

# SE 320 LSNi SmartKey Arming Device



Security Systems

EN | Installation Manual  
SE 320 LSNi



**BOSCH**

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## System Overview with Functional Variants

The SE 320 LSNi SmartKey Arming Device is a system solution for arming and disarming intrusion alarm systems. The individual components of the system can be put together as required for the intended usage. Operation types with or without the SPE blocking element are possible. Control authorizations for arming/disarming are defined during control panel programming. The system is programmed using an appropriate programming program. All the information and explanations you need to program the system can be found in the online help, i.e. directly on the screen.

### SPE blocking element

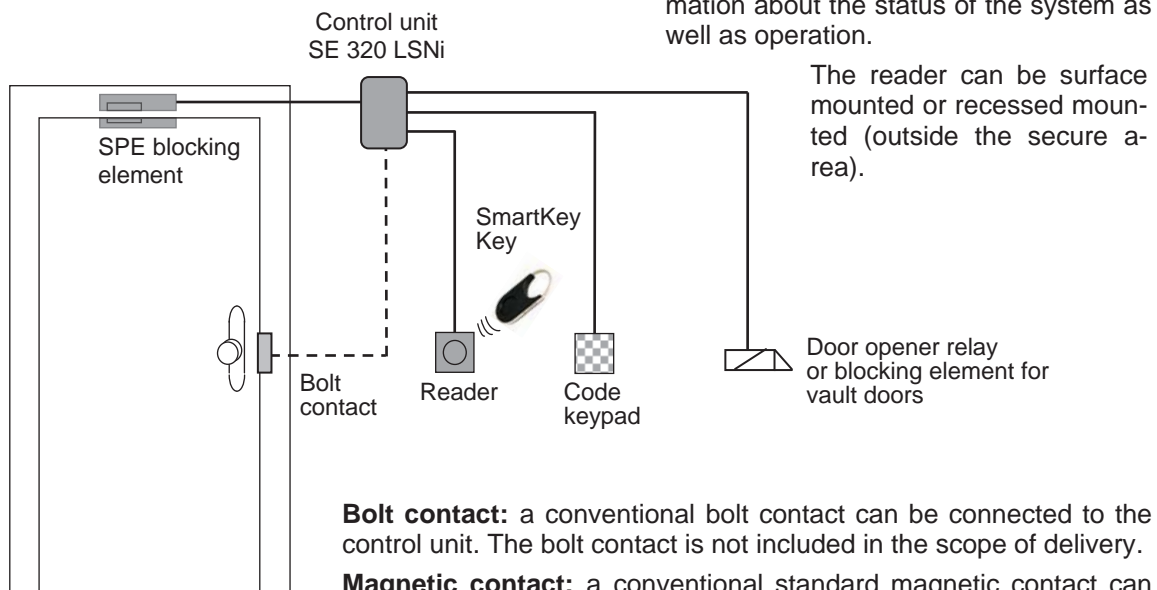
The SPE blocking element is an additional lock for the door and is meant to prevent unauthorized entry to the armed area. The SPE blocking element is always installed in conjunction with a kit in the secure area to enable it to accommodate different doors. The figure shows a door-mounted installation; see installing the SPE blocking element for other variants. A conventional magnetic contact can be used with the door-mounted installation kit. Operation types with and without blocking elements are possible.

### SE 320 LSNi control unit

The control unit processes the status reports of all components in the system, communicates these reports to the intrusion alarm system and controls the blocking element. The control unit is installed in the secure area.

### Reader

The system is armed and disarmed by holding an electronic key up to the reader. The LED and buzzer provide information about the status of the system as well as operation.



**Bolt contact:** a conventional bolt contact can be connected to the control unit. The bolt contact is not included in the scope of delivery.

**Magnetic contact:** a conventional standard magnetic contact can be connected to the control unit. The magnetic contact is not included in the scope of delivery.

**Note:** Conventional contacts are the recommended contact type as they can be processed directly by the control unit.

### Notes on bolt contacts and door openers

- A bolt contact is mandatory for VdS systems.
- A bolt contact is optional for systems that are not compliant with VdS.
- Door openers on doors fitted with bolt contacts will not be activated when the door is locked.

# System Description

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## System Overview with Functional Variants

### Code keypads

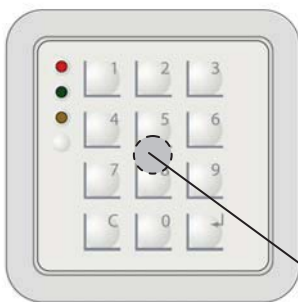
There are two types of code keypads: SmartKey code keypads and lockable code keypads.

The code keypad, used in conjunction with the reader, allows arming and disarming of the intrusion alarm system only after the correct combination of numbers has been entered on the keypad.

Holdup alarm: if someone is forced to disarm the intrusion alarm system under duress, a silent alarm (hold-up alarm) can be set off remotely via the code keypad.

The code keypad can be surface mounted or recessed mounted (outside the secure area).

### SmartKey code keypad with integrated reader




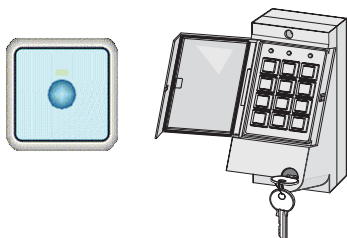


The SmartKey code keypad **with** integrated reader combines the function of the reader + the SmartKey code keypad in one unit.

Initial set-up and operation is the same as with one reader + one code keypad. Instructions for start-up and operation are enclosed with the corresponding device, reader or SmartKey code keypad.

The reader for the SmartKey key is located in the middle of the device (not visible from the outside). To operate, hold the SmartKey up to the center of the code keypad at a maximum distance of 2 cm and press the button on the key.

### Function variants

- 1**  **Reader**  
Non-contact reader for surface-mounting or recessed-mounting (IP55 junction box).
- 2**  **SmartKey code keypad with integrated reader**  
Code keypad with integrated non-contact reader for surface or recessed mounting (IP55 junction box).
- 3**  **SmartKey code keypad**  
Code keypad for surface mounting or recessed mounting (IP55 junction box).
- 4**  **Reader + lockable code keypad**  
Non-contact reader for surface mounting or recessed mounting (IP55 junction box). Lockable code keypad for surface mounting or recessed mounting (recessed mounting with mounting kit).

## System Overview with Functional Variants

### SmartKey keys



There are two types of SmartKey keys

- Keys with a security card
- Standard key (without security card)

**Key with security card:** the system operates like a locking device. The key kit consists of a set number of valid keys and a security card. The control unit is initialized using the security card, and accepts only the keys of the key kit. To order additional keys, the security card must be sent to the manufacturer together with the order. The keys are labeled with a consecutive key number, a security card number and an 8-digit identification number.

**Standard key (without security card):** the keys are not numbered and can be programmed in any way. The keys are labeled with an 8-digit identification number.

**Note:** All the SmartKeys can share the same code (programmable). Every code change made on the code keypad will immediately apply to every SmartKey.

### Further connection options

**Blocking elements for vault doors:** The blocking elements E4.4 and E4.3 (E4.3 available as E4.4 + conversion kit for installation on left or right) are electromagnetic blocking systems designed for installation in vault or safe doors and cash dispensers. The blocking elements are not used as arming devices; arming is performed via SmartKeys. The blocking element for vault doors is included in the arming's forced actuation system.



Important note: Do not connect an SPE blocking element or a door relay if you are connecting an E4.4/E4.3 blocking element.

**Door opener relay:** There is a relay for activating a door opener relay on the control unit (2 A, 30 V DC). A door opener connection will require programming. Activation is only possible when the control panel is disarmed and the bolt contact open. Setting of a time-delay and an activation time is programmable. The door opener relay can also be activated using a push-button on PL2.



Important note: Do not connect an E4.4/E4.3 blocking element for safe doors if a door opener relay is connected.

**Switch-point control (C-Point):** a freely programmable C-point switching output (open-collector output) 12 V, max. 80 ma, is located on the control unit. Connect only one cable with a maximum length of 3 m.

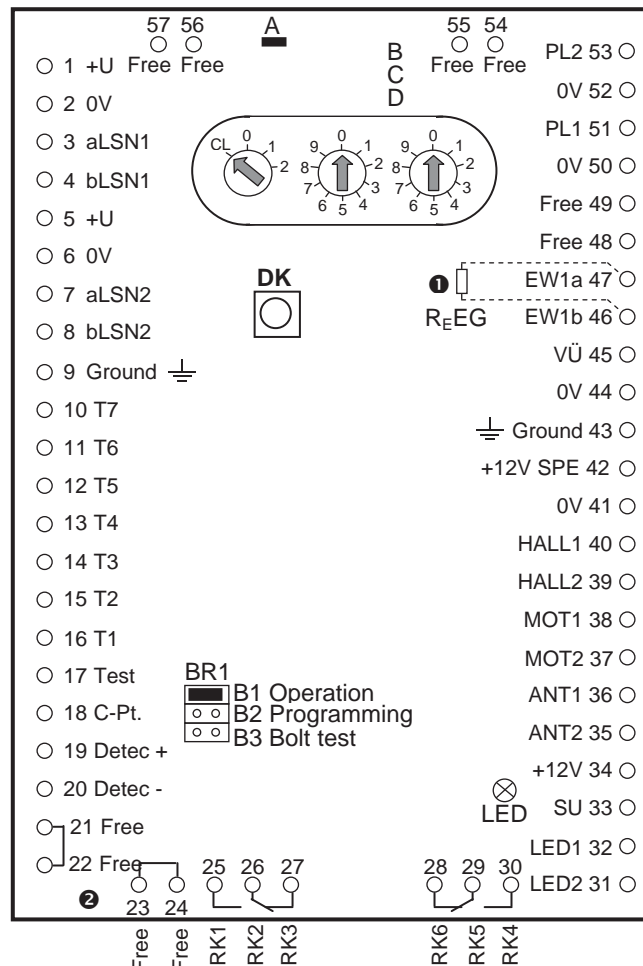
The yellow LED on the SmartKey code keypad is connected to the C-point by default. An appropriate series resistor is fitted to enable the C-point to be connected to the yellow LED on the SmartKey code keypad. Solder a bridge across the solder points on BR2 (circuit board reverse) to bridge the series resistor if the C-point is used for a different purpose and not connected to the yellow LED on the SmartKey code keypad.

# System Description

## Description of the Connections on the Control Unit

The control unit connections have different functions. There are inputs, outputs and plug-in terminals. Inputs and outputs have to be assigned according to a specific schema with regard to the scope of basic functions.

A, B, C or D is equipped with an SMD resistor, depending on the control unit.



① R<sub>E</sub>EG 12K1 already installed

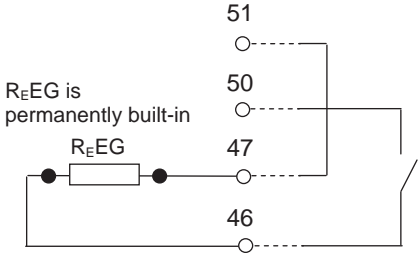
② Points 21/22 and 23/24 are connected internally.

