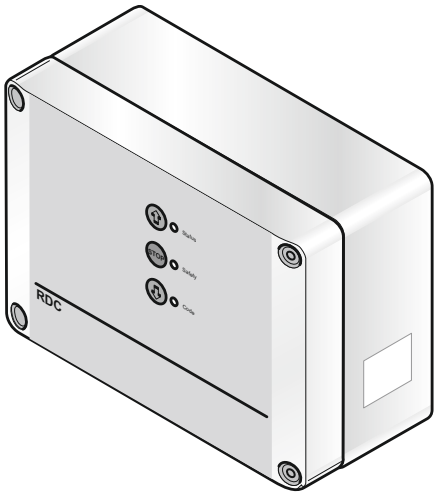
SOMMER
Made in Germany



RDC

46682V001-142008-0-OCE_Rev.A

Contents

Contents

1 Safety

1.1 Intended use

The roller door control unit **RDC** may only be used:

- to control motors in roller doors (max. motor power: 800 W);
- according to the instructions and safety information given in these installation and operating instructions.

Any other use is considered improper use. The manufacturer is not liable for damage resulting from improper use.

The roller door control unit **RDC** (hereafter “control unit”) may not be used in conjunction with motors in roller grille doors.

1.2 Symbols used

The safety instruction appears together with signal words. The signal word indicates the level of danger and severity of injury or property damage that arise if the instructions and safety information are not observed.

- **Danger** indicates an imminent danger, causing: grave injury/death.
- **Caution** indicates potential danger, causing: minor injury or property damage.

For information and useful tips.

1.3 General safety instructions

Persons operating or working on the control unit must read these installation and operating instructions, understand them, follow the instructions and observe the safety information.

Work on the control unit, for example installation, connection and initial operation, may only be carried out by an expert (qualified electrician).

Always keep the installation and operating instructions within easy reach.

Observe and comply with local accident prevention regulations and valid standards.

Observe and comply with the Employer’s Liability Rules “Power-operated windows, doors and gates - BGR 232” (applies to operators in Germany).

When using the automatic close function, observe the standard EN 12453; install safety device (e.g., light barrier).

Only use genuine spare parts, accessories and fixing material from the manufacturer.

1.3.1 Remote control

The remote control may only be used for equipment and/or systems where interference in the transmitter or receiver does not pose a risk to humans, animals or objects, or where the risk is covered by other safety devices.

The user must be made aware that systems that pose an accident risk should only be remote controlled, if at all, if the user can actually see the door.

The radio remote control may only be used if the door's movement can be watched and no persons or objects are within the range of movement.

Keep the transmitter somewhere where it cannot be pressed inadvertently, e.g., by children or animals.

The radio system is not protected from interference from other telecommunications systems or equipment (e.g., radio-controlled systems that are licensed to operate within the same frequency range). Excessive interference can be reported to your appropriate Telecommunications Office which has radio interference measuring equipment (radiolocation).

Do not use transmitters near locations or installations that are susceptible to radio interference (e.g., airports, hospitals).

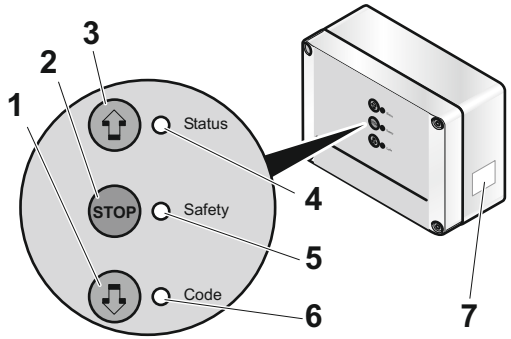
1.4 Target groups and qualifications

The operator must make sure that the control unit is operated in its original state and that an expert regularly checks that the safety device is working properly.

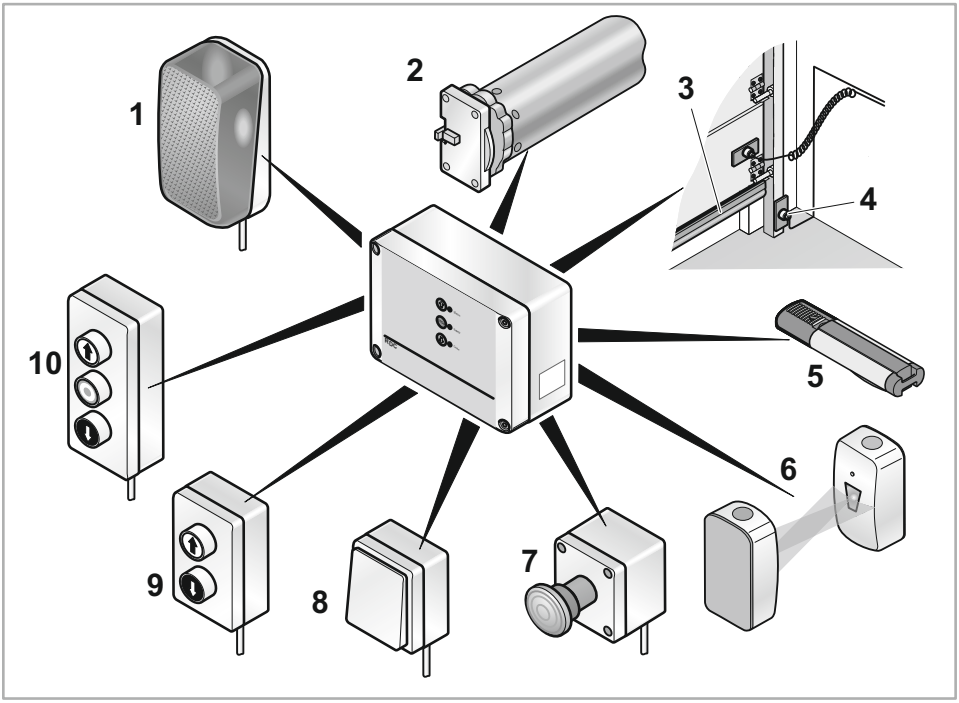
The user may operate the control unit using pushbuttons or a handheld transmitter as instructed by the operator.

