP direction |

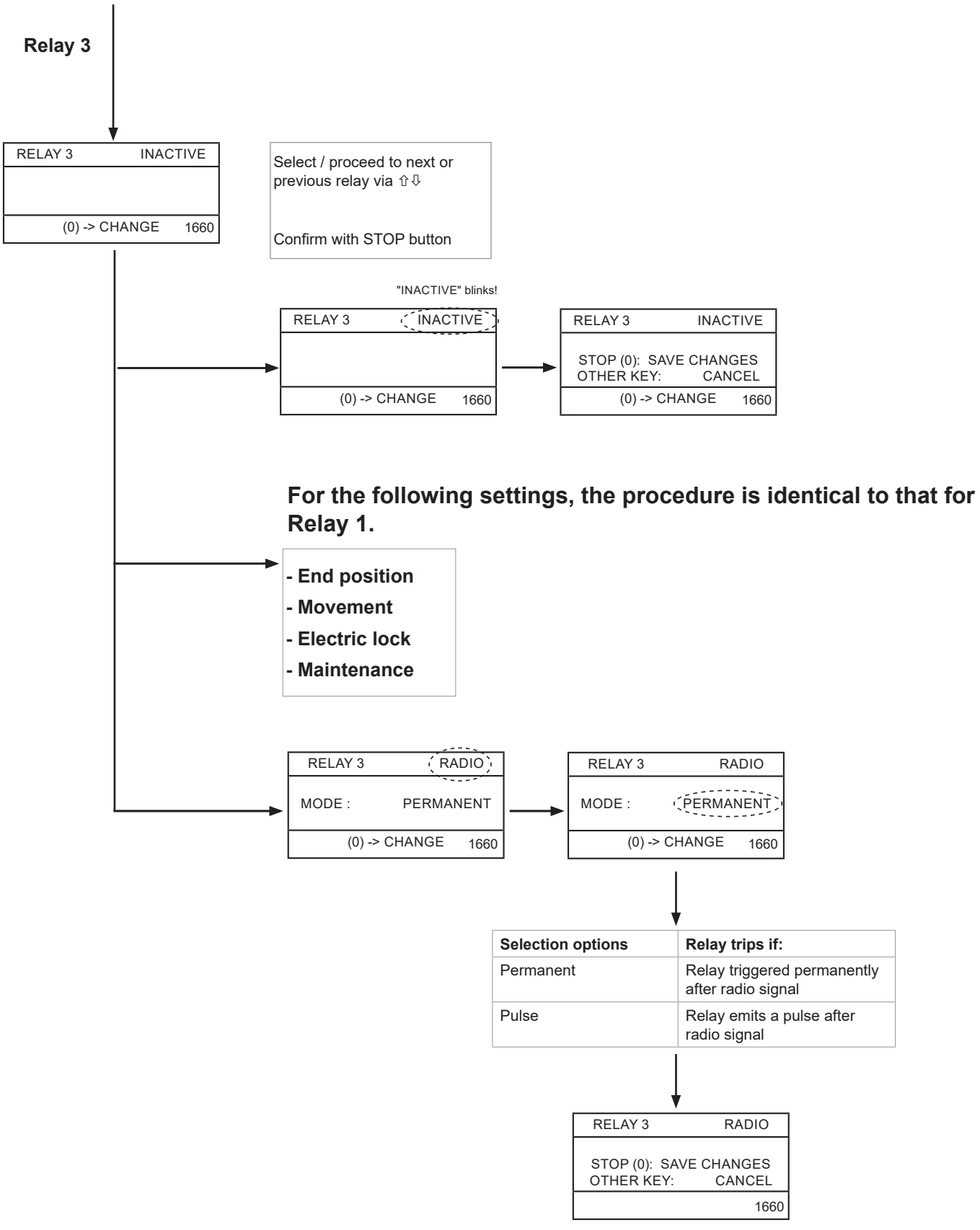
| Setting range | |
|---|---|
| 0 to 5 | Lead (pre-warning) time in s for door in DOWN direction |

# Initial operation



# Initial operation

**Relay 3**




| Selection options | Relay trips if: |
|---|---|
| Permanent | Relay triggered permanently after radio signal |
| Pulse | Relay emits a pulse after radio signal |

## Partial open (1700)

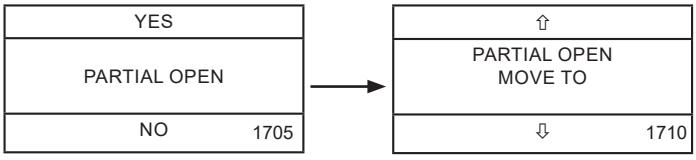
**NOTE:**
**Partial opening does not function in "TWO WAY TRAFFIC" mode of operation!**

**NOTE:**
**The behaviour of an external command device (terminals 7 + 8 "OPEN") or a handheld transmitter can be defined under the menu item "Service (2500)" - "MODE EXT. KEY UP (2565)."**

**NOTE:**
**If the partial opening function is used, the control unit behaves as follows:**

**Press button once = partial open**

**Press button twice = door opens completely**




Move to the desired partial opening height via ⇧⇩

Confirm with STOP button

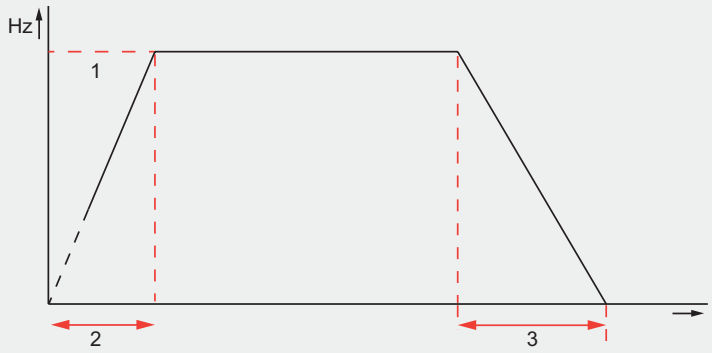
**Selection options:**

- Disabled back
- Enabled

**NOTE:**
**The menu items shown on the following pages on a grey background (frequency converter (inverter) and traffic light settings) are only available if a frequency converter or traffic light module is connected! Otherwise, these menu items are not available!**