## Description of the Connections on the Control Unit

Connection	Name	Function	Description
1	+ U	Input	Power supply 9.6 - 30V
2	0V	Input	Power supply 0V
3	aLSN1	Input	LSN incoming
4	bLSN1	Input	LSN incoming
5	+ U	Output	Power supply 9.6 - 30V
6	0V	Output	Power supply 0V
7	aLSN2	Output	LSN outgoing
8	bLSN2	Output	LSN outgoing
9	Ground	Distributor	Operating ground
10 - 16	T7 - T1	Code key-pad	Code keypad connection

# System Description

## Description of the Connections on the Control Unit

Connection	Name	Function	Description
17	Test	Input	This input is for test purposes only, i.e. a line should only be connected temporarily to perform a test. The SPE blocking element's bolt will engage when 0V is connected.
18	C-Point	Output	Freely programmable switching output (open-collector output) 12V, max. 80 mA. Connect only one cable with a maximum length of 3 m. The yellow LED on the SmartKey code keypad is connected to the C-point by default. An appropriate series resistor is fitted to enable the C-point to be connected to the yellow LED on the SmartKey code keypad. Solder a bridge across the solder points on BR2 (circuit board reverse) to bridge the series resistor if the C-point is used for a different purpose and not connected to the yellow LED on the SmartKey code keypad.
19/20	Detec + Detec -	Input	Blocking element (lock) detection output for safe doors (E4.3/E4.4), optocoupler input
21/22 23/24	Free Free	Distributor Distributor	Free plug-in terminals, 21 and 22 connected Free plug-in terminals, 23 and 24 connected
25/26/27 28/29/30	RK1 - RK3 RK6 - RK4	Relay contact Relay contact	Changeover contact, programmable for door openers (2 A, 30 V DC) Changeover contact switches at the same time as RK1 – RK3
31 32 33 34 35/36	LED 2 LED 1 SU +12V ANT2/ANT1	Output Output Output Output Input	Green LED reader Red LED reader Buzzer reader Power supply 12V reader Antenna reader
37/38 39 40 41 42	MOT2/MOT1 HALL2 HALL1 0V +12V SPE	Output Input Input Output Output	SPE blocking element motor control Detection of initial bolt position Detection of final bolt position Power supply 0V for SPE blocking element Power supply 12V for SPE blocking element
43	Ground	Distributor	Operating ground
44/45	0V/VÜ	Input	Connection option for conventional bolt contact
46/47 50/51	EW1b/EW1a 0V/PL 1	Input Input	Connection option for magnetic contact Connection option for magnetic contact   <p style="text-align: center;">Conventional magnetic contact</p>
48/49	Free	Distributor	Free plug-in terminals
52/53	0V/PL 2	Input	Primary line usable depending on connection
54 - 57	Free	Distributor	Free plug-in terminals

Note: The primary lines PL 1, PL 2 and VÜ are evaluated by the control unit.

# Installation Instructions

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## Installing System Components



### Note the following during installation:

- Used shielded cables only.
- The usual precautionary measures for C-MOS technology apply to handling the circuit boards and to soldering work. Wear a grounded wrist strap when working on the control panel.

### Mounting the control unit

- Mount the control unit to the wall. When choosing a position to mount the unit,



please note that the reader and SPE blocking element are equipped with a 6 m molded cable that must not be lengthened.

### Mounting the reader

- Mount the reader according to the enclosed instruction leaflet.



If you have to install the reader close to other systems with proximity readers, please make sure that you leave a distance of at least 0.5 m.

The reader should be installed at a height of at least 1.2 m and preferably recessed mounted. The reader is molded and completely resistant to environmental influences. Do not fit the reader cover until you have performed all the function tests. Removing the cover after it has been fitted will cause damage to the cover. The reader is equipped with a 6 m molded cable that must not be lengthened.

### Installing the code keypad

- The code keypad must be installed outside of the security area close to the assigned door (next to the reader because of the LED and buzzer) and protected from atmospheric conditions. Make sure that the code keypad is not visible to other persons during use.



Install the code keypad in accordance with the installation instructions enclosed with the device. Make sure the membrane supply line does not get broken when fitting the membrane keypad. The SmartKey keypad unit is equipped with a 6 m molded cable that must not be lengthened.

**Important information for lockable code keypad:** Connect points LF1 and LF2 with a solder bridge as described in the code keypad installation instructions if you want to enable user codes to be changed using the keypad.



# Installation Instructions

## Installing System Components

### Installing the SPE blocking element

- Install the SPE blocking element using the appropriate kit and in accordance with the enclosed installation note.



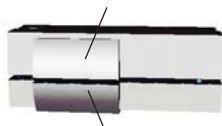
Make sure the door cannot slam shut. The bolt of the SPE blocking element could otherwise be damaged during start-up by a slamming door.

### SPE blocking element variants and kits

#### Installation on the door or on the frame

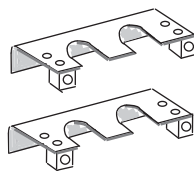
Kit for on-the-door installation. In the kit, a conventional magnet contact can be used.

Bolt piece (installed on the frame)



Sleeve piece (installed on the door)

Kit for glass doors

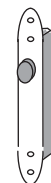


#### Installation on the door or on the frame

Bushing



Normal collar



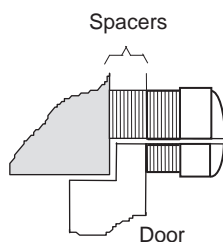
Angled collar



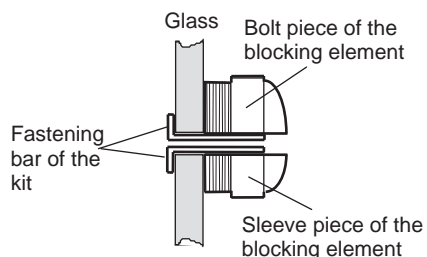
Counterpiece



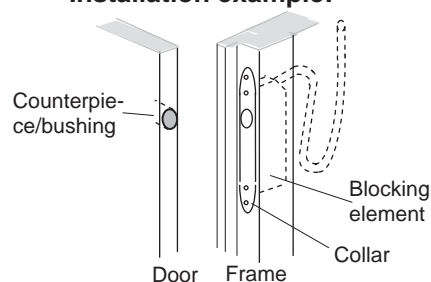
#### Installation example:



#### Installation example:



#### Installation example:



## Installing the Magnetic Contact and Bolt Contact

Install the magnetic contact or bolt contact in accordance with the manufacturer's instructions. The control unit will serve as a distributor for the contacts.

# Installation Instructions

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## Connection, Switch-Point control, Address Switches

### Connection



Make sure the control panel is disconnected from the power supply.

Connect the control unit and the optional components as shown in the connection diagram on the following page.

### Switch-point control

(18 C point): a freely programmable C-point switch output (open-collector output) 12 V, max. 80 mA, is located on the control unit. Connect only one cable with a maximum length of 3 m.

The yellow LED on the SmartKey code keypad is connected to the C-point by default. An appropriate series resistor is fitted to enable the C-point to be connected to the yellow LED on the SmartKey code keypad. Solder a bridge across the solder points on BR2 (circuit board reverse) to bridge the series resistor if the C-point is used for a different purpose and not connected to the yellow LED on the SmartKey code keypad.

### Address switch

The address switch is used for LSN panels in the planning stage.

The address switch does not need to be adjusted on any of the currently available LSN panels.

The address switch should remain in the positions CL 0 0. Default setting.

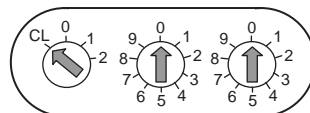
Preliminary information on the address switch:

CL 0 0 = "Classic" LSN mode (standard setting)

001 – 254 = LSNi mode with manual addressing of the control unit

0 0 0 = LSNi mode with automatic addressing of the control unit

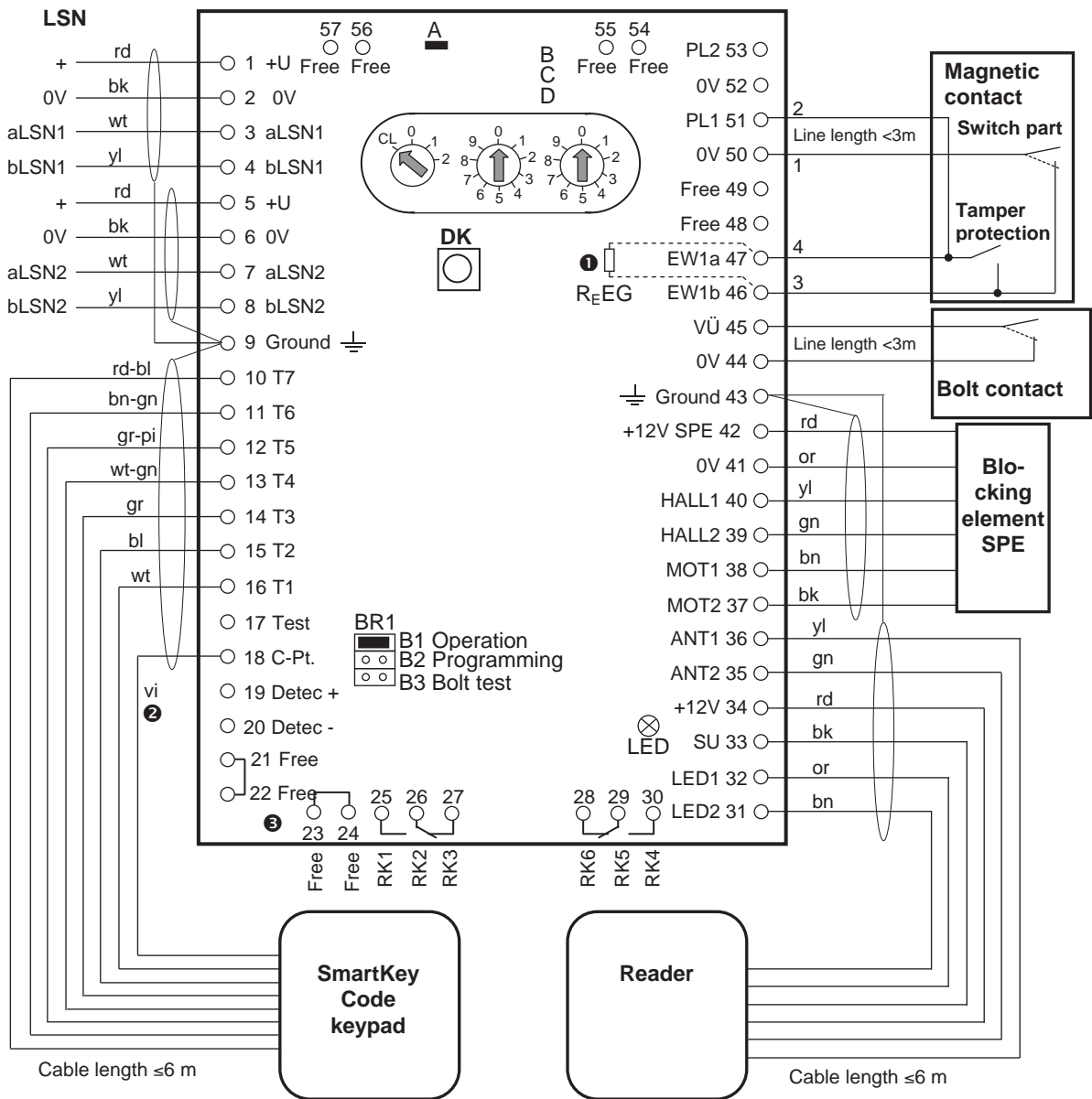
The control unit address is set by positioning the three rotatable switches. Use a flat-head screwdriver to adjust each switch. The switches will click when turned. The valid range is from 1 to 254. Any settings between 255 and 299 will cause an error message to be displayed on the control panel.



Setting in    Hundreds    Tens    Units

# Installation Instructions

## Connecting the Control Panel and Optional Components

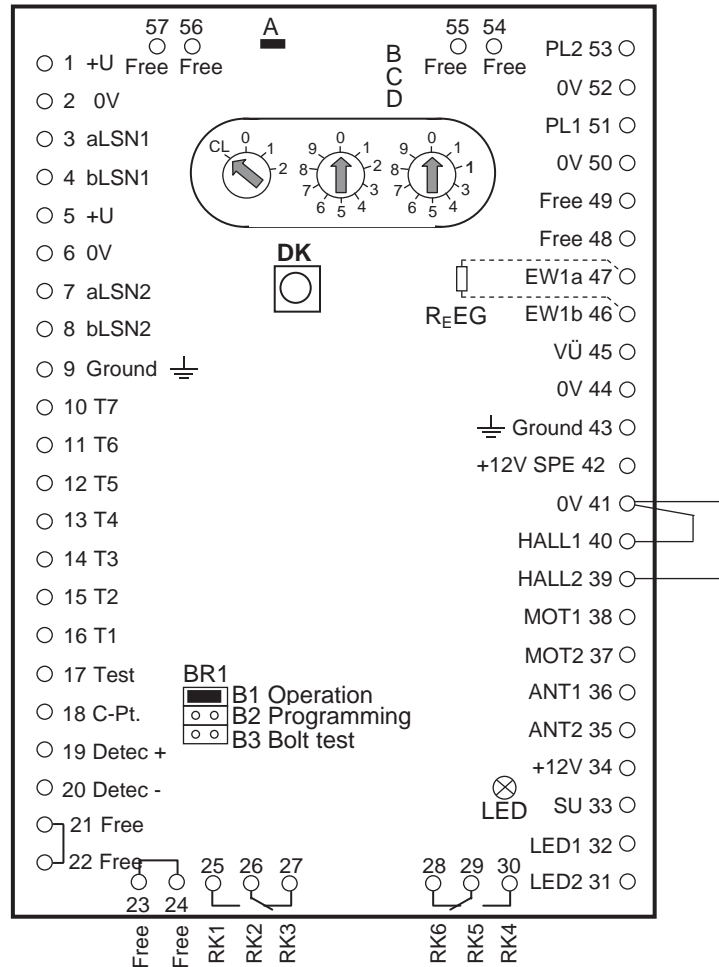


- ❶ R<sub>E</sub>EG 12K1 already installed
- ❷ Yellow LED on code keypad
- ❸ Points 21/22 and 23/24 are connected internally.