The qualified electrician may work on the control unit (e.g., installation, connection, initial operation, testing, maintenance or disassembly).

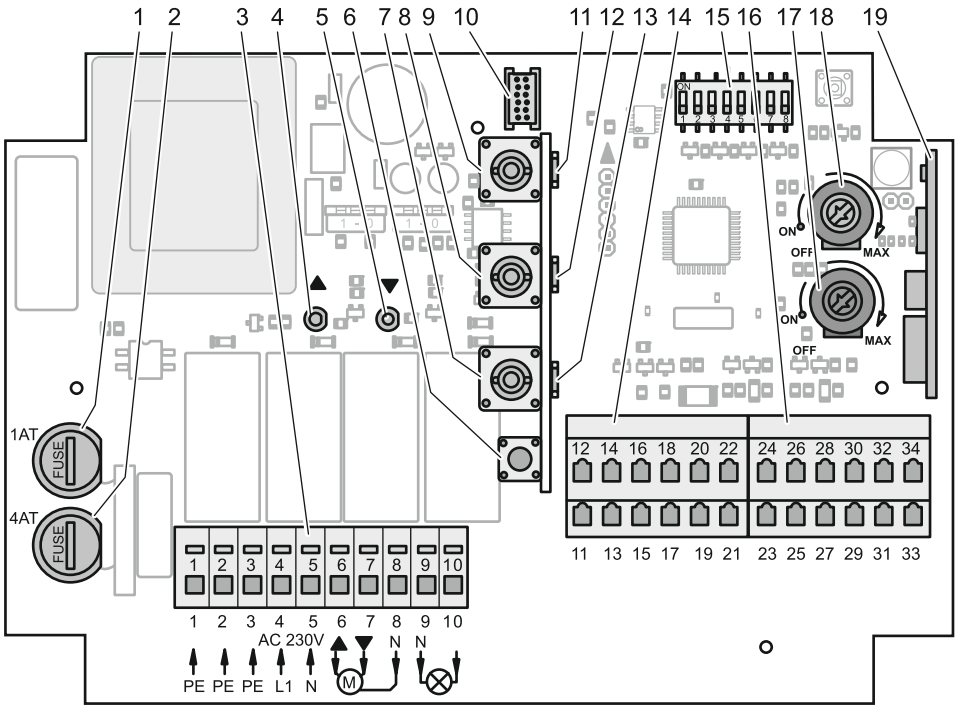
2 Device overview



1. Close button
2. Stop button
3. Open button
4. LED1 (Status)
5. LED2 (Safety 1/2)
6. LED3 (Radio)
7. Type plate



1. Warning light/Illumination
2. Motor with arrester
3. Safety contact strip
4. Pre-limit switch
5. Handheld transmitter
6. Light barrier
7. EMERGENCY OFF switch
8. Pulse button
9. 2-function pad
10. 3-function pad



1. Fuse 2 for the warning light: 1 A, surge-proof
2. Fuse 1 for the motor: 4 A, surge-proof
3. Terminal strip 1
4. OPEN LED
5. CLOSE LED
6. Program button for remote control
7. Close button
8. Stop button
9. Open button
10. TorMinal connection
11. LED1 (Status)
12. LED2 (Safety 1/2)
13. LED3 (Radio)
14. Terminal strip 2
15. DIP switch
16. Terminal strip 3
17. Potentiometer for automatic closing
18. Potentiometer for early warning function
19. Radio receiver

2.1 Scope of delivery

- Control
- Installation and operating instructions
- 1 x resistor 8.2 kOhm
- 3 x bridges for safety inputs

When unpacking, please check that all the contents are there and are undamaged. Contact your specialist retailer/supplier if necessary.

Dispose of the packaging according to the applicable local regulations.

2.2 Technical data

Rated voltage.....AC 230 V ± 10%

Rated frequency.....50/60 Hz

Operating temperature range.....–20 to +50°C

Protection class.....IP 54 *)

Standby power consumption.....~ 4 VA

Maximum motor output .....800 VA

Weight.....0.8 kg

Dimensions H/W/D.....125/175/75 mm

Receiver memory capacity.....112 commands

*) Only if installed indoors

2.3 Storage

Store the control unit

- in closed, dry rooms at a room temperature of –20 to +50°C and humidity of approx. 35% to 60%;
- in a dry place, free of dust, where it will not fall or get bumped.