## Inverter profile UP (1900)

1. Max. speed (Hz)
2. Startslope (ms)
3. Stopslope (inc.)



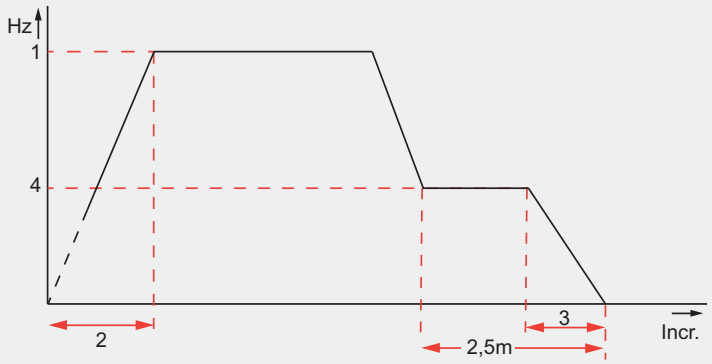

| | | |
|---|---|---|
| ⇧<br>MAX VELOCITY UP<br>80 HZ<br>CONFIRM<br>⇩ 1910 | Select the frequency for the desired speed via ⇧⇩<br>Confirm with STOP button | **Setting range:**<br>20 Hz to 120 Hz |
| ⇧<br>STARTSLOPE UP<br>700 MS<br>CONFIRM<br>⇩ 1920 | Select the desired time via ⇧⇩<br>Confirm with STOP button | **Setting range:**<br>600 ms to 2000 ms |
| ⇧<br>STOPSLOPE UP<br>POS: 400 INCR.<br>CONFIRM<br>⇩ 1950 | Select the desired position via ⇧⇩<br>Confirm with STOP button | **Setting range:**<br>0 incr. to 1500 incr. |
| ⇧<br>SENDING PARAMETERS<br>PARAMETER 3/14<br>⇩ 2095 | | |

**NOTE:**
**The steepness of the slopes changes with the speed adjustment.**

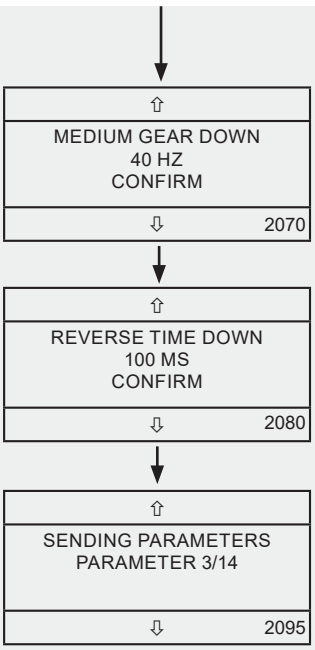
**NOTE:**
**This value is the difference to the end position at which the stopslope begins.**

## Inverter profile DOWN (2000)

1. Max. speed (Hz)
2. Startslope (ms)
3. Stopslope (inc.)
4. Medium gear (Hz)




| ⇧<br>MAX VELOCITY DOWN<br>50 HZ<br>CONFIRM<br>⇩ 2010 | Select the frequency for the desired speed via ⇧⇩<br>Confirm with STOP button | **Setting range:**<br>20 Hz to 120 Hz | |
|---|---|---|---|
| ⇧<br>STARTSLOPE DOWN<br>700 MS<br>CONFIRM<br>⇩ 2020 | Select the desired time via ⇧⇩<br>Confirm with STOP button | **Setting range:**<br>600 ms to 2000 ms | **NOTE:**<br>**The steepness of the slopes changes with the speed adjustment.** |
| ⇧<br>STOPSLOPE DOWN<br>POS: 400 INCR.<br>CONFIRM<br>⇩ 2050 | Select the desired position via ⇧⇩<br>Confirm with STOP button | **Setting range:**<br>0 incr. to 1500 incr. | **NOTE:**<br>**This value is the difference to the end position at which the stopslope begins.** |




Select the frequency for the desired speed via ⇧⇩

Confirm with STOP button

**Setting range:**

Limited by slow gear and max. speed

**NOTE:**

**This value is the frequency for the desired speed from which the door is stopped at the end position from 2.5 m in the DOWN direction in order to comply with the closing forces.**

Select the desired time via ⇧⇩

Confirm with STOP button

**Setting range:**

20 ms to 1000 ms

**CAUTION!**

**Any change in the reverse time of the main closing edge influences compliance with the closing forces.**

# Inverter parameter door DOWN switchpoint 2.5 m (2080)

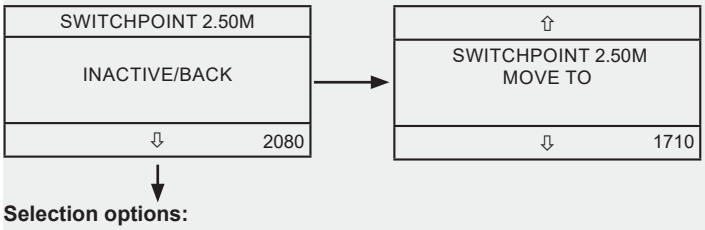
**(medium gear)**

**CAUTION!**

**It is essential to ensure that the set speed is reduced from the switchpoint to such an extent that the required closing forces are observed!**