# Installation Instructions

## Connecting for Operation Without an SPE Blocking Element (37 to 42)

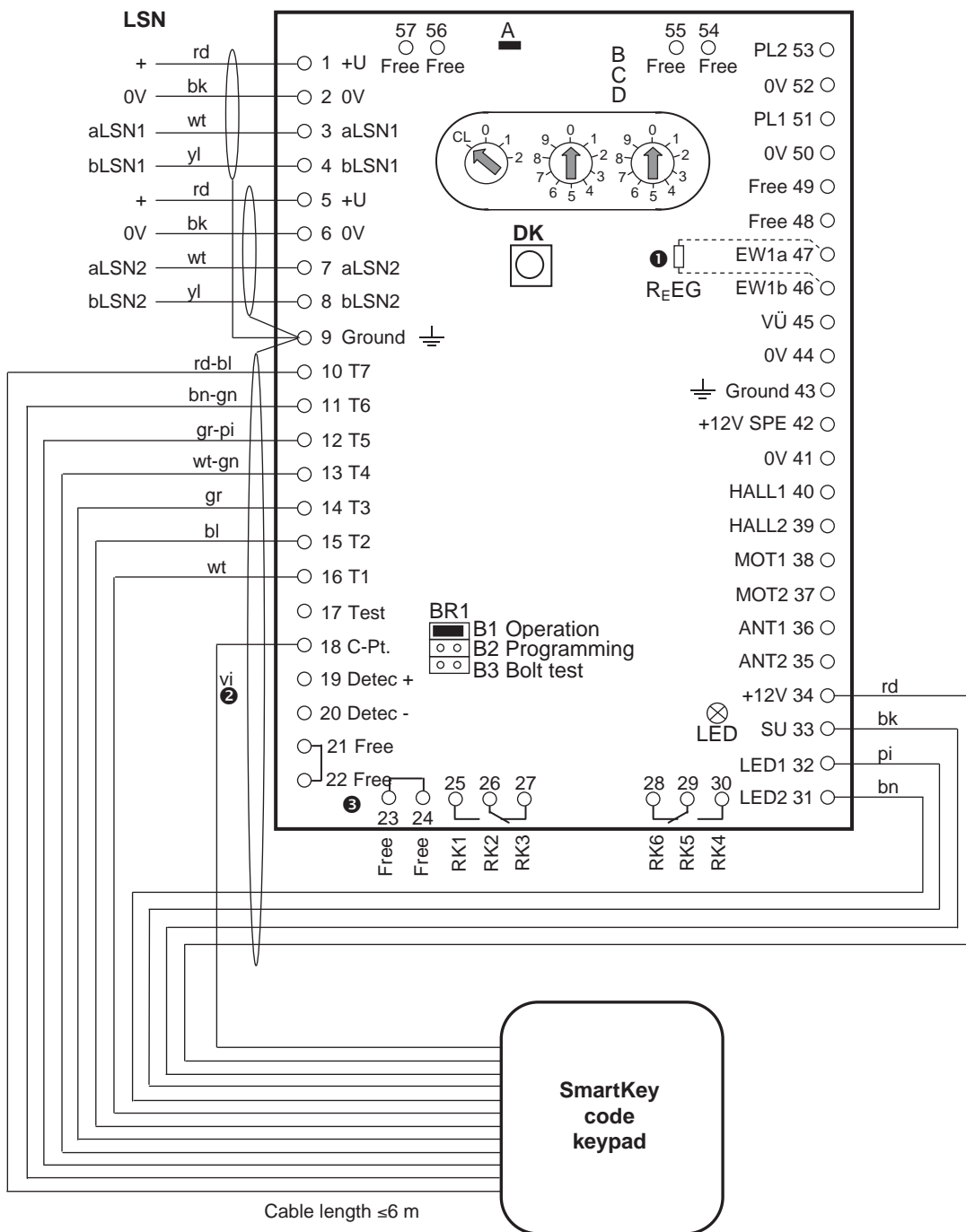
Use the following switching arrangement on the control unit to set the operating mode "Without SPE blocking element". Connect the inputs HALL1 and HALL2 to 0V.



# Installation Instructions

## Connecting for Operation with SmartKey Code Keypad Only

For information about connecting all other components, see "Connecting the Control Panel and Optional Components".

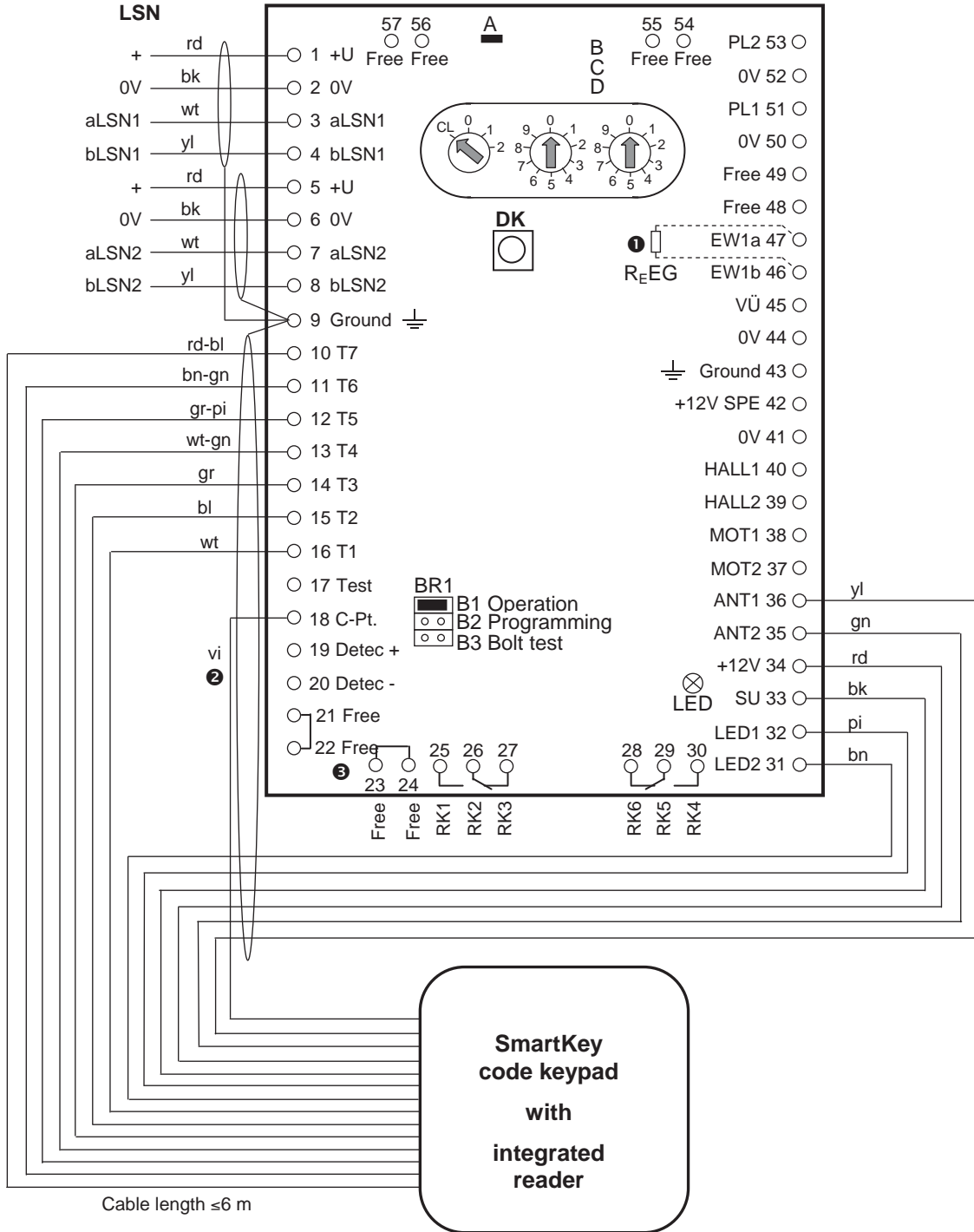


- ❶ R<sub>E</sub>EG 12K1 already installed
- ❷ Yellow LED on code keypad
- ❸ Points 21/22 and 23/24 are connected internally.

# Installation Instructions

## Connecting the SmartKey Code Keypad with Integrated Reader

For information about connecting all other components, see "Connecting the Control Panel and Optional Components".

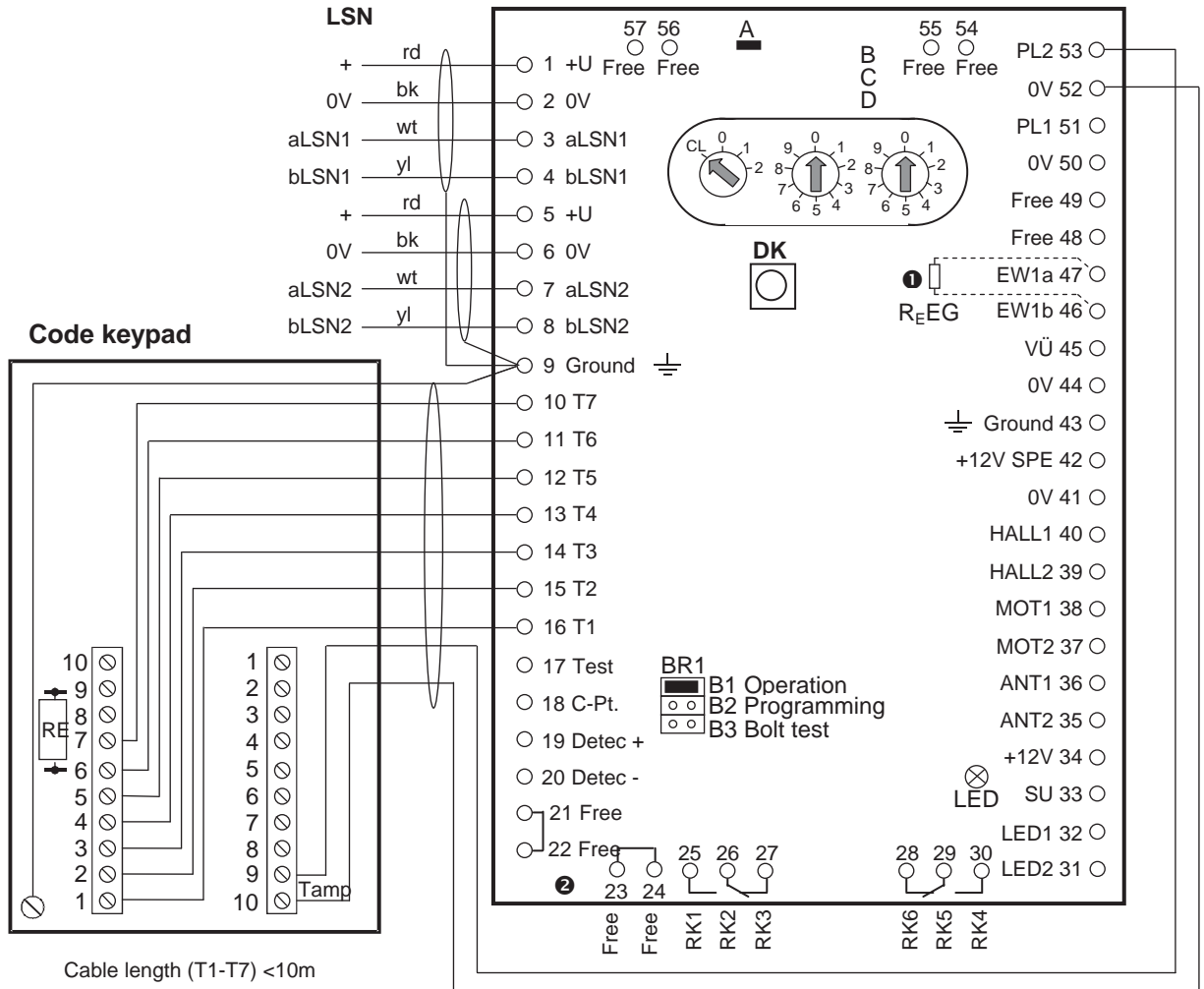


- ❶ R<sub>E</sub>EG 12K1 already installed
- ❷ Yellow LED on code keypad
- ❸ Points 21/22 and 23/24 are connected internally.