2.4 EU manufacturer's declaration

The company SOMMER Antriebs- und Funktechnik GmbH
Hans-Böckler-Strasse 21-27
73230 Kirchheim/Teck, Germany

declares that the control unit:

- RDC

conforms to the following directives:

- Low Voltage Directive 2006/95/EC
- EU Directive on Electromagnetic Compatibility 2004/108/EC

The following standards/draft standards in particular were applied:

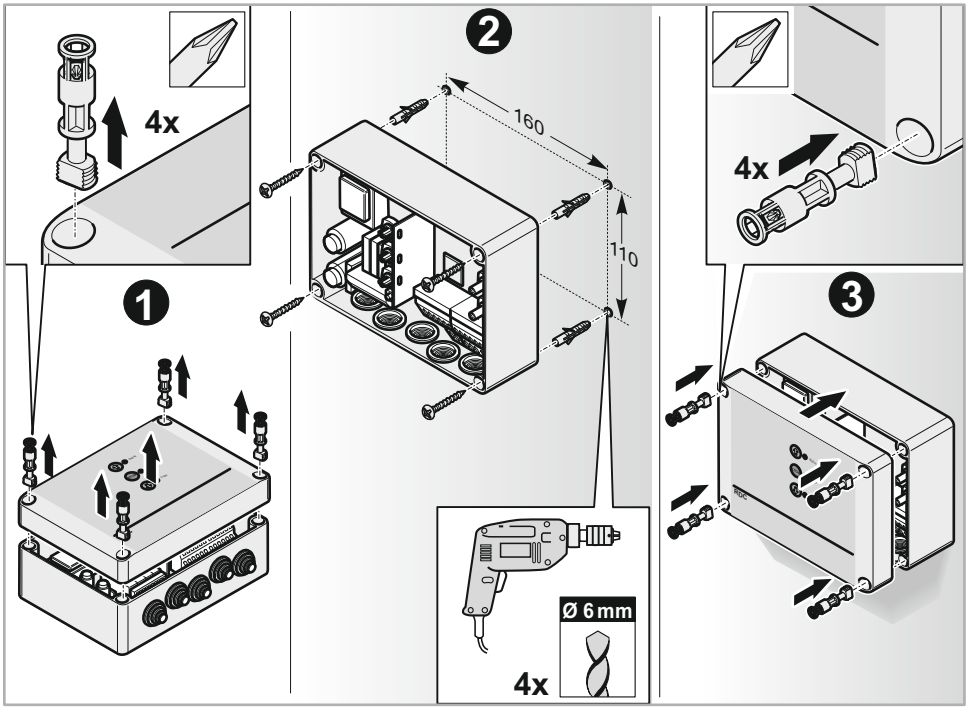
- DIN EN 61000-6-3:2007-09, DIN EN 61000-6-2:2006-03
- DIN EN 60335-1:2007-02, EN 12453:2000, ISO 13849-1:2006

Note: Do not put the door system into operation until it has been established that the door system into which this control unit is to be integrated complies with the provisions of all relevant and applicable EC directives.

Kirchheim/Teck, 2/11/2007 Frank Sommer
Managing Director

3 Installation

3.1 Installing the housing



Install the housing upright on an even surface, with the cable conduits facing downwards.

Mount the housing without distortion, so that no water can get in and the lid is watertight when closed.

Use the fixture points provided for screwing on the housing. Do not drill through the rear wall of the housing. It will leak as a result, which will damage or destroy the control unit.

Dry any moisture that gets into the housing with a fan.

3.2 Connecting up the control unit

The control unit may only be connected to the power supply by a qualified electrician (according to the definition given in BGV A3, § 2 Subsection 3; applies only in Germany).

Risk of electric shock

Before working on the control unit, switch off the mains, check that it is not live and prevent it from being switched back on.

Before connection, check that the mains voltage range of the control unit is compatible with the local mains voltage.

Always connect up the control unit off-circuit.

The terminals in the control unit are only made for lines with rated cross-sections of 1.5 mm² to 2.5 mm².

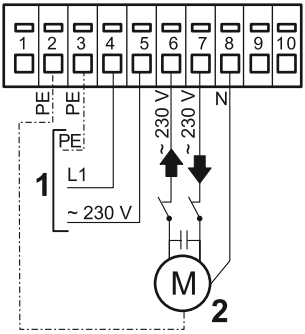
Only cut as much off the cap on the cable conduit as will leave it sealed after the cable is inserted.

Only connect the control unit to the mains via a permanent cable with all-pole isolation device. Comply with the current VDE and EN standards (EN 12453) and the technical criteria for connection as required by the regional electricity supply companies.

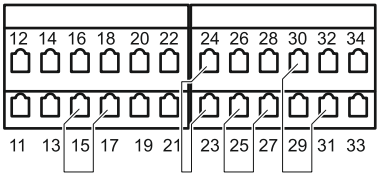
Mount the control unit and external command devices in the door area so that the door can be watched during operation. But they must not be within the door's range of movement.

Static electricity can damage the electronic components on the board. Before touching the board, touch a metallic, grounded object to statically discharge yourself.

The control unit can be operated in automatic mode or in conjunction with safety devices (minimum requirement: "safety contact strip"). If there are no safety devices, the control unit must only be used in the dead man mode!