**NOTE:**

**Movement to the switchpoint takes place during the adjustment in deadman mode and slow gear!**




Enable / move to the desired position using ⇧⇩

Confirm with STOP button

**Selection options:**

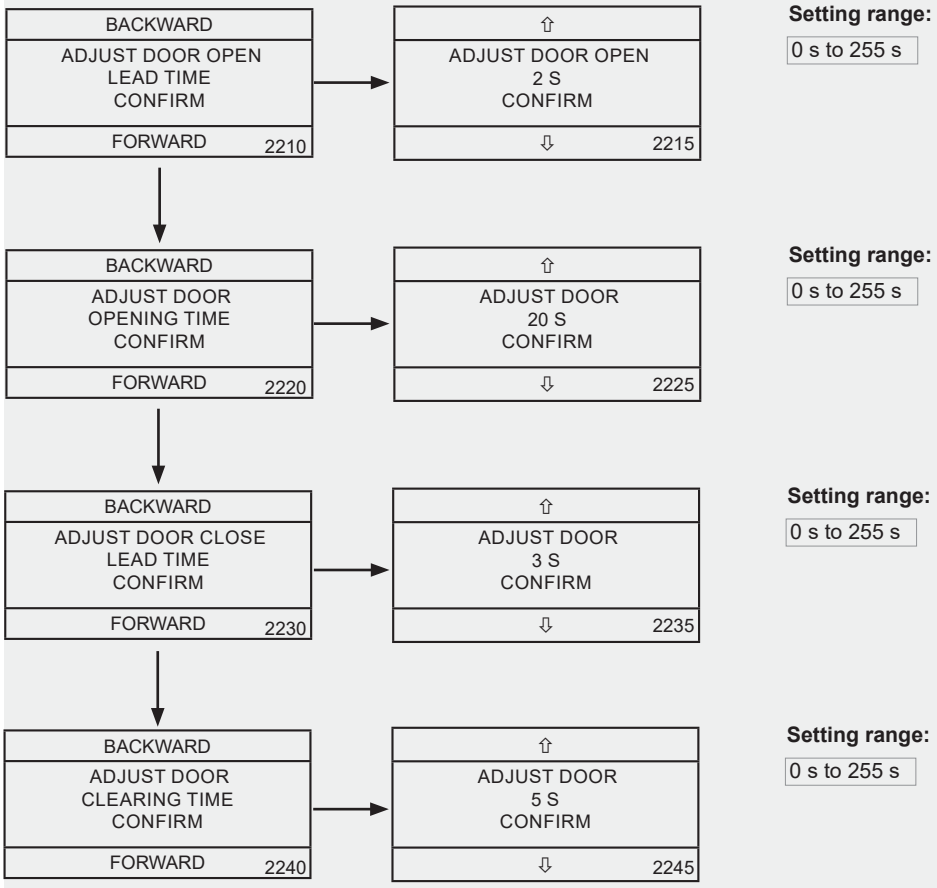
- Disabled back
- Enabled

# Adjust traffic light control (2200)

**NOTE:**
**The individual times can be selected separately!**

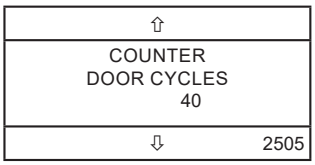
Select the desired time
via ⇧⇩

Confirm with STOP button




| Adjustable times | Meaning |
|---|---|
| Door OPEN lead time | Lead time before the door starts in UP direction |
| Opening time | Time after which the door closes automatically |
| Door CLOSE lead time | Lead time before the door starts in DOWN direction |
| Clearing time | Time for clearing the roadway before the traffic lights switch |

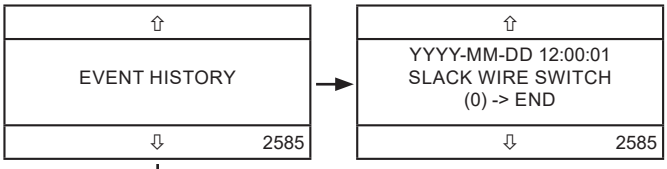
## Service (2500)

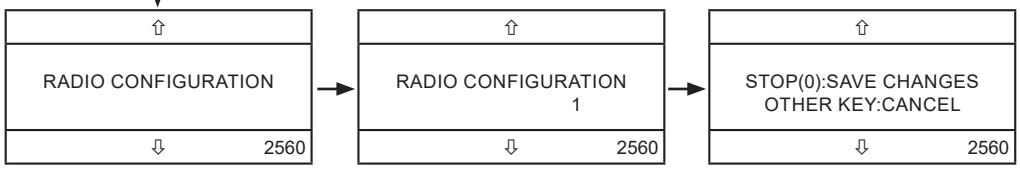



View the events / change the selection using ⇧⇩

Confirm with STOP button

**NOTE:**
**1 door cycle = door UP + door DOWN**




**Selection options:**

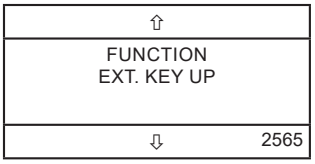
Configuration 1 to 4

| | **Channel 1** | **Channel 2** | **Channel 3** | **Channel 4** |
|---|---|---|---|---|
| **Configuration 1** | Pulse control | Partial open | UP | CLOSE |
| **Configuration 2** | Pulse control | OPEN | CLOSE | Relay |
| **Configuration 3** | OPEN internal | OPEN external | CLOSE | Relay |
| **Configuration 4** | OPEN | Partial open | CLOSE | Relay |

=

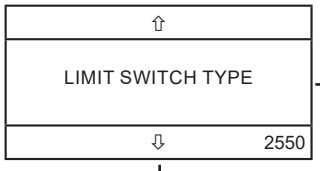
**NOTE:**
**See menu item 1660 (relay 3).**

**NOTE:**
**The radio command OPEN corresponds to the setting of the EXT. KEY UP in menu item 2565!**




**Selection options:**

| | |
|---|---|
| End position top partial opening | Both positions can be moved to |
| End position top | Only the upper end position is moved to |
| Partial open | Only the partial opening position is moved to |