# Installation Instructions

## Connecting a Lockable Code Keypad

For information about connecting all other components, see "Connecting the Control Panel and Optional Components".



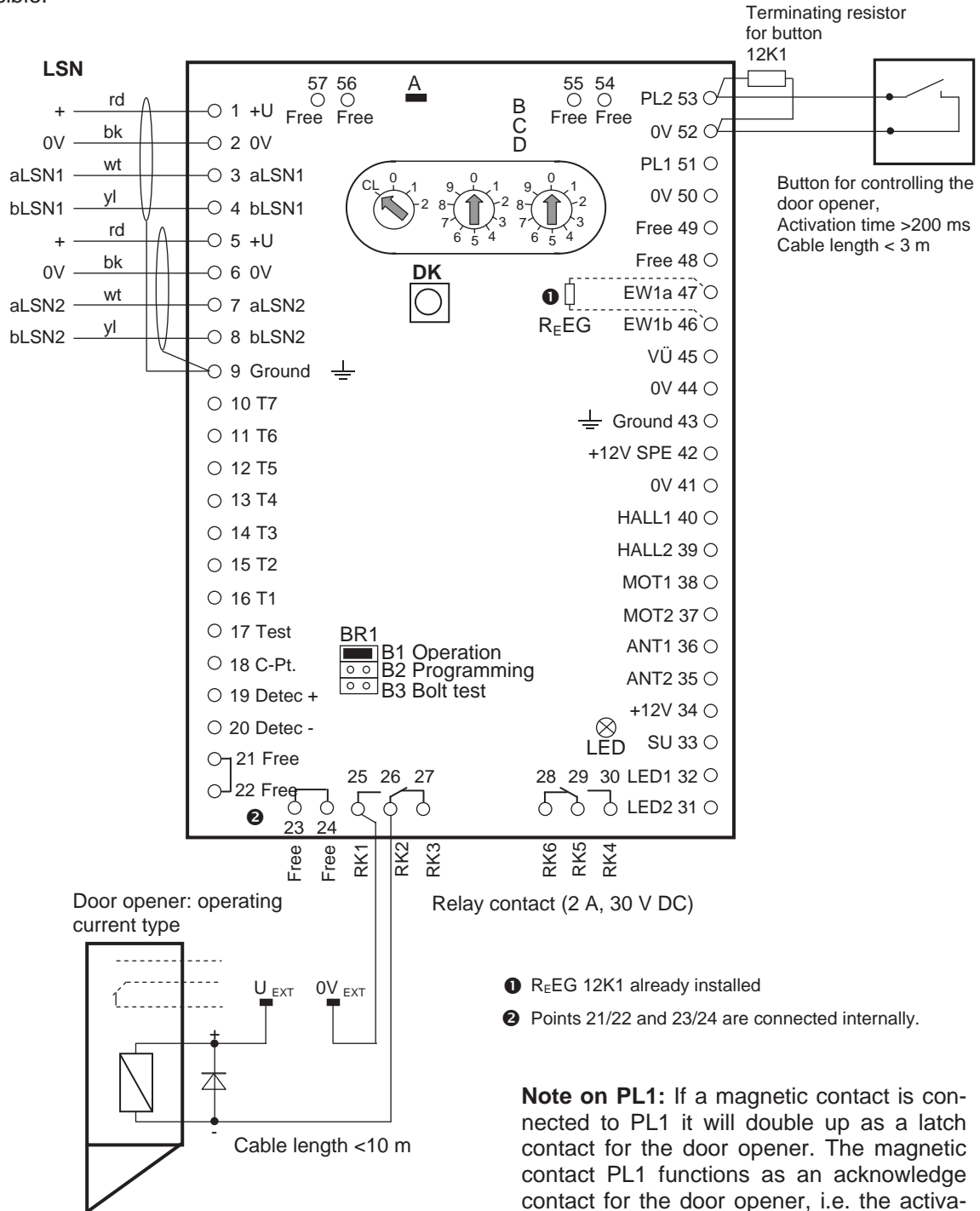
Terminating resistor RESG tamper in code keypad 12K1

**Important notice:** Connect points LF1 and LF2 with a solder bridge as described in the installation instructions for the code keypad.

# Installation Instructions

## Connecting a Door Opener Relay

For information about connecting all other components, see "Connecting the Control Panel and Optional Components". Simultaneous connection to a blocking element for vault doors is not possible.





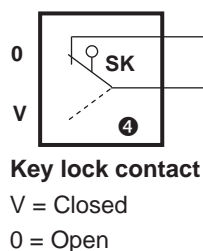
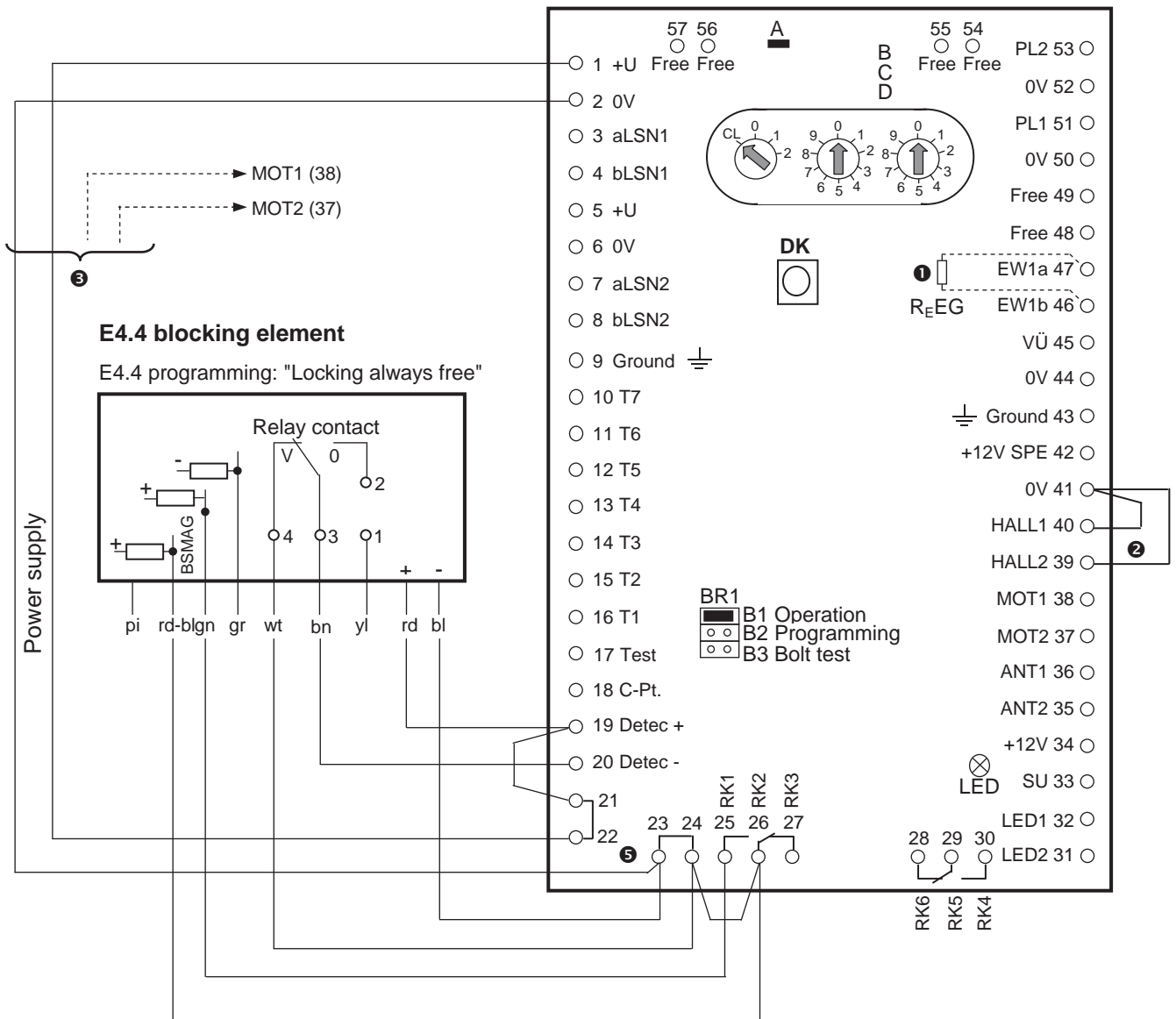
# Installation Instructions

## Connecting an E4.4 Blocking Element for Vault Doors

For information about connecting all other components, see "Connecting the Control Panel and Optional Components".

It is not possible to connect both an E4.4 blocking element and an SPE blocking element and/or a door opener relay at the same time.

Connect inputs HaLL1 and HaLL2 to 0V, i.e. no SPE blocking element installed.



- ❶ R<sub>E</sub>EG 12K1 already installed
- ❷ No SPE blocking element installed
- ❸ Voltage supply for E4.4 blocking element 10.5 V to 15 V. If +U > 15 V then connect to MOT1 and MOT2.
- ❹ Connect wires rd-bl and gn if the connection does not have a key lock contact.
- ❺ Points 21/22 and 23/24 are connected internally.

# Installation Instructions

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## Connecting an E4.3 Blocking Element for Vault Doors

① E4.3 available as E4.4 + conversion kit for left or right-hand installation.

See next page for connections. For information about connecting all other components, see "Connecting the Control Panel and Optional Components".

It is not possible to connect both an E4.31 blocking element and an SPE blocking element and/or a door opener relay at the same time.

Connect inputs HaLL1 and HaLL2 to 0V, i.e. no SPE blocking element installed.