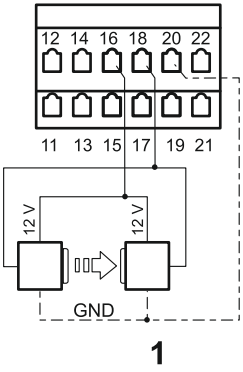
1. Mains connection: AC 230 V ± 10%
2. Motor connection
   (max. motor power 800 W)

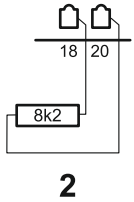


Place bridge (included in scope of delivery) if the following elements are not connected:

- Light barrier: between terminals 15 and 17
- Arrester: between terminals 23 and 24
- Emergency off switch: between terminals 25 and 27
- 3-function pad: between terminals 30 and 31 (Stop button)

3.3 Connecting the safety contact strip (Safety 1)





Safety contact strips are available in two models:

- Optical safety contact strip from FRABA (1) or
- Electrical 8kOhm safety contact strip (2)

The safety contact strip is attached to the closing edge of the door. It protects people from getting caught at the closing edges and prevents objects from getting damaged. As soon as it is activated when the door is closing (by an obstacle or person), the control unit stops the operator and changes the direction of travel. The setting of DIP switches 3 and 4 determines how the control unit responds or how far the door travels in the opposite direction when an obstacle is encountered; see Chapter “6.15 Operator response to detected obstacle”.

If the safety contact strip is activated, faulty or not connected, dead man operation is automatically activated; see Chapter “4.1 Activate/deactivate dead man operation”.

4 Initial operation

Only a qualified electrician may work on the control unit (according to the definition given in BGV A3, § 2 Subsection 3; applies only in Germany).

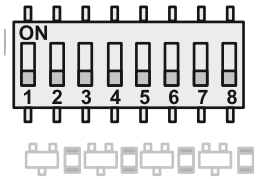
Risk of electric shock

Do not touch live parts (ends of cables, contacts, etc.) if the control unit is connected to the power supply.

Only switch the DIP switches when the control unit is off-circuit.

The control unit can be operated in automatic mode or in conjunction with safety devices (minimum requirement: “safety contact strip”). If there are no safety devices, the control unit must only be operated in the dead man mode!

Document initial operation!



All DIP switches are set to “OFF” by factory default.

4.1 Activate/deactivate dead man operation

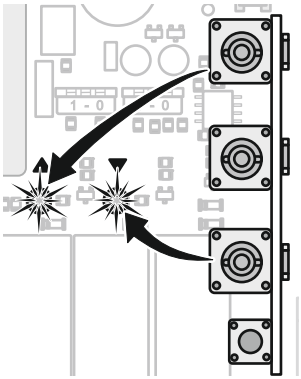
In the “dead man” mode the operator runs for as long as the command button is pressed. The operator stops as soon as the button is released. A handheld transmitter will not function when the system is in dead man mode.

When DIP switch 7 is

- “ON”, dead man is activated;
- “OFF”, dead man is deactivated (automatic operation).

4.2 Controlling the motor direction

1. Activate dead man operation.
2. Press the Open or Close button. The door must run in the right direction.
   → If the door runs in the opposite direction:
   - disconnect the control unit from the mains;
   - switch the lines on terminals 6 and 7.



4.3 Setting the motor limit switches

For information about the limit switches and setting them, see the motor operating instructions.

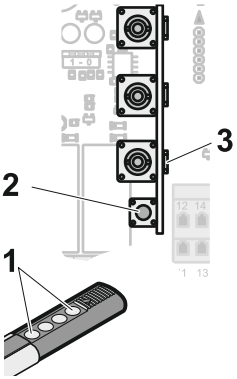
1. Press the Open or Close button and keep it pressed until the door reaches the end position.
2. If necessary, set the limit switch on the motor.
3. Repeat steps 1 and 2 for the other direction.
4. Deactivate dead man operation.

4.4 Setting the run time (run time monitoring)

When DIP switch 8 is “OFF”, motor run time monitoring is deactivated. Previously programmed run times are deleted and must be reprogrammed. This is the case if a relay clicks audibly when the door is not moving.

1. Set DIP switch 8 to “ON”.
2. Open and close the door to the end positions
   → Relay stops clicking when the motor is not running. Otherwise repeat the step.
   → The run times in both directions are now programmed.
3. Leave DIP switch 8 “ON”. This means that the run times will be monitored constantly and the control unit stops the operator if they are exceeded.

5 Programming the handheld transmitter



5.1 Wiping the radio receiver's memory

For security reasons, you should completely wipe the radio receiver's memory

- before programming transmitters for the first time and
- if a transmitter gets lost.

1. Press the program button (2) and hold it for 20 seconds
   → First, the LED (3) is lit steadily, then begins to flash once intermittently after 5 seconds, then is lit steadily after 10 seconds and goes out after 20 seconds, which indicates that the memory is wiped.

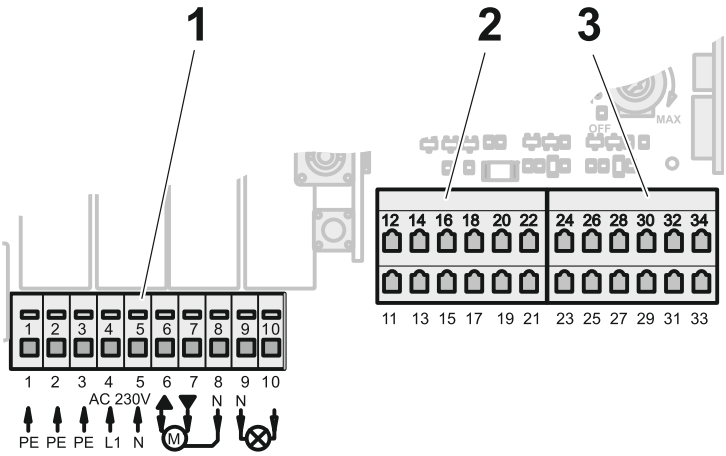
5.2 Programming the handheld transmitter button to pulse mode

1. Press the program button (2) for approx. 0.5 seconds.
   → LED (3) lights up, program mode begins.
2. Press any button (1) on the transmitter.
   → LED (3) goes out. That button on the transmitter is programmed as the pulse button. The command sequence is (Open – Stop – Close – Stop – etc.).