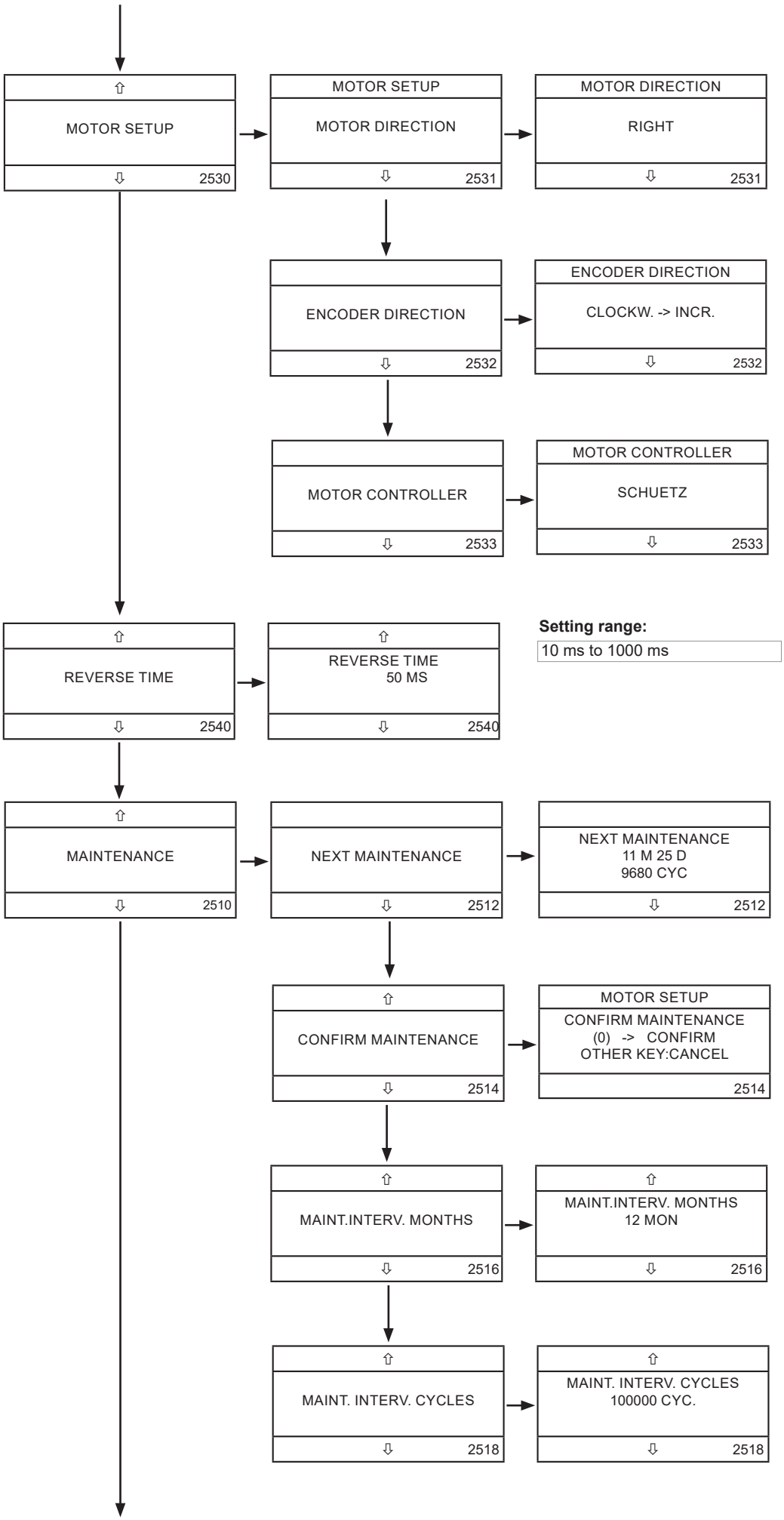

**Selection options:**

- Mechanical limit switches
- SOMMER encoder
- Encoder 01

**NOTE:**
**When mechanical limit switches are used, this setting must be made accordingly.**

**CAUTION!**
**In the case of a motor change from frequency converter to 400 V, the motor plug must not be connected.**

# Initial operation




View the events / change the selection using ⇧⇩

Confirm/select with the STOP button

| Abbreviation | Meaning |
|---|---|
| Clockw. | clockwise |
| Incr. | increasing |
| Decr. | decreasing |