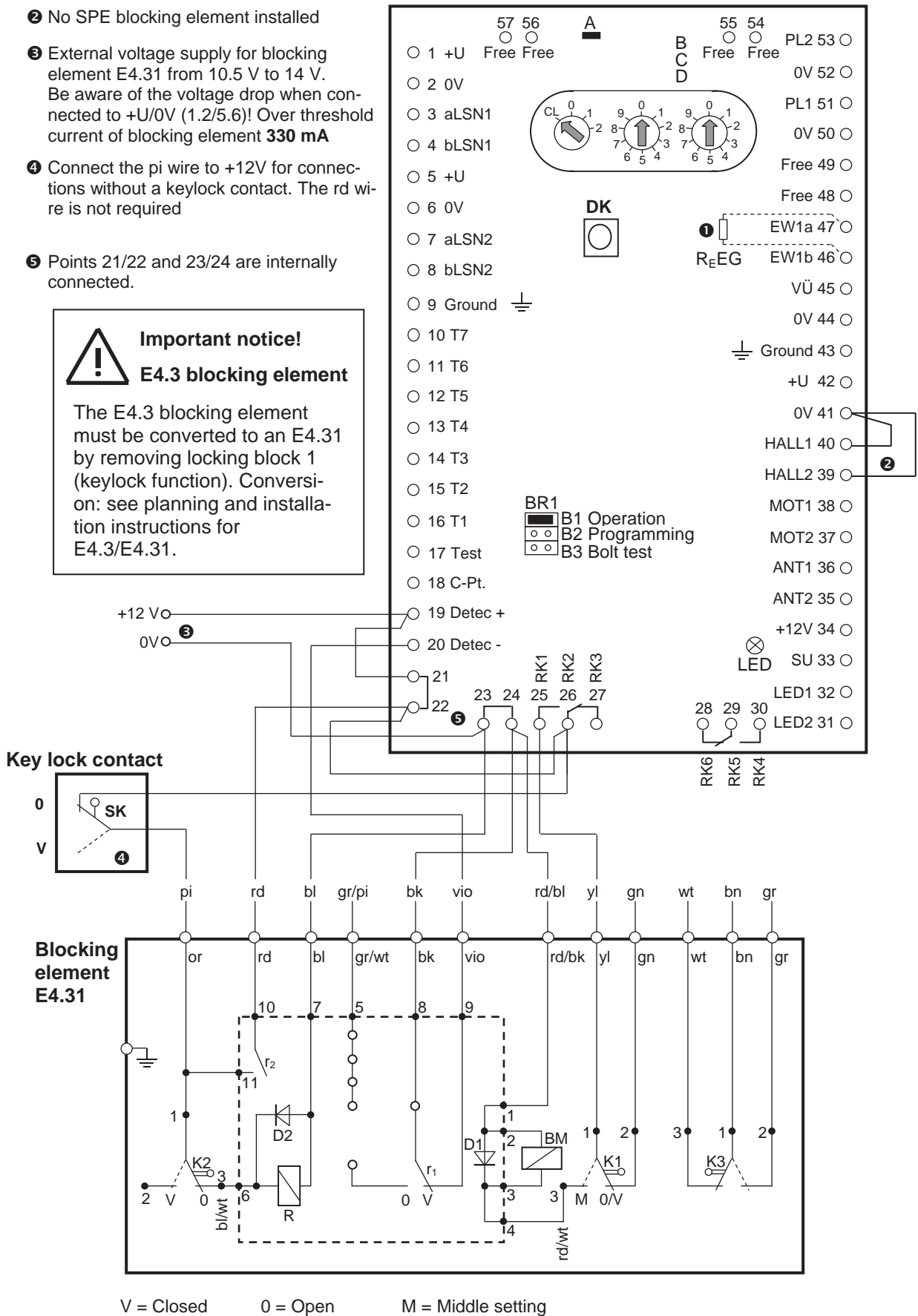
**Important notice:** The E4.3 blocking element must be converted to an E4.31 by removing locking block 1 (keylock function). Conversion: see planning and installation instructions for E4.3/E4.31.

## Connecting an E4.3 Blocking Element

- ❶ R<sub>E</sub>EG 12K1 already installed
- ❷ No SPE blocking element installed
- ❸ External voltage supply for blocking element E4.31 from 10.5 V to 14 V. Be aware of the voltage drop when connected to +U/0V (1.2/5.6)! Over threshold current of blocking element **330 mA**
- ❹ Connect the pi wire to +12V for connections without a keylock contact. The rd wire is not required
- ❺ Points 21/22 and 23/24 are internally connected.

**Important notice!**  
**E4.3 blocking element**

The E4.3 blocking element must be converted to an E4.31 by removing locking block 1 (keylock function). Conversion: see planning and installation instructions for E4.3/E4.31.



# Installation Instructions

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## Function Test for the SPE Blocking Element and Reader

### Switching on the power supply

- Make sure that bridge B1 on the control unit is connected before switching on the power supply.
- Switch on the power supply.

The yellow LED on the control unit's circuit board displays the system's status as follows:

Yellow LED	Status	Required action
Off	System is OK	None
On	Electronic defect.	Switch the power supply off and then back on. Replace the control unit if the LED is still activated.

### Function test

1. Remove the jumper from B1 and plug it into B3 on the control unit.
  - ➔ The SPE blocking element bolt engages. Yellow LED on the control unit is turned on. The red and green LEDs on the reader light up. The reader buzzer sounds for 5 seconds.
2. Remove the jumper from B3 on the control unit.
  - ➔ The SPE blocking element bolt disengages. The LEDs on the control unit and the reader go out.
3. Repeat steps 1 - 2 with the door closed to check the precise insertion of the SPE blocking element's bolt into the bolt-hole.
4. Plug the jumper back into B1 on the control unit once you have completed the function test.

The yellow LED on the control unit's circuit board indicates the system's status as follows:

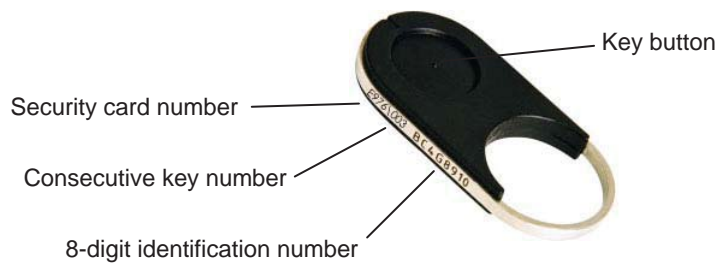
LED	Status	Required action
Off	System is OK	None
1 flash	Bolt will not engage or disengage.	<ul style="list-style-type: none"><li>▪ Check the SPE blocking element and the bolt-hole for correct installation and electrical connection.</li><li>▪ Repeat the test.</li></ul>

## Reading In keys and Programming the System

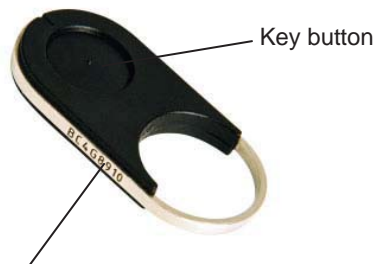
Depending on the "key type" and "reading-in method of the key", perform **one** of the following 4 steps. Keys should only be read in keys as described under points 2. or 4. in exceptional circumstances. You will find the description on the following pages.

1. Key **with** security card: Reading in key during **programming** (see point 1).
2. Key **with** security card: Reading in key via the **reader** (see point 2).
3. Standard key (**without** security card): Reading in key during **programming** (see point 3).
4. Standard key (**without** security card): Reading in key via the **reader** (see point 4).

### Keys (with a security card)



### Standard key (without security card)



The standard key is labeled with the 8-digit identification number only.

# Installation Instructions


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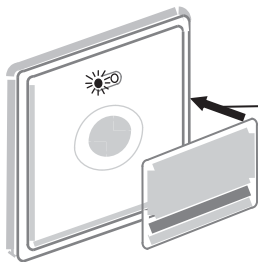
## 1. Key with security card: Reading in the key during programming

The SE 320 LSNi system is programmed and the key identification number read in using the appropriate programming program (e.g. WinPara or NzPara). This is when the key's 8-digit identification number is entered into the system. In the programming program, select for the key to be read in during programming (select the parameter "**integrated**" for SE 320 when using NzPara). The maximum number of keys depends on the control panel in use.

Reading in occurs in two stages. First, the security card is read in. Reading in the security card at the reader replaces the manufacturer's general works code with the individual customer code. This is followed by programming and the 8-digit identification numbers of the keys are entered.

### Operation sequence:

1.  The plugs with the LSN cables (3.4 and 7.8) must be removed from the control unit. The control panel will display an LSN line malfunction message.
2. Connect the jumper on the control unit's circuit board to B2.



3. Hold the front **or** the reverse side of the security card parallel to the reader at a maximum distance of 2 cm until the red LED lights up.

➔ This completes reading in the security card.

4. Connect the jumper back into B1.  
➔ The yellow LED on the control unit and the red LED on the reader go out.
5. Reconnect the plugs with the LSN lines to the control unit and reset the LSN line malfunction message on the control panel.
6. In the programming program, define that the key should be read in during programming (select the parameter "**integrated**" for SE 320 when using NzPara). Enter the keys' 8-digit identification number into the programming program and program the control panel.  
➔ This completes programming the keys.


# Installation Instructions

## 2. Key with security card: Reading in the key via the reader

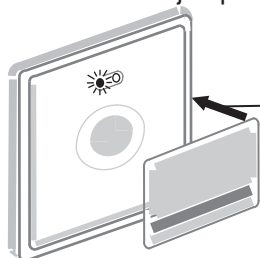
Keys (maximum 16) can be read in directly via the reader if the 8-digit identification number is not entered during programming. In the programming program (e.g. WinPara or NzPara) define that the keys should be read in via the reader (select the parameter "**standalone**" for SE 320 when using NzPara). The control panel must be programmed before the keys are read in.

Reading in occurs in two stages. First, the security card is read in, then the keys. Reading in the security card at the reader replaces the manufacturer's general works code with the individual customer code.

### Operation sequence:

1. Programming has been concluded with the appropriate settings (see also above).
2.  The plugs with the LSN lines (3.4 and 7.8) must be removed from the control unit. The control panel will display an LSN line malfunction message.

3. Connect the jumper on the control unit's circuit board to B2.

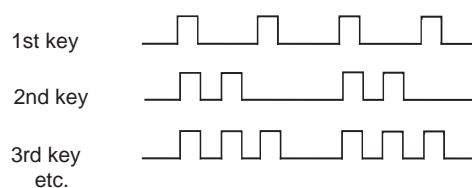


4. Hold the front **or** the reverse side of the security card parallel to the reader at a maximum distance of 2 cm until the red LED lights up.

➔ This completes reading in the security card.

5. Press and hold the key button of the first key whilst holding the key up to the circle in the center of the reader at a maximum distance of 2 cm until you hear a short confirmation signal.

6. Repeat step 5 for all the other keys. The flashing signals of the control unit's yellow LED and the red LED on the reader correspond with the number of keys.



7. Connect the jumper back into B1.  
➔ The yellow LED on the control unit and the red LED on the reader go out. This completes programming the keys.
8. Reconnect the plugs with the LSN lines to the control unit and reset the LSN line malfunction message on the control panel.

# Installation Instructions


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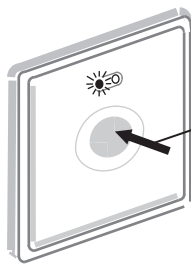
## 3. Standard key (without security card): Reading in the key during programming

The SE 320 LSNi system is programmed and the key identification number read in using the appropriate programming program (e.g. WinPara or NzPara). This is when the key's 8-digit identification number is entered into the system. In the programming program, select for the key to be read in during programming (select the parameter "**integrated**" for SE 320 when using NzPara). The maximum number of keys depends on the control panel in use.

Reading in occurs in two stages. First, read in any standard key on the reader. This replaces the manufacturer's general works code with the code of the standard key. This is followed by programming and the 8-digit identification numbers of the keys are entered.

### Operation sequence:

1.  The plugs with the LSN lines (3.4 and 7.8) must be disconnected from the control unit. The control panel will display an LSN line malfunction message.
2. Connect the jumper on the control unit's circuit board to B2.



3. Hold any standard key at a maximum distance of 2cm from the reader and press and hold the key button until the red LED lights up.  
➔ This concludes reading in the standard key's code.
4. Connect the jumper back into B1.  
➔ The yellow LED on the control unit and the red LED on the reader go out.
5. Reconnect the plugs with the LSN lines to the control unit and reset the LSN line malfunction message on the control panel.
6. In the programming program, define that the key should be read in during programming (select the parameter "**integrated**" for SE 320 when using NzPara). Enter the keys' 8-digit identification number into the programming program and program the control panel.  
➔ This completes programming the keys.




# Installation Instructions

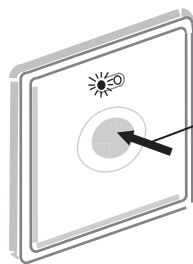
## 4. Standard key (without security card): Reading in the key via the reader

Keys (maximum 16) can be read in directly via the reader if the 8-digit identification number is not entered during programming. In the programming program (e.g. WinPara or NzPara) define that the keys should be read in via the reader (select the parameter "**standalone**" for SE 320 when using NzPara). The control panel must be programmed before the keys are read in.

Reading the standard key into the reader replaces the manufacturer's standard works code with the standard key's code.