If no radio signal is sent within 10 seconds of the start of the program mode, the program mode is terminated; LED (3) goes out.

6 Connections and functions

6.1 Terminal strips (overview)

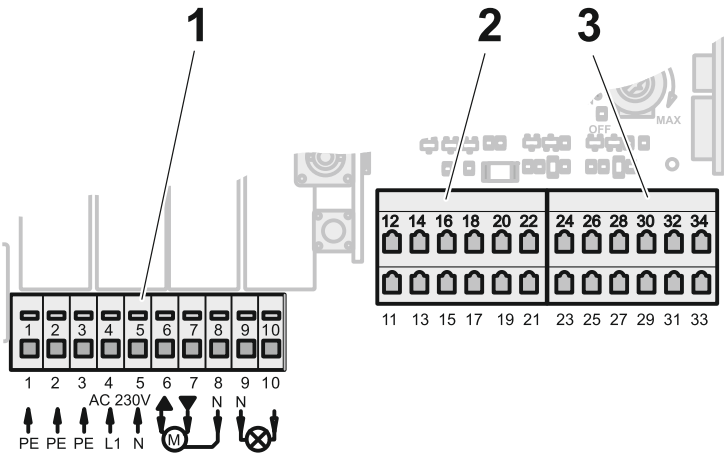


1st terminal strip 2nd terminal strip 3rd terminal strip

6.1.1 Terminal strip 1

Accessory	Polarity	Terminal
	PE (gr/ye) for warning light	1
	PE (gr/ye) for motor	2
Power	PE (gr/ye) for power	3
	L1 (br) AC 230 V	4
	N (bl)	5
Motor-driven	OPEN AC 230 V	6
	CLOSE AC 230 V	7
	None	8
Warning light	N (bl)	9
	L (br)	10

6.1.2 Terminal strip 2

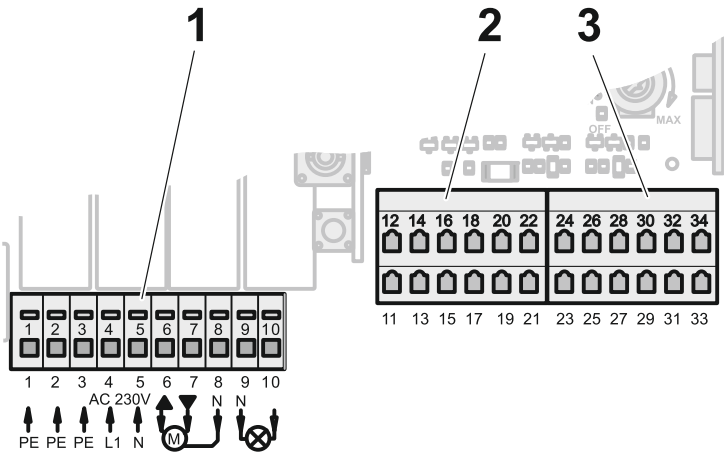


1st terminal strip 2nd terminal strip 3rd terminal strip

Accessory	Polarity		Terminal
Pre-limit switch	Any		12
			14
Optical safety contact strip from FRABA	DC 12 V (br)		16
	Signal (gr)		18
	GND (wh)		20
Electrical 8 kOhm safety contact strip	+ (br)		18
	GND (wh or bl)		20
Light barrier with open contact	Receiver	DC 24 V	11
		COM	15
		Signal	17
		GND	19
	Sender	DC 24 V	13
		GND	21
2-wire light barrier	Any		15
			17

Note: Observe the maximum cable length for accessories on terminal strip 2: 30 m.

6.1.3 Terminal strip 3



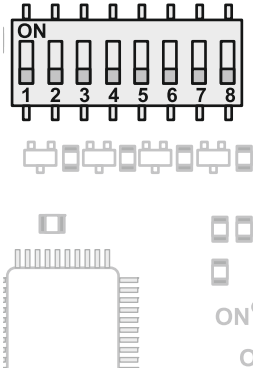
1st terminal strip 2nd terminal strip 3rd terminal strip

Accessory	Polarity	Terminal
Arrester *)	Any	23
		24
Emergency off switch *)	Any	25
		27
Pulse button **)	Any	26
		28
3-function pad	COM	30
	STOP *)	31
	OPEN **)	29
	CLOSE **)	33
2-function pad	COM	30
	OPEN **)	32
	CLOSE **)	34

*) With floating NC contact
**) With floating NO contact

Note: Observe the maximum cable length for accessories on terminal strip 3: 30 m.

6.2 DIP switches



Only switch the DIP switches when the control unit is off-circuit.

All DIP switches are set to “OFF” by factory default.