**Selection options:**

- Contactor
- Frequency converter

**Setting range:**

10 ms to 1000 ms

**NOTE:**
**When using an operator with frequency converter, this menu item is not displayed.**

**NOTE:**
**Display next maintenance**

**M = months**
**D = days**
**CYC = cycles**

On completion of maintenance, confirm with STOP button

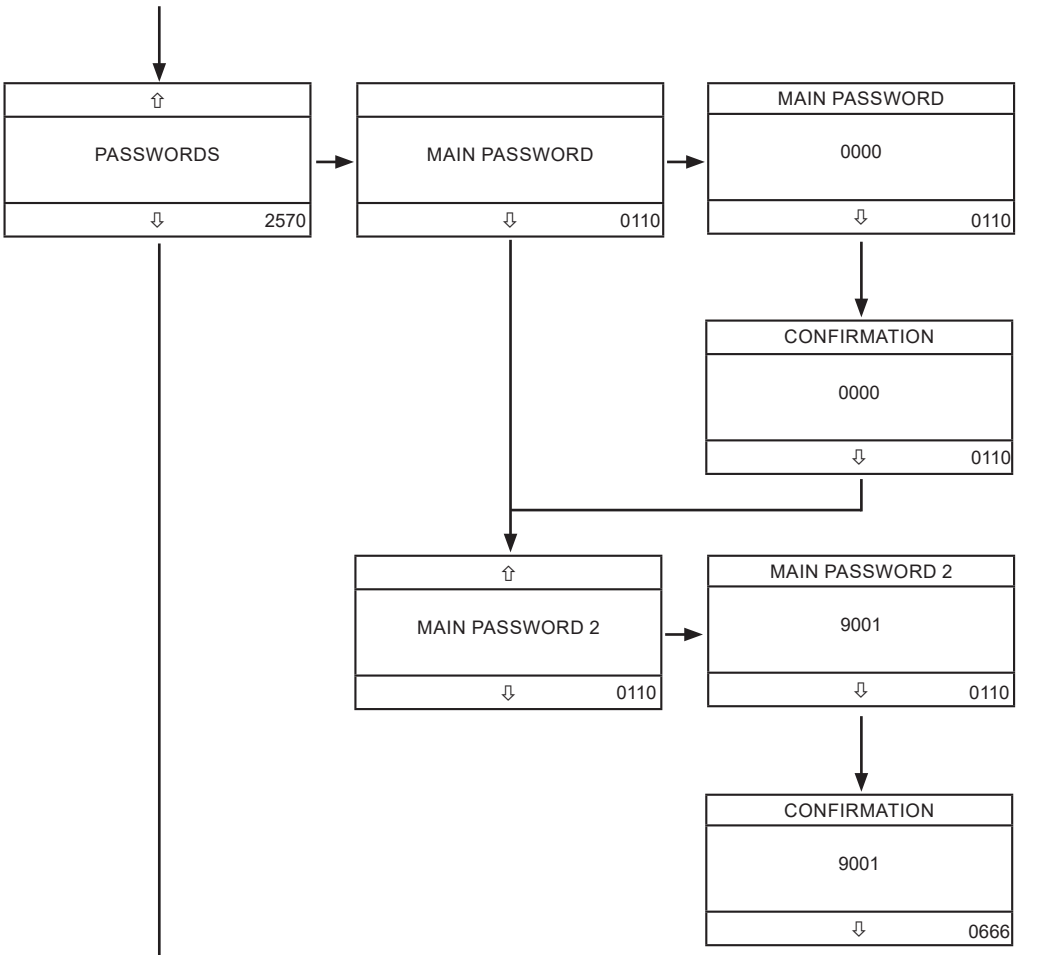
**Setting range:**

3 months to 24 months

**Setting range:**

1000 cycles to 100000 cycles

# Initial operation

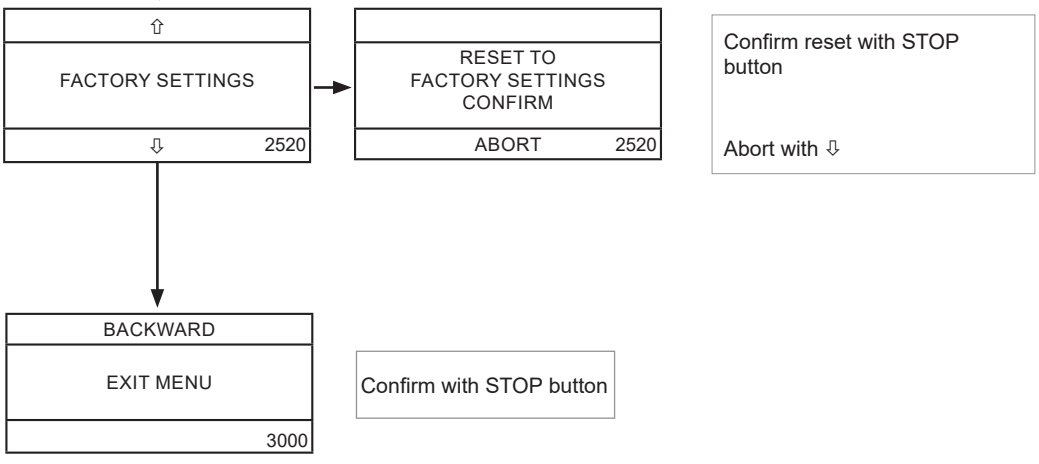



Select the respective digit with ⇧⇩ and confirm with "STOP."

⇒ The active position flashes.

⇒ The next position is automatically selected.

**NOTE:**
**The passwords must be entered a second time for confirmation.**




Confirm reset with STOP button

Abort with ⇩

Confirm with STOP button

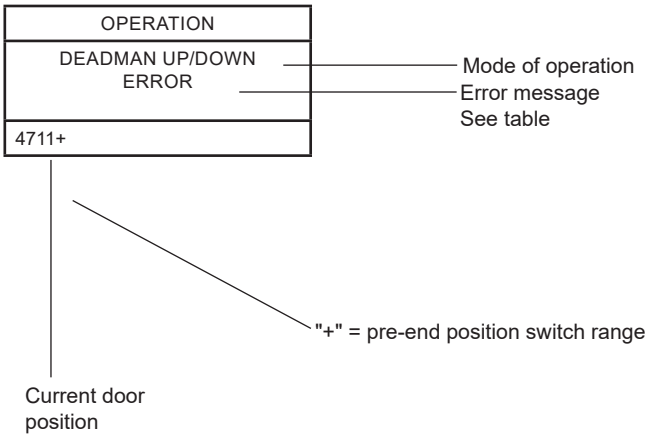
# Error messages

The control unit is self-monitoring and partially self-healing. This means that it detects errors (including errors in connected devices) and shows them on the LCD display.

Depending on the severity of the error, the display is automatically reset after correction of the error or must be manually reset as directed.

All errors and events that affect the safety of the system are logged with date and time. They can be viewed in the Service menu under "Event history."

**NOTE:**
**Self-healing means that the control unit automatically resets the error display as soon as the error has been corrected.**




| | Error message | Error class* | Log** | Self-healing |
|---|---|---|---|---|
| 1 | Security Chain<br>Safety chain 1 triggered | S | Yes | Yes |
| 2 | Safety chain 2<br>Safety chain 2 triggered | S | Yes | Yes |
| 3 | Inverter error<br>Communication error in inverter | S | Yes | No |
| 4 | Encoder<br>Communication error with absolute value encoder | F | Yes | Yes |
| 5 | Inv. thermal<br>(Inverter has signalled overheating | S | Yes | Yes |
| 6 | OSE 1 triggered | E / D | No | Yes |
| 7 | OSE 2 triggered | E / D | No | Yes |
| 8 | SW.RAIL 1 TRIGGERED | E / D | No | Yes |
| 9 | SW.RAIL 2 triggered | E / D | No | Yes |
| 10 | 2-wire photocell triggered | E / D | No | Yes |
| 11 | 4-wire photocell triggered. | E / D | No | Yes |
| 12 | DOOR TOO SLOW<br>Increments per second | S | Yes | Yes |
| 13 | DOOR TOO FAST<br>Increments per second | S | Yes | Yes |
| 14 | Error in configuration<br>Error in configuration data | F | Yes | No |
| 15 | Safety limit switch<br>End position TOP or BOTTOM was overrun | S | Yes | Yes |
| 16 | Check motor<br>Check encoder<br>Despite the start command of the control unit, the encoder values are not changed | F | Yes | No |