### Operation sequence:

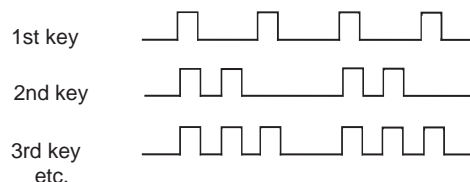
1.  The plugs with the LSN lines (3.4 and 7.8) must be disconnected from the control unit. The control panel will display an LSN line malfunction message.
2. Connect the jumper on the control unit's circuit board to B2.



3. Hold any standard key up to the circle in the center of the reader at a maximum distance of 2 cm and press and hold the key button until the red LED flashes and you hear two short confirmation signals.

4. Hold each of the remaining standard keys up to the circle in the center of the reader at a maximum distance of 2 cm, holding down the key buttons until you hear a short confirmation signal.

The flashing signals of the control unit's yellow LED and the reader's red LED correspond with the number the number of keys.



5. Connect the jumper back into B1.
  - ➡ The yellow LED on the control unit and the red LED on the reader go out. This completes programming the keys.
6. Reconnect the plugs with the LSN lines to the control unit and reset the LSN line malfunction message on the control panel.

# Installation Instructions

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## Starting Up the SmartKey Code Keypad with Reader (or changing user codes)



**General information:** The code keypad, used in conjunction with the reader, allows the intrusion alarm system to be armed and disarm only after the correct combination of numbers has been entered on the keypad. When arming and disarming, the SmartKey is used first followed by the user code.

**Hold-up code:** If someone is forced to disarm the intrusion alarm system under duress, a silent alarm (hold-up alarm) can be triggered via the code keypad by increasing the value of the last digit of the user code; this is programmable between the values 1 and 9.

### Notes on operation

- The user code for the NZ 300 LSN and "integrated" SmartKey is described in detail in the NzPara online help under "User Codes" (different default setting).
- Define your user code during the first start-up. User codes can always be changed at a later date. Both operational procedures are identical.
- User codes always have 6 digits, the default code is **000000**.
- The user code can only be changed when the system is disarmed. The system cannot be armed while a user code is being changed.
- Code entry can be aborted by pressing the "C" key. The buzzer sounds intermittent tones for 6 seconds. The LEDs on the reader are deactivated.
- If the user code is entered incorrectly three times, a wait period of 5 minutes begins. The buzzer sounds intermittent tones for 6 seconds. The LEDs are deactivated. If another incorrect entry is made, another waiting period of 5 minutes follows.

Provided the yellow LED on the code keypad has been correctly programmed and connected to the C-point of the control unit, a blocked code keypad or reader can be indicated during a system status query (using code keypad or key) by the yellow LED, which lights up for approximately 5 seconds.

- A maximum interval of 1 minute is permitted between each operational step when operating the code keypad. The initiated operation will be aborted if no input is made during the 60-second period.
- The LEDs and the buzzer on the reader are used as signals when codes are changed.

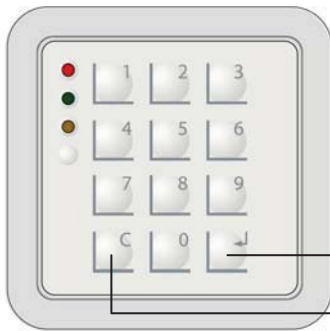
### Notes on the user code



The code keypad and reader can also be operated without a SmartKey. In this case, enter the user number (ID) and user code to allow operation.

**Continued overleaf.**

## Starting Up the SmartKey Code Keypad with Reader (or changing user codes)



Define your user code during the first start-up. You can change your user code at a later date. Both operational procedures are identical.

Use this key to verify entries.

Use this key to abort an operation.



The user code for the NZ 300 LSN and "integrated" SmartKey is described in detail in the NzPara online help under "User Codes" (different default setting).

### Define user code or change user code

(when the system is disarmed) as follows:

1. Simultaneously press the "C" and "↵" keys for 3 seconds.
  - ➔ The reader's buzzer will sound for 1 second and both LEDs will flash.
2. Press the SmartKey button and hold the SmartKey up to the reader for > 1 second. This will assign the SmartKey to the corresponding **user number (ID)**. Users without a key must enter their **user number (ID)**.
  - ➔ The buzzer will sound for 1 second and the LEDs will be deactivated.
3. When starting up for the first time, enter "**000000**" and confirm your input with the "↵" key  
- or,  
If you want to change the user code, enter the "old user code" and confirm your input with the "↵" key.
  - ➔ The reader's buzzer will sound for 1 second and the green LED will light up.
4. Enter the new user code and confirm your entry with the "↵" key.
  - ➔ The reader's buzzer will sound for 1 second, the green LED will light up and the red LED will flash.
5. Enter the new user code once again and confirm your entry with the "↵" key.
  - ➔ The reader's buzzer will sound for 3 seconds, and the green and red LEDs will light up for 3 seconds and then go out.
  - ➔ The new user code is now valid.

# Installation Instructions

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## Starting up the SmartKey Code Keypad Without Reader (or changing user codes)



**General information:** The code keypad allows arming and disarming of the intrusion alarm system only after the correct combination of numbers has been entered on the code keypad.

**Hold-up code:** If someone is forced to disarm the intrusion alarm system under duress, a silent alarm (hold-up alarm) can be triggered via the code keypad by increasing the value of the last digit of the user code; this is programmable between the values 1 and 9.

### Notes on operation

- The user code for the NZ 300 LSN and "integrated" SmartKey is described in detail in the NzPara online help under "User Codes" (different default setting).
- Define your user code during the first start-up. User codes can always be changed at a later date. Both operational procedures are identical.
- User codes always have 6 digits; the default code is **000000**.
- The user code can only be changed when the system is disarmed. The system cannot be armed while a user code is being changed.
- Code entry can be aborted by pressing the "C" key. The buzzer sounds intermittent tones for 6 seconds. The LEDs are deactivated.
- If the user code is entered incorrectly three times, a wait period of 5 minutes begins. The buzzer sounds intermittent tones for 6 seconds. The LEDs are deactivated. If another incorrect entry is made, another waiting period of 5 minutes follows.

Provided the yellow LED on the code keypad has been correctly programmed and connected to the C-point of the control unit, a blocked code keypad can be indicated during a system status query by the yellow LED, which lights up for approximately 5 seconds.

- A maximum interval of 1 minute is permitted between each operational step when operating the code keypad. The initiated operation will be aborted if no input is made during the 60-second period.

### Notes on the user code

- User number (ID) = 1 to max. 3 digits depending on the control panel
- User code = always 6 digits
- User code = user number (ID) + 6 digit user code

**Continued overleaf.**

# Installation Instructions

## Starting up the SmartKey Code Keypad Without Reader (or changing user codes)



Define your user code during the first start-up. You can change your user code at a later date. Both operational procedures are identical.

Use this key to verify entries.

Use this key to abort an operation.



The user code for the NZ 300 LSN and "integrated" SmartKey is described in detail in the NzPara online help under "User Codes" (different default setting).

### Define user code or change user code

(when the system is disarmed) as follows:

1. Simultaneously press the "C" and "↵" keys for 3 seconds.
  - ➔ The keypad's buzzer will sound for 1 second and the red and green LEDs will flash.
2. Enter your **user number (ID)**.
  - ➔ The buzzer will sound for 1 second and the LEDs will be deactivated.
3. When starting up for the first time, enter "**000000**" and confirm your input with the "↵" key  
- or,  
If you want to change the 6-digit user code, enter the "old user code" and confirm your input with the "↵" key.
  - ➔ The code keypad's buzzer will sound for 1 second and the green LED will light up.
4. Enter the new user code and confirm your entry with the "↵" key.
  - ➔ The code keypad's buzzer will sound for 1 second, the green LED will light up and the red LED will flash.
5. Enter the new user code once again and confirm your entry with the "↵" key.
  - ➔ The code keypad's buzzer will sound for 3 seconds, and the green and red LEDs will light up for 3 seconds and then go out.
  - ➔ The new user code is now valid.

# Installation Instructions

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## Starting up a Lockable Code Keypad (or changing user codes)



**General information:** The code keypad, used in conjunction with the reader, allows the intrusion alarm system to be armed and disarm only after the correct combination of numbers has been entered on the keypad. When arming and disarming, the SmartKey is used first followed by the user code. If someone is forced to disarm the intrusion alarm system under duress, a silent alarm (hold-up alarm) can be triggered via the code keypad by increasing the value of the last digit of the user code; this is programmable between the values 1 and 9.

**Opening the code keypad:** Turn the key slightly to the right and open the cover to the left.

### Notes on operation

- The user code for the NZ 300 LSN and "integrated" SmartKey is described in detail in the NzPara online help under "User Codes" (different default setting).
- Define your user code during the first start-up. User codes can always be changed at a later date. Both operational procedures are identical.
- User codes always have 6 digits; the default code is **000000**.
- The user code can only be changed when the system is disarmed. The system cannot be armed while a user code is being changed.
- Code entry can be aborted by pressing the "+" key. The buzzer sounds intermittent tones for 6 seconds. The LEDs on the reader are deactivated.
- If the user code is entered incorrectly three times, a wait period of 5 minutes begins. The buzzer sounds intermittent tones for 6 seconds. The LEDs are deactivated. If another incorrect entry is made, another waiting period of 5 minutes follows.
- A maximum interval of 1 minute is permitted between each operational step when operating the code keypad. The initiated operation will be aborted if no input is made during the 60-second period.
- The LEDs and the buzzer on the reader are used as signals when user codes are changed.

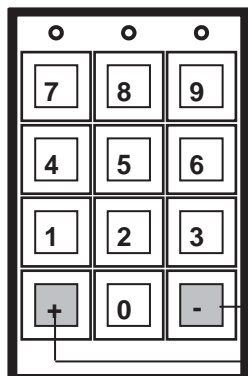
### Notes on the user code



The code keypad and reader can also be operated without a SmartKey. In this case, enter the user number (ID) and user code to allow operation.

Continued overleaf.

## Starting up a Lockable Code Keypad (or changing user codes)



Define your user code during the first start-up. You can change your user code at a later date. Both operation processes are identical.



User codes can only be changed if the soldering bridge LF1/LF2 on the keypad circuit board is closed (see code keypad installation instructions).

Use this key to verify entries.

Use this key to abort an operation.



The user code for the NZ 300 LSN and "integrated" SmartKey is described in detail in the NzPara online help under "User Codes" (different default setting).

### Define user code or change user code (when the system is disarmed) as follows:

1. Press the "+" and "-" keys simultaneously for 3 seconds.
  - ➔ The reader's buzzer will sound for 1 second and the red and green LEDs will flash.
2. Press the SmartKey button and hold the SmartKey up to the reader for > 1 second. This will assign the SmartKey to the corresponding **user number (ID)**. Users without a key must enter their **user number (ID)**.
  - ➔ The buzzer will sound for 1 second and the LEDs will be deactivated.
3. When starting up for the first time, enter "000000" and confirm your input with the "-" key.  
- or,  
If you want to change the user code, enter the "old user code" and confirm your input with the "-" key.
  - ➔ The reader's buzzer will sound for 1 second and the green LED will light up.
4. Enter the new user code and confirm your input with the "-" key.
  - ➔ The reader's buzzer will sound for 1 second, the green LED will light up and the red LED will flash.
5. Enter the new user code once again and confirm your input with the "-" key.
  - ➔ The reader's buzzer will sound for 3 seconds, and the green and red LEDs will light up for 3 seconds and then go out.
  - ➔ The new user code is now valid.

# Installation Instructions

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## Concluding system installation

1. Make sure that bridge B1 on the control unit is closed for normal operation. Replace the control unit cover.
2. Make sure the red and green LEDs on the reader are off (= normal operating condition).
3. Arm and then disarm each key (see following chapter) to verify make sure that the programming is correct. Inform the operator of this step in advance to avoid any unnecessary interruption of operations.

**Note:** The bolt will engage when the bolt contact is closed as long as the magnetic contact (PL1) is closed.



## Viewing the System Status from the Reader

Press and hold the key button and hold the key up to the reader for 1 second. The system status is indicated as shown in the following table.

Display element	Behavior	Meaning
Green LED	Lit	System disarmed
	Flashing	System is attempting to disarm
Red LED	Lit	System is armed
	Flashing	System is attempting to arm
Buzzer	Short signal for 0.5 sec.	Process initiated.
	Short signal for 2.5 sec.	Process completed successfully.
	Interval signal for 5 sec.	Process not completed successfully.