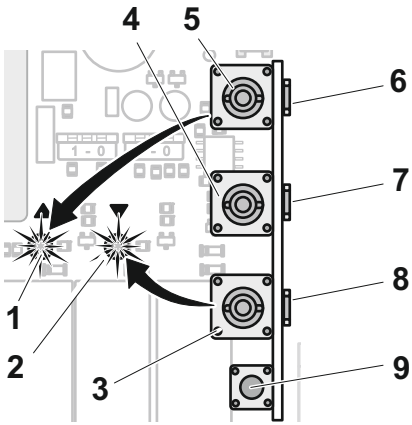
The DIP switch setting is read in by the control unit:

- after the control unit is switched on;
- during the self-test, after the door reaches the end positions;
- in every intermediate position, if the door is not running.

	Settings	Mode	Function
DIP 1	OFF		Warning light flashes whilst the door is in motion.
	ON		Warning is on constantly whilst the door is in motion.
DIP 2	OFF		Light barrier with open contact connected to safety input 2.
	ON		2-wire light barrier connected to safety input 2.

	Settings	Mode	Current direction of travel/position	Reaction on safety contact strip	Reaction on light barrier
DIP 3	OFF	1	OPEN	STOP	STOP
DIP 4	OFF		CLOSE	Door is opened completely	Drive reverses 2 seconds
DIP 3	OFF	2	OPEN	STOP	No reaction
DIP 4	ON		CLOSE	Door is opened completely	Drive reverses 2 seconds
DIP 3	ON	3	OPEN	STOP	No reaction
DIP 4	OFF		CLOSE	Drive reverses 2 seconds	Door is opened completely
			Intermediate position	No reaction	Door is opened completely
DIP 3	ON	4	OPEN	STOP	No reaction
			CLOSE	Drive reverses 2 seconds	Door is opened completely
DIP 4	ON		Intermediate position	No reaction	Door is opened completely
			Top end position during automatic closing	No reaction	Door closes 5 seconds after light barrier is broken
DIP 5	OFF		Automatic closing following opening is deactivated by the pulse input.		
	ON		Automatic closing following opening is activated by the pulse input. Standard value 20 seconds, can be altered using TorMinal.		
DIP 6	OFF		Partial opening function deactivated		
	ON		Partial opening function activated		
DIP 7	OFF		Dead man operation deactivated		
	ON		Dead man operation activated		
DIP 8	OFF		Monitoring of motor run times deactivated.		
	ON		Monitoring of motor run times activated.		

6.3 Buttons and LEDs



1. OPEN LED
2. CLOSE LED
3. Close button
4. Stop button
5. Open button
6. LED1 (Status)
7. LED2 (Safety 1/2)
8. LED3 (Radio)
9. Program button (radio)

A moving door can be stopped by pressing the Open or Close button (panic function).

6.3.1 OPEN LED

The LED lights up whilst the door opens.

6.3.2 CLOSE LED

The LED lights up whilst the door closes.

6.3.4 LED1 (Status)

Display (green)	Cause
Not lit	No power supply available or fuse 1 is faulty *).
Lit	Power supply available and EMERGENCY OFF switch unlocked.
Flashes once intermittently	During “stay open time”.
Flashes twice intermittently	Arrester activated or EMERGENCY OFF switch pressed (locked).
Flashes once intermittently	A function is selected (i.e., Open) whilst the hand transmitter is being programmed, see Chapter “7.2 Programming the handheld transmitter to Open-Stop-Close”.

***) Risk of electric shock**

The terminals 3 and 4 of terminal strip 1 may still be live.

6.3.5 LED2 (Safety)

Display (red)	Description
Not lit	No safety warning
Flashes once intermittently	Safety contact strip (safety 1) activated
Flashes twice intermittently	Light barrier (safety 2) broken
Flashes three times intermittently	Warning received from both safety measures (safety 1 and 2)
Flashes four times intermittently	Safety measures not recognised following switching on of the power supply. Note: Check wiring and DIP switches.

6.3.6 LED3 (Radio)

Whether or not LED3 is lit depends on the radio signal and what state the program button is in. LED3 is **not** lit if:

- it is not receiving any radio signal; or
- no programming is being done; or
- the memory has just been completely wiped.

To read about the program button, go to Chapter “6.3.4 Program button (programming/wiping the transmitter)”.

6.3.7 Program button (programming/wiping the transmitter)

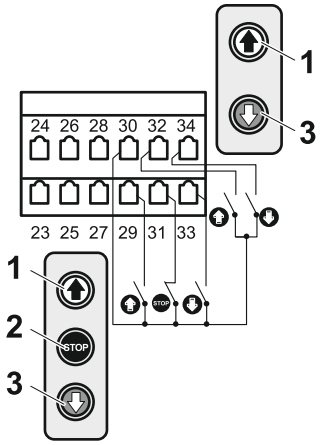
To program a transmitter, the factory radio codes for its buttons must be transferred to the radio receiver memory; to wipe a transmitter the radio code must be deleted from the receiver’s memory. The program button controls these two actions. Depending on how long the button is kept pressed, one or the other radio mode is activated. The LED3 indicator light changes accordingly:

Prog. button pressed	Display LED3 (red)	Type of operation
0.5 secs	Lit	Type of operation 1: Programming active
5 secs	Flashes once periodically	Type of operation 2: Ready to wipe a button
10 secs	Lit again	Type of operation 3: Ready to wipe all the buttons of a handheld transmitter
20 secs	Out	Type of operation 4: Handheld transmitter memory completely wiped

6.4 Connecting up the 2- or 3-function pad

Caution

Only use the connection for floating button contacts. External voltage can damage or destroy the control unit.