* Error classes:

F = fatal error
S = serious error
D = defect
E = safety event

** Event is logged in the service menu (parameter menu)

# Factory settings:

| | | |
|---|---|---|
| Language: | | English |
| Date/time | | Unchanged |
| Brake | | Active |
| Upper brake point | | 20 |
| Lower brake point | | 20 |
| Brake delay | | 0 |
| End positions | | Position retained |
| PRE END POS SWITCH | | Position retained |
| Safety limit switch | | 100 increments |
| Mode of operation | | Impulse UP / Deadman DOWN |
| Safety devices | Safety input tested/untested | Disabled |
| | 2-wire photocell | Disabled |
| | OSE 1 | Disabled |
| | OSE 2 | Disabled |
| | Safety edge 1 | Disabled |
| | Safety contact strip 2 | Disabled |
| Automatic close | | 0 sec. (disabled) |
| Relay 1 | | Brake |
| Relay 2 | | Inactive |
| Relay 3 | | Inactive |
| Partial open | | Pos. deleted |
| Inverter profile UP | Max. speed | 50 Hz |
| | Startslope (ms) | 600 ms |
| | Stopslope (inc.) | 400 inc. |
| Inverter profile DOWN | Max. speed | 50 Hz |
| | Startslope (ms) | 600 ms |
| | Stopslope (inc.) | 400 inc. |
| | medium gear | 40 Hz |
| | Emergency reverse time | 50 ms |
| Switchpoint 2.5 m | | Pos. deleted |
| Traffic light control | Door UP lead time | 3 sec. |
| | Opening time | 20 sec. |
| | Door DOWN lead time | 3 sec. |
| | Clearing time | 5 sec. |
| Door cycles | | Unchanged |
| Event history | | Unchanged |
| Motor setup | Motor direction | Unchanged |
| | Encoder direction | Unchanged |
| | Motor controller | Unchanged |
| Service interval | Time | 12 months |
| | Cycles | 10,000 cycles |
| Emergency reverse time | | 100 ms |
| Limit / end position switch type | | Unchanged |
| Password | | 0000 |

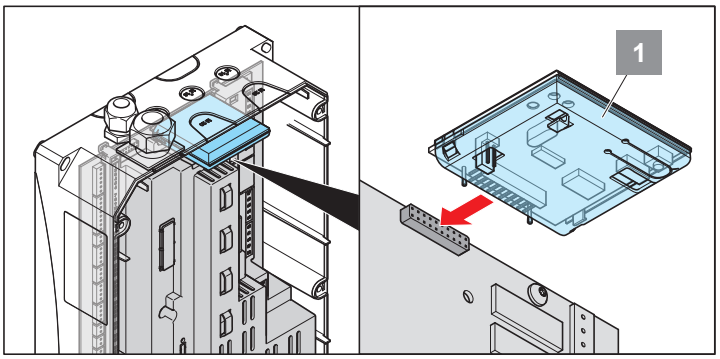
**NOTE:**
**These factory settings are applicable for standard control units only. There may be differences with personalised control units.**
**See factory settings (menu 2520) Page 43.**

# Radio (optional)

Programming from menu item 2560 et seq.

Four radio channels are available when using the 868.8 MHz or 434.42 MHz radio receiver.
Every radio channel has a preset function which can be changed manually in the radio configuration menu.

**NOTE!**
**See separate instructions for the radio receiver!**




## Radio channels

| | Channel 1 | Channel 2 | Channel 3 | Channel 4 |
|---|---|---|---|---|
| **Radio mode 1** | Pulse control | Partial open | OPEN | CLOSE |
| **Radio mode 2** | Pulse control | OPEN | CLOSE | Relay |
| **Radio mode 3** | OPEN internal | OPEN external | CLOSE | Relay |
| **Radio mode 4** | OPEN | Partial open | CLOSE | Relay |

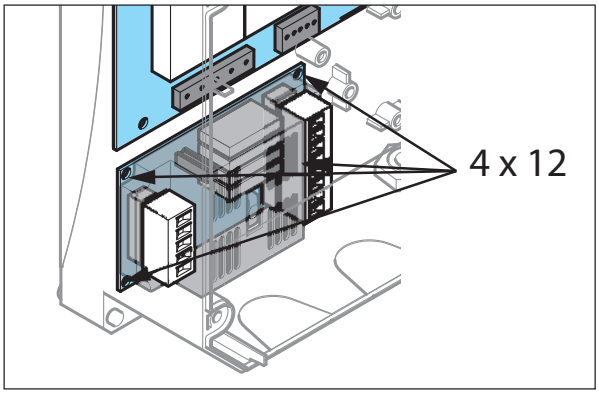
# Accessories

## Traffic light module / two way traffic control (optional)

Programming from menu item 2200 et seq.