# Operating the System

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## Arming the System from the Reader or Code Keypad

### Arming the system with a key

1. Press and hold the key button and hold the key up to the reader for 3 seconds until you hear a short signal from the buzzer.

- ➔ The green LED starts to light up, signaling that the system is currently disarmed.
- ➔ The red LED starts to flash, signaling that the arming process has commenced.

Further reader signals (LED) follow as described in the left-hand box (arming successful) or in the right-hand box (arming unsuccessful).

- ➔ The green LED is deactivated.
- ➔ The red LED and the buzzer are activated for 2.5 seconds (continuous signal).

**System arming successful.**

- ➔ The red LED is deactivated.
- ➔ The green LED lights up for 5 seconds.
- ➔ The buzzer simultaneously emits an interval signal for 5 seconds.

**System arming unsuccessful.** See the table "Operating Problems During Normal Operation" for assistance.

### Arming the system with a code

1. Enter your user number + user code.

- ➔ The green LED starts to light up, signaling that the system is currently disarmed.
- ➔ The red LED starts to flash, signaling that the arming process has commenced.

Further keypad signals (LED) follow as described in the left-hand box (arming successful) or in the right-hand box (arming unsuccessful).

- ➔ The green LED is deactivated.
- ➔ The red LED and the buzzer are activated for 2.5 seconds (continuous signal).

**System arming successful.**

- ➔ The red LED is deactivated.
- ➔ The green LED lights up for 5 seconds.
- ➔ The buzzer simultaneously emits an interval signal for 5 seconds.

**System arming unsuccessful.** See the table "Operating Problems During Normal Operation" for assistance.

## Disarming the System from the Reader or Code Keypad

### Disarming the system with key and user code

1. Press and hold the key button and hold the key up to the reader for 3 seconds until you hear a short signal from the buzzer.
  - ➔ The red LED is activated, signaling that the system is currently armed.
  - ➔ The green LED starts to flash, signaling that the disarming process has commenced.
2. If programmed: enter your user code and confirm your input with the key " = " or " ↵ ".

Further reader signals (LED) follow as described in the left-hand box (disarming successful) **or** in the right-hand box on the right (disarming unsuccessful).

➔ The red LED is deactivated.  
➔ The green LED and the buzzer are activated for 2.5 seconds (continuous signal).  
**Disarming was successful.**

➔ The green LED is deactivated.  
➔ The red LED is activated for 5 seconds.  
➔ The buzzer emits intermittent tones for 5 seconds.  
**Disarming was unsuccessful.** See the table "Operating Problems During Normal Operation" for assistance.

### Disarming the system with a code

1. Enter your user number + user code.
    - ➔ The **red** LED is **activated**, signaling that the system is currently **armed**.
    - ➔ The green LED starts to **flash**, signaling that the disarming process has commenced.
- Further keypad signals (LED) follow as described in the left-hand box (disarming successful) **or** in the right-hand box on the right (disarming unsuccessful).

➔ The red LED is deactivated.  
➔ The green LED and the buzzer are activated for 2.5 seconds (continuous signal).  
**Disarming was successful.**

➔ The green LED is deactivated.  
➔ The red LED is activated for 5 seconds.  
➔ The buzzer emits intermittent tones for 5 seconds.  
**Disarming was unsuccessful.** See the table "Operating Problems During Normal Operation" for assistance.

# Operating the System

---

## Operation with SmartKey Code Keypad Only

### Viewing the system status

- Enter your user number + user code.

The system status is displayed according to the following table. To abort the system status display press "C". The arming/disarming sequence will otherwise commence after 2 seconds.

Display element	Behavior	Meaning
Green LED	Lit	System disarmed
Red LED	Lit	System is armed

## Operation with SmartKey Code Keypad Only

### Notes on arming

- If user number (ID) is 1-digit or 2-digit: arming will occur immediately after entering the user code and pressing the "↵" key or automatically 2 seconds after entering the last digit.
- If user number (ID) is 3-digit: arming will occur immediately after entering the last digit of the user code.

### Arming the system with a code

1. Enter your user number + user code.

- ➡ The green LED starts to light up, signaling that the system is currently disarmed.
- ➡ The red LED starts to flash, signaling that the arming process has commenced.

Further keypad signals (LED) follow as described in the left-hand box (arming successful) or in the right-hand box (arming unsuccessful).

- ➡ The green LED is deactivated.
- ➡ The red LED and the buzzer are activated for 2.5 seconds (continuous signal).

- ➡ The red LED is deactivated.
- ➡ The green LED lights up for 5 seconds.
- ➡ The buzzer simultaneously emits an interval signal for 5 seconds.

**System arming unsuccessful.** See the table "Operating Problems During Normal Operation" for assistance.

## Operation with SmartKey Code Keypad Only

### Notes on disarming

- If user number (ID) is 1-digit or 2-digit: Disarming will occur immediately after entering the user code and pressing the "↵" key or automatically 2 seconds after entering the last digit.
- If user number (ID) is 3-digit: Disarming will occur immediately after entering the last digit of the user code.

### Disarming the system with a code

1. Enter your user number + user code.

- ➔ The red LED is activated, signaling that the system is currently armed.
- ➔ The green LED starts to flash, signaling that the disarming process has commenced.

Further keypad signals (LED) follow as described in the left-hand box (disarming successful) or in the right-hand box on the right (disarming unsuccessful).

- ➔ The red LED is deactivated.
- ➔ The green LED and the buzzer are activated for 2.5 seconds (continuous signal).

**Disarming was successful.**

- ➔ The green LED is deactivated.
- ➔ The red LED is activated for 5 seconds.
- ➔ The buzzer simultaneously emits an interval signal for 5 seconds.

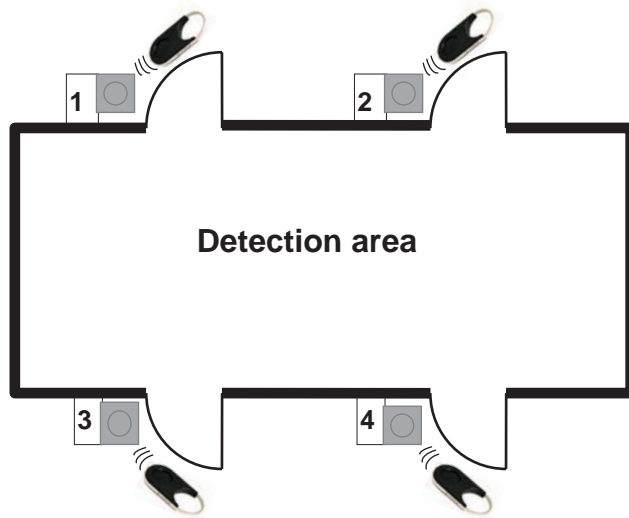
**Disarming was unsuccessful.** See the table "Operating Problems During Normal Operation" for assistance.

# Operating the System

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## Example of Operation with 4 SmartKeys/Code Keypads

All SmartKeys/code keypads have equal arming and disarming rights.



### Arming:

Arming can occur with any SmartKey once all the bolt contacts are closed and the detection area is ready to activate. Arming will engage all SPE blocking element bolts.

### Disarming:

Any SmartKey can be used for disarming. Disarming will disengage all SPE blocking element bolts.

## Disarming for "Forced Unlocking and Alarm Display"



The operator's attention must be drawn to the following points if this function has been programmed in the EMA.

If the red LED on the reader flashes continuously after disarming, it means that the SmartKey is signaling an intrusion alarm. It is recommendable to have a procedure in place for this event to protect the operator, e.g.: do not enter the area, call the alarm company or the police, etc. The red LED will be deactivated when the intrusion detection system is reset.

If programmed, this function will immediately retract the SPE blocking element bolt when an external alarm is triggered; an optical signal (flashing red LED) will indicate this status when the external alarm is disarmed.

## Problems with Installation and Reading In Keys

Always check the following first of all:

- Are the component cables correctly connected?
- Are there any short-circuits/broken wires?
- Is the component connected to a power supply?
- Is jumper BR1 correctly connected to the control unit?

Problem	Possible cause(s)	Elimination
LEDs on the reader/control unit are not activated during function test.	Component damaged (through transport, incorrect handling, etc).	Component needs replacing.
Bolt does not engage/disengage during function test.	<ul style="list-style-type: none"> <li>▪ Installation error</li> <li>▪ SPE blocking element damaged</li> </ul>	Check the installation and fitting of the SPE blocking element and repeat the test. Replace the SPE blocking element if this proves unsuccessful.
Five second interval tones are emitted when keys are read in (only if the keys are read in directly via the reader).	Max. permissible number of keys (16) exceeded. (for "standalone" operating mode).	Check the correct number of keys.
No reaction when the key is held up to the keypad.	Keypad has not yet been fitted to the mounting part. The scanner unit is not in the keypad but in the mounting part.	Hold key up to the mounting part.

## Diagnostics options on the open control unit

Yellow LED	Status	Required action
Off	System is OK	None
On	Electronic defect.	Switch the power supply off and then back on. Replace the control unit if the LED is still activated.
1 flash	<ul style="list-style-type: none"> <li>▪ Bolt will not engage</li> <li>▪ Bolt engages but does not recognize the end position.</li> </ul>	Check that the blocking element and bolt-hole are correctly installed.
2 flashes	Antenna malfunction	<ul style="list-style-type: none"> <li>▪ Check the reader is connected correctly.</li> <li>▪ Switch the power supply off and then back on. Replace the reader if the LED continues to flash.</li> </ul>

# Fault Elimination

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## Operating Problems During Normal Operation

Problem	Possible cause(s)	Elimination
Reader does not respond when the key is held up to the reader.	<ul style="list-style-type: none"> <li>▪ Key outside of reader range.</li> <li>▪ Key not held up to the reader for long enough.</li> <li>▪ Key button not pressed when key was held up to the reader.</li> <li>▪ Metal objects located between key and reader.</li> </ul>	Repeat the arming process after removing any of the possible causes of errors.
No display on the reader, only an intermittent tone when the key is held up to the reader.	<ul style="list-style-type: none"> <li>▪ Key not/incorrectly programmed or read in.</li> <li>▪ Key bypassed by security manager.</li> <li>▪ Reader blocked. Incorrect code entered repeatedly.</li> </ul>	<p>Check possible causes of error or inform your security manager.</p> <p>Block will be deactivated automatically after 5 minutes.</p>
Area cannot be armed. Intermittent signal is sounded immediately after the system status is displayed on the reader.	<ul style="list-style-type: none"> <li>▪ Open bolt or magnetic contact on the SmartKey door.</li> <li>▪ User not authorized to arm the area.</li> </ul>	Repeat the arming process after removing any of the possible causes of errors.
Area cannot be armed. Intermittent signal sounds for approx. 15 seconds after arming was requested (= red LED flashes).	<ul style="list-style-type: none"> <li>▪ Locking bolt does not engage properly.</li> <li>▪ Open doors or windows in the detection area.</li> <li>▪ In the case of multiple detection areas: arming sequence not adhered to.</li> <li>▪ If detection area has a block type lock: block type lock not locked.</li> </ul>	Repeat the arming process after removing any of the possible causes of errors.
Area cannot be armed. Intermittent signal sounds for approx. 60 seconds after arming was requested (= red LED flashes).	<ul style="list-style-type: none"> <li>▪ No code entered.</li> <li>▪ The " ← " key was not pressed after the code was entered.</li> </ul>	Repeat the arming process after removing any of the possible causes of errors.