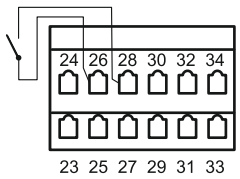
1. Open button
2. Stop button
3. Close button

Place bridge between terminals 30 and 31 if Stop button is not connected up in the 3-function pad.

6.5 Connecting the pulse button

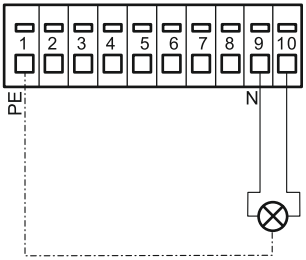
Caution

Only use the connection for floating button contacts. External voltage can damage or destroy the control unit.



Command sequence: Open – Stop – Close – Stop – etc.

6.6 Connecting the warning light



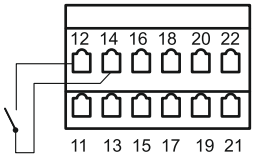
The warning light gets its power supply from the control unit (AC 230 V, max. 80 W). It has two flashing patterns:

- slow (every second) while the door is moving and during the warning;
- fast (every half-second) while the door is moving in the dead man mode.

The warning light can be set on DIP switch 1 for when the door is moving:

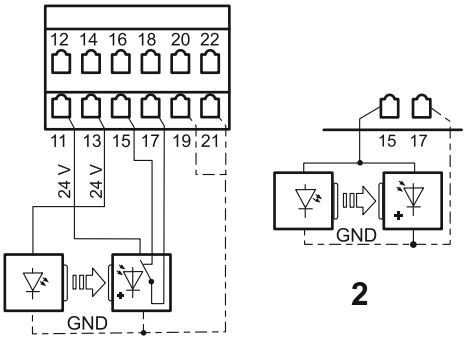
- to “OFF”: warning light flashes;
- to “ON”: warning light shines steadily.

6.7 Connecting the pre-limit switch



The pre-limit switch is mounted on the bottom of the door frame, max. 5 cm from the floor. After the pre-limit switch is activated (the door overruns the position when closing) the safety contact strip must be activated within 2 seconds or the operator goes into reverse; the door opens.

6.8 Connecting the light barrier (Safety 2)



Light barriers are available in two models: DIP switch 2 must be set accordingly:

- to “OFF”: light barriers with NC contact (1); or
- to “ON”: 2-wire light barriers (2)

One light barrier monitors the doorway. As soon as it is interrupted (e.g., by a car or person), the control unit stops the operator or changes the direction of travel; the setting on DIP switches 3 and 4 and the automatic close setting determine how the control unit responds; see Chapter “6.15 Operator response to detected obstacle”.

The function of the light barrier is tested by the control unit after the door reaches its end position.

If the light barrier is interrupted, faulty or not connected, dead man operation is automatically activated; see Chapter “4.1 Activate/ deactivate dead man operation”. LED2 (Safety) flashes twice intermittently.

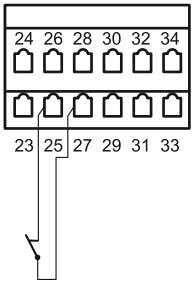
Place bridge between terminals 15 and 17 if a light barrier is not connected. Set DIP switch 2 to “OFF”.

6.9 Connecting the EMERGENCY OFF switch

Caution

EMERGENCY OFF switch must be mounted where it is easy to see and easy to reach.

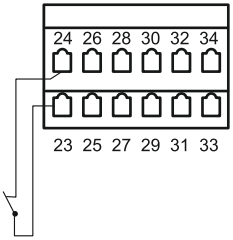
Only use the connection for floating button contacts. External voltage can damage or destroy the control unit.



When pressed, the EMERGENCY OFF switch stops the operator immediately and terminates all control unit functions (including dead man operation).

Place bridge between terminals 25 and 27 if an EMERGENCY OFF switch is not connected.

6.10 Connecting the arrester



The arrester is installed in the door operator and can be connected to the control unit. If it is, the control unit detects when the arrester kicks in and blocks all control unit functions.

Place bridge between terminals 23 and 24 if an arrester is not connected.

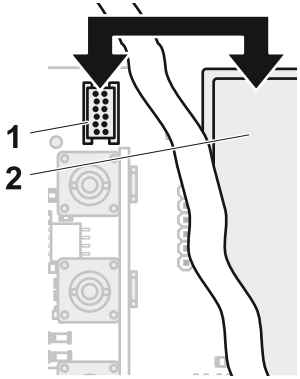
6.11 Other command devices

Caution

Only use the connection for floating button contacts. External voltage can damage or destroy the control unit.

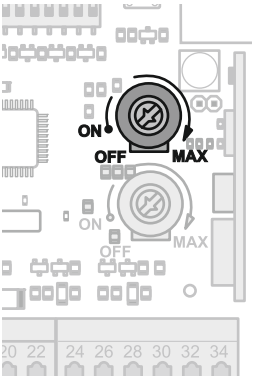
Other command devices, e.g., pull-buttons or key switches can be connected to the control unit. For installation, please refer to the instruction manual for the particular device.

6.12 TorMinal



A TorMinal (2) can be connected to connection (1). A TorMinal is a device for reading out and adjusting factory-set control unit values. TorMinal may only be operated by an expert with the relevant skills.

6.13 Warning function



If required, you can set how much warning you want using potentiometer 1. While the warning time is running, the external warning light flashes. When set all the way to the left, this function is deactivated.