### Mechanical installation

**CAUTION**
**Before working on the control unit, always disconnect the power plug or disconnect the mains voltage at a main switch (lock to prevent reactivation).**




1. Opening the control unit housing
2. Install traffic light module in the control unit housing with the four 12 mm bolts

### Electrical installation

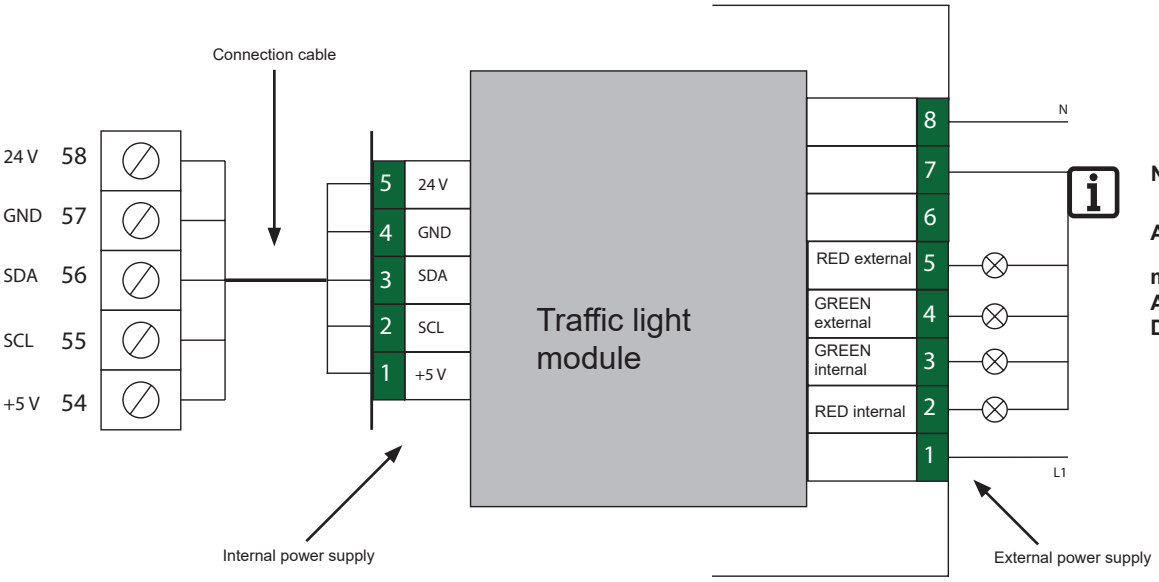
**NOTE:**
**The traffic lights require an external power source!**

**NOTE:**
**The output contacts of the traffic light module are floating!**

**NOTE:**
**If the traffic light module (two way traffic control) is used, the button assignment for the door UP command is as follows:**

**From the inside: Internal button on control unit or external pulse button**

**From the outside: External button of multiple button**




**NOTE:**

**Allowable contact load:**

**max. 3 A 250 V / AC / cos ϕ = 1**
**AC : 250 V, 3 A**
**DC : 24 V, 2 A**

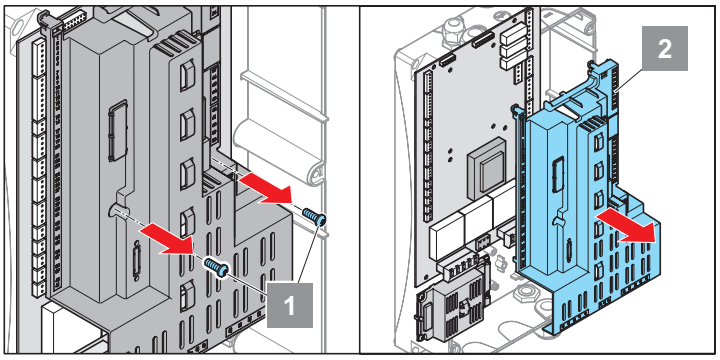
# Induction loop module (optional)

## Technical data:

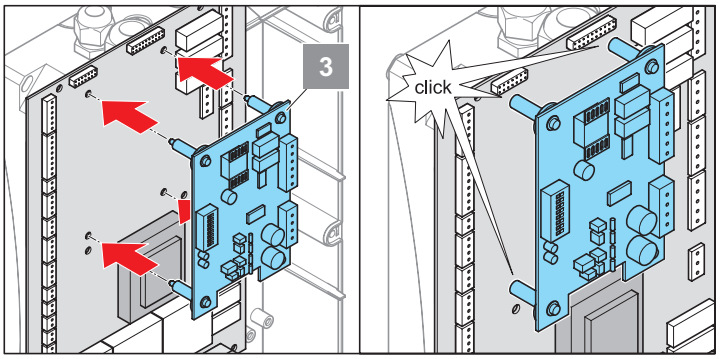
| | |
|---|---|
| Power consumption | 1 VA |
| Response time | 200 ms |
| Loop inductance | 100 – 1000 µH |
| Loop frequency range | 20 to 120 KHz |

**CAUTION!**
**Before working on the control unit, always disconnect the power plug or disconnect the mains voltage at a main switch (lock to prevent reactivation).**

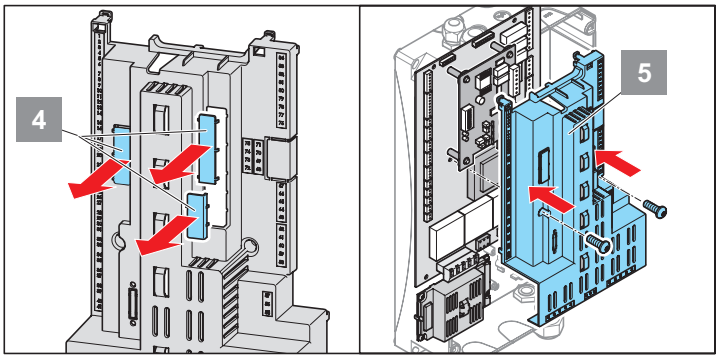
## Retrofit:



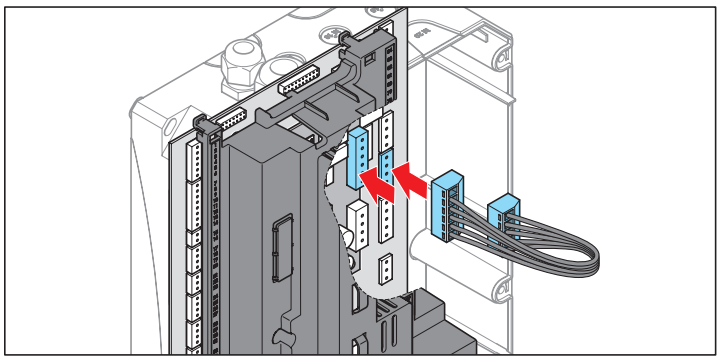

1. Unscrew bolts
2. Remove cover




3. Fit induction loop module
   ⇒ Spacers lock




4. Break out openings for terminal area from cover
5. Replace the cover

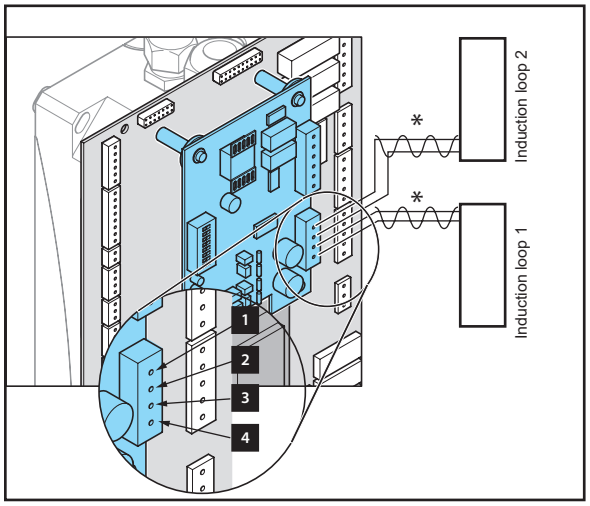


6. Connect the control unit and the induction loop module with the connection cable
   ⇒ Plug-in terminal (top terminal strip) on the induction loop module
   ⇒ Plug-in terminals: 59 – 63 on the control unit

**CAUTION!**
**No electrical isolation between loop and operating voltage!**

**NOTE:**
**Do not install these cables in the same duct as high-voltage cables!**

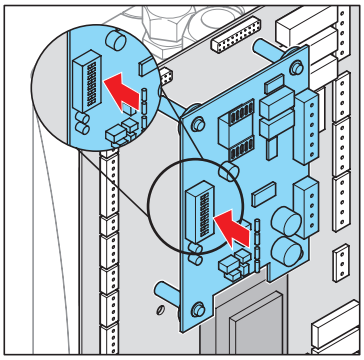
## Connecting induction loops:




7. Connect induction loops
   ⇒ Terminals 1 + 2 = induction loop 2
   ⇒ Terminals 3 + 4 = induction loop 1

*Twist wires (20 x / metre line length)

## DIP switches 1 + 2 (frequency adjustment for loop 1)



| Switch 1 | Switch 2 | Frequency |
|---|---|---|
| OFF | OFF | Standard frequency f |
| ON | OFF | f - 10% |
| OFF | ON | f - 15% |
| ON | ON | f - 20% |

Switches 1+2 can be used to change the loop frequency for loop 1 in 4 steps. This prevents the loops from interfering with each other.

When the frequency switch is actuated, loop 1 must be recalibrated with the OFF / OFF position.

## DIP switches 3, 4, 5, 6 (sensitivity)

### Loop 1

| Switch 3 | Switch 4 | Sensitivity |
|---|---|---|
| OFF | ON | low (1) |
| ON | OFF | medium (2) |
| ON | ON | high (3) |
| OFF | OFF | Loop disabled |

### Loop 2

| Switch 5 | Switch 6 | Sensitivity |
|---|---|---|
| OFF | ON | low (1) |
| ON | OFF | medium (2) |
| ON | ON | high (3) |
| OFF | OFF | Loop disabled |

**NOTE:**
**Recommended setting: medium**

## DIP switch 7 (direction detection)

| Switch | Effect |
|---|---|
| OFF | Goto operation – the assignment states of the loops are output independently over the channels |
| ON | Direction detection enabled – The signal is sent depending on the assignment sequence |

Special features:

If loop 1 is actuated before loop 2, the signal output for loop 2 is blocked until both loops are free again.

If loop 2 is actuated before loop 1, the signal output for loop 1 is blocked until both loops are free again.

## DIP switch 8 (sensitivity increase)

| Switch | Effect |
|---|---|
| OFF | Normal sensitivity |
| ON | Loop sensitivity is increased. This mode of operation allows high vehicles (lorries) to be correctly recognised over their entire length |

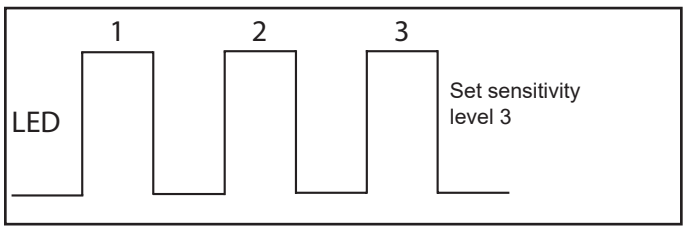
## Testing sensitivity

The recommended sensitivity can be displayed using the LED display

**NOTE:**
**After the second step, one of the LEDs starts flashing.**
**The frequency of the flashing must be counted.**
**The sensitivity is set manually based on the calculated value.**

1. Drive a high vehicle, e.g. a lorry, over the induction loop
   ⇒ The induction loop module evaluates the values generated by the vehicle
2. Set DIP switches 3 + 4 and 5 + 6 to the "OFF" position
   ⇒ The recommended sensitivity setting is displayed by the flash frequency of the LED

e.g.:



# Measuring the loop frequency

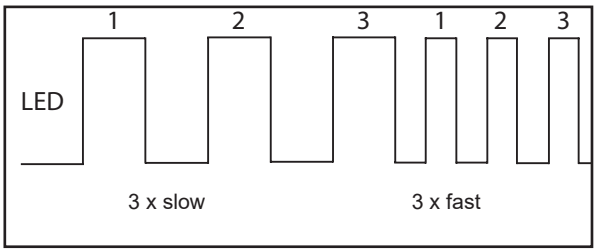
The recommended sensitivity can be displayed using the LED display

**NOTE:**
**When the DIP switches (sensitivity switches) have been switched from OFF position to ON position, the LED belonging to the loop flashes.**

**The following items are important for measuring the loop frequency:**

**1. How often the LED flashes.**
**2. The frequency of flashing.**

**The loop frequency can be calculated based on the measured values.**




Loop frequency = 33 KHz