## Operating Problems During Normal Operation

Problem	Possible cause(s)	Elimination
Area cannot be disarmed. Intermittent signal is sounded immediately after the system status is displayed on the reader.	<ul style="list-style-type: none"> <li>▪ User not authorized to arm the area.</li> <li>▪ User temporarily unauthorized to arm the area because he belongs to a specific time group.</li> </ul>	Repeat the arming process after removing any of the possible causes of errors.
Area cannot be disarmed. Intermittent signal sounds for approx 15 seconds after disarming was requested (= green LED flashes).	<ul style="list-style-type: none"> <li>▪ In the case of multiple detection areas: arming sequence not adhered to.</li> <li>▪ Additional coded arming device (e.g. timer locks) preventing system from disarming.</li> </ul>	Repeat the arming process after removing any of the possible causes of errors.
Area cannot be disarmed. Intermittent signal sounds for approx 15 seconds after disarming was requested (= green LED flashes).	<ul style="list-style-type: none"> <li>▪ No code entered.</li> <li>▪ The " ← " key was not pressed after the code was entered.</li> </ul>	Repeat the arming process after removing any of the possible causes of errors.
Door will not open despite correct disarming procedure.	<ul style="list-style-type: none"> <li>▪ Bolt is stuck (door could be slightly warped).</li> </ul>	Gently jolt the door, then arm and disarm the system. If this is unsuccessful the door will have to be pushed/pulled open with force (pre-determined breaking point in the SPE blocking element will break, the door remains undamaged).
Intermittent signal sounds during code entry.	<ul style="list-style-type: none"> <li>▪ You are not intended to enter codes in this state.</li> </ul>	Consult your security manager.
Intermittent signal sounds after a code is entered.	<ul style="list-style-type: none"> <li>▪ Incorrect code entered.</li> <li>▪ Fewer than 6 digits entered.</li> <li>▪ For NZ 300 LSN: 4-digit default code not yet extended to 6 digits.</li> </ul>	Check possible causes of error or inform your security manager.
The "Change code" function cannot be initiated from the code keypad.	<ul style="list-style-type: none"> <li>▪ The "Same code for all users" setting has been programmed.</li> <li>▪ Lockable code keypad: The "+" key on the keypad has not been activated.</li> </ul>	Deactivate the setting in programming.  Insert bridge LF1/LF2 on the keypad circuit board.
Door opener not activated.	<ul style="list-style-type: none"> <li>▪ Detection area is armed.</li> <li>▪ Door is locked.</li> <li>▪ Magnetic contact on the SmartKey door is open.</li> <li>▪ User temporarily unauthorized to arm the area because he belongs to a specific time group.</li> </ul>	Repeat door opener activation, taking the possible causes of error into consideration.

# Fault Elimination

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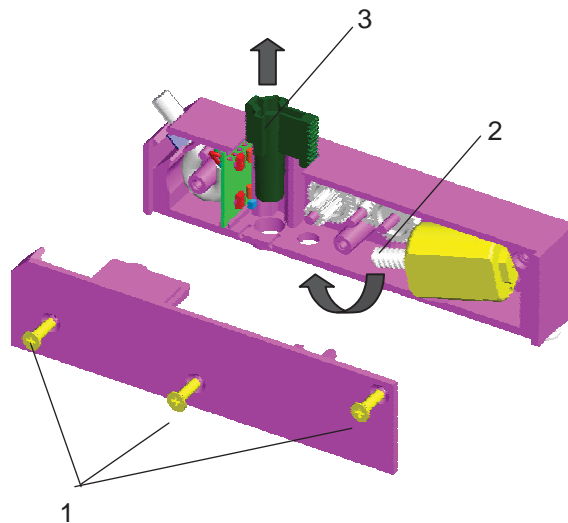
## Replacing the Bolt in the SPE Blocking Element

(for instance, if the bolt is broken or cannot be moved)

The bolt can be replaced while the system is running (disarmed status).

**Consult the appropriate installation notes and proceed as follows:**

1. Uncover the SPE blocking element by removing the plastic cover from the bolt part (for door-mounted installation) or the collar (built-in version). For door-mounted elements, the magnetic contact housing may also have to be removed.
2. Loosen the screws on the SPE blocking element (1) and remove the cover.
3. Lift the motor screw (2) slightly to release the bolt (3) from the gear installation.
4. Extract the bolt.
5. Replace with a new bolt.
6. Place the motor back in its original position.
7. Replace the cover and tighten the screws.
8. Install the SPE blocking element according to the installation notes.



## General Information

Maintenance and inspection measures must be performed at specific intervals by appropriately qualified personnel. Furthermore, the regulations of DIN VDE 0833 apply to all related work.

## Inspection and Maintenance

- Function test of the control unit device function
- Visual inspection of mounting/damage
- Function test for the SPE blocking element

### Function test of the SPE blocking element with bolt contact:

1. Activate the bolt contact when the door is closed.
  - ➔ The SPE blocking element bolt engages.
2. Place the bolt contact back on stand-by.
  - ➔ The SPE blocking element bolt disengages.

### Function test of the SPE blocking element with control unit (tamper contact open):

1. Remove the jumper from B1 and connect it to B3 on the control unit.
  - ➔ The SPE blocking element bolt engages.
  - ➔ The yellow LED on the control unit lights up.
2. Remove the jumper from B3 on the control unit.
  - ➔ The SPE blocking element bolt disengages.
  - ➔ The yellow LED on the control unit goes out.
3. Repeat steps 1 - 2 with the door closed to check the precise insertion of the SPE blocking element's bolt into the bolt-hole.
4. Reconnect the jumper to B1 on the control unit once you have completed the function test.

The yellow LED on the control unit's circuit board indicates the system's status as follows:

Yellow LED	Status	Required action
Off	System is OK	None
1 flash	Bolt will not engage	<ul style="list-style-type: none"><li>▪ Check the SPE blocking element and the bolt-hole for correct installation and electrical connection.</li><li>▪ Repeat the test.</li></ul>

# Notes for Maintenance and Service

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## Loss of keys

The following steps are required if the keys were read in **during programming**:

1. Bypass the key using the control panel keypad or erase the key using the appropriate programming program (e.g. WinPara or NzPara)
2. Order a new key
  - see chapter "Ordering Additional Keys"

The following steps are required if the keys were read in **directly via the reader**:

1. For security reasons, erase all remaining keys and the individual customer code, i.e. restore the default settings
  - see chapter "Restoring the Default Settings"
2. Read in the security card or standard key and all the remaining keys from scratch
  - see chapter "Reading In Keys and Programming the System"
3. Order a new key
  - see chapter "Ordering Additional Keys"

## Ordering Additional Keys

If you need new keys (e.g. for new members of staff), take the following steps:

### Keys with a security card

- Send your order to the manufacturer together with the security card so that the new keys can be registered on the card.
- When you have received the additional keys, read them in as described in the chapter "Reading In Keys and Programming the System". You do **not** have to re-read in the security card (or customer card).

### Standard key (without security card):

- Order additional standard keys.
- When you have received the default key, read it in the same as you would an additional key
  - see chapter "Reading In Keys and Programming the System"

## Loss of the Security Card


Losing the security card will not compromise system functionality. However, if at some stage in the future you need further keys you will have to request both a new security card **and** new keys from the manufacturer.

The following steps are required once you have received the new security card and keys:

1. Restore the default settings
  - see chapter "Restoring the Default Settings"
2. Read in the new security card and keys
  - see chapter "Reading In Keys and Programming the System"

## Restoring the Default Settings

Restore the default settings as follows:

1. The system is in a disarmed state (e.g. in revision mode).
2.  Remove the control unit cover. The plugs with the LSN lines (3.4 and 7.8) must be removed from the control unit.
3. In the control unit, move the jumper from B1 to B2.
4. Close the tamper contact GK for at least 3 seconds until you hear the buzzer.
  - ➡ All the keys and the customer code have now been erased.
  - The default settings have been restored.
5. In the control unit, move the jumper from B2 back to B1.
6. Reconnect the plugs with the LSN lines to the control unit and reset the LSN line malfunction message on the control panel.

# Technical Data

## SE 320 LSNi control unit

Operating voltage	9.6 V...30 V
Total current consumption including blocking element at an input voltage of 9.6 V	
- Restore LSN part	3.53 mA
- Restore additional supply	41 mA
- Bolts being engaged	110 mA for 200 ms
- Bolts blocked	470 mA for 200 ms
Total current consumption including blocking element at an input voltage of 28 V	
- Restore LSN part	3.53 mA
- Restore additional supply	30 mA
- Bolts being engaged	65 mA for 200 ms
- Bolts blocked	200 mA for 200 ms
C-Point output:	
A freely programmable C-point switching output (open-collector output) 12 V, max. 80 mA, is located on the control unit. Connect only one cable with a maximum length of 3 m.	
The yellow LED on the SmartKey code keypad is connected to the C-point by default. An appropriate series resistor is fitted to enable the C-point to be connected to the yellow LED on the SmartKey code keypad. Solder a bridge across the solder points on BR2 (circuit board reverse) to bridge the series resistor if the C-point is used for a different purpose and not connected to the yellow LED on the SmartKey code keypad.	
Relay outputs	2 change-over contact sets
- Switch performance	60 W DC (2 A, 30 V DC)
- Connection voltage when input voltage is 9.6 V	20 mA
- Connection voltage when input voltage is 28 V	8 mA
Optocoupler input Detec + / Detec -	With series resistor for input voltage of 10 V...30 V
Test input (pull-up input resistor on + 5 V)	Activate by connecting 0 V. This input is only intended for test purposes, i.e. cables may only be connected temporarily for test purposes.

Environmental conditions	
- Environmental class	2
- Protective system	IP 30
- Operating temperature	-5°C...+45°C
- Storage temperature	-40°C...+85°C
Housing	
- Material	ABS
- Color	RAL 9002
Dimensions (WxHxD)	135 x 160 x 35 mm
Weight	0.25 kg
VdS approval (Cl. C) for overall system	G 106065, C

### Blocking element

Max. distance between bolt and counterpart	4 mm
Bolt break force	ca. 1kN
Cable to control unit	max. 6 m, 6-pin, screened, completely sealed
Environmental conditions	
- Environmental class	3
- Protective system	IP 44
- Operating temperature	-25°C...+55°C
- Storage temperature	-40°C...+85°C
Housing	
- Material	ABS
- Color	RAL 9002
Weight	
- Surface mounted models	0.45 kg
- Recessed mounted models	0.40 kg
Dimensions (WxHxD)	118 x 28 x 16 mm

**Note on the blocking element:** SE 320 LSNi without bolt contact. If all the bolts of all SE 320 LSNi units in a detection area are to be activated simultaneously, the values for "activated bolts" must be added together when calculating power requirements. Up to four SE 320 LSNi can be activated within 200 ms due to the time shift caused by the LSN.

## Reader

Range	Max. 20 mm
Frequency	125 kHz
Transmission power	250 mW
Cable to control unit	max. 6 m, 6-pin, screened, completely sealed
Environmental conditions	
- Environmental class	3
- Protective system	IP 65
- Operating temperature	-25°C...+70°C
- Storage temperature	-40°C...+85°C
Housing	
- Material	ASA Luran S
- Color	Titanium white (cp. RAL 9010)
Dimensions (WxHxD)	80 x 80 x 30 mm
For installation in 55 mm surface-mount/recessed-mount junction boxes	
Weight	0.35 Kg

## SmartKey code keypad

Environmental conditions	
- Environmental class	3
- Protective system	IP 65
- Operating temperature	-25°C...+60°C
- Storage temperature	-25°C...+60°C
Cable to control unit	max. 6m completely sealed
Housing	
- Material	ASA Luran S
- Color	Titanium white (cp. RAL 9010)
Dimensions (WxHxD)	80 x 80 x 30 mm
For installation in 55 mm surface-mount/recessed-mount junction boxes	

## Lockable code keypad

Environmental conditions	
- Environmental class	3
- Protective system	IP 32
- Operating temperature	-25°C...+60°C
- Storage temperature	-30°C...+60°C
Color	RAL 9002
Dimensions (WxHxD)	73 x 164 x 36 mm

## Key

Range	Max. 20 mm
Environmental conditions	
- Environmental class	4
- Protective system	IP 67
- Operating temperature	-40°C...+70°C
- Storage temperature	-40°C...+85°C
Housing	
- Material	POM
- Color	RAL 9005 (black)
Dimensions (WxHxD)	27 x 24 x 6 mm
Weight	0.011 kg

## Laws/Standards/Directives

The system fulfills all the requirements of the relevant laws, standards and directives, in particular those of

- EN 61000-6-3
- EN 50130-4
- DIN VDE 0833, Parts 1 and 3
- VdS 2110
- VdS 2227
- VdS 2119
- VdS 2311
- VdS 2203
- VdS 2252
- EN 50131-1



125 kHz  
0.029 uW (-10 dBuA/m)