If automatic closing is activated, a minimum warning of 3 seconds is given for safety reasons. Maximum warning (turn potentiometer 1 clockwise) is approx. 30 seconds.

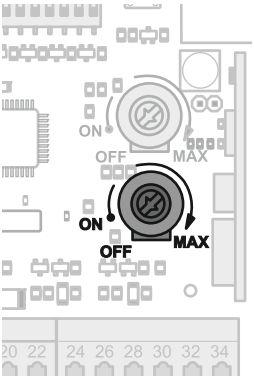
6.14 Automatic closing function

If automatic closing is activated, the fully open door (“OPEN” end position reached) automatically closes after the “stay open time” and warning time has lapsed.

Important:

- Automatic closing can only be activated if a light barrier (Safety 2) is connected.
- Automatic closing always begins after the “OPEN” end position.
- In the event of a persistent “OPEN” command (OPEN contact closed), the fully open door remains in the “OPEN” end position. Automatic closing does not start until the command is cancelled. This function is used in conjunction with an external timer to keep the door open for a certain length of time. After the time is up, automatic closing starts again and the door closes.

6.14.1 Automatic closing function (with potentiometer 2)



Automatic closing is activated when potentiometer 2 is switched on (turned clockwise). The potentiometer is switched off by factory default (set all the way to the left). Turn it clockwise to set the stay open time. The maximum stay open time is approx. 120 seconds).

During the stay open time, LED1 (Status) flashes once intermittently.

6.14.2 Automatic closing function (with pulse button)

Automatic closing is activated when

- DIP switch 5 is set to “ON”;
- the door is opened with the pulse button.

The stay open time is a constant 20 seconds. It can be changed using TorMinal; see Chapter “6.12 TorMinal”.

6.14.3 Reduce waiting time before automatic closing

This function reduces the stay open time to 5 seconds when automatic closing is activated if something passes through the light barrier when the door is open. DIP switches 3 and 4 must be set to “ON”.

In some cases, you might like a short stay open time, e.g., when driving the car into the underground parking lot of an appartment block at night.

6.15 Operator response to detected obstacle

6.15.1 Automatic closing is activated

If the light barrier or the safety contact strip detects an obstacle, the operator reverses and opens the door to the “OPEN” end position.

If the obstacle is detected for a second time, the operator reverses for 2 seconds; the door opens for 2 seconds and stops.

6.15.2 Automatic closing is deactivated

The operator responds depending on DIP 3 and DIP 4 settings.

DIP-switches	Setting	Mode	Current direction of travel/position	Behaviour when obstacle encountered	
				by safety contact strip	by light barrier
DIP 3	OFF	1	OPEN	STOP	STOP
DIP 4	OFF		CLOSE	Door is opened completely	Drive reverses 2 seconds
DIP 3	OFF	2	OPEN	STOP	No reaction
DIP 4	ON		CLOSE	Door is opened completely	Drive reverses 2 seconds
DIP 3	ON	3	OPEN	STOP	No reaction
DIP 4	OFF		CLOSE	Drive reverses 2 seconds	Door is opened completely
			Intermediate	No reaction	Door is opened completely
DIP 3	ON	4	OPEN	STOP	No reaction
			CLOSE	Drive reverses 2 seconds	Door is opened completely
DIP 4	ON		Intermediate	No reaction	Door is opened completely
			Top end limit during automatic closing	No reaction	Door closes 5 seconds after light barrier is broken

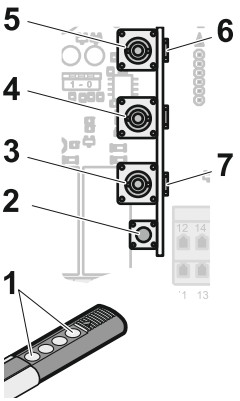
7 Radio receiver

Each button on the handheld transmitter has a permanently stored radio code (factory setting). When you program a button into the radio receiver, the button's radio code is transferred to the receiver, where it is assigned a command.

For security reasons, you should completely wipe the radio receiver's memory

- before programming transmitters for the first time and
- if a transmitter gets lost.

The programmed commands are retained in the event of a power failure.



7.1 Wiping the radio receiver's memory

1. Press the program button (2) and hold it for 20 seconds
   → First LED3 (7) shines steadily, then beings to flash once intermittently after 5 seconds, then shines steadily after 10 seconds and goes out after 20 seconds, which indicates that the memory is wiped.

7.2 Programming the handheld transmitter to Open-Stop-Close

1. Press the program button (2) for approx. 0.5 seconds.
   → LED3 (7) lights up. Program mode begins.
2. Select a function (Open, Stop, Close): Press button (3, 4 or 5).
   → LED1 (6) flashes once intermittently.

3. Press any button (1) on the transmitter.
   → LED3 (7) goes out.
   → LED1 (6) lights up.
   → The function you selected will be assigned to the button you pressed.
4. Repeat steps 1 to 3 for the other buttons on the transmitter and other functions.

If no radio signal is sent within 10 seconds of the start of the program mode, the program mode is terminated; LED3 (7) goes out.

7.3 Programming the handheld transmitter button to pulse mode

1. Press the program button (2) for approx. 0.5 seconds.
   → LED3 (7) lights up. Program mode begins.
2. Press whichever button you want (1) on the transmitter.
   → LED3 (7) goes out. That button on the transmitter is programmed as the pulse button. The command sequence is (Open – Stop – Close – Stop – etc.).

If no radio signal is sent within 10 seconds of the start of the program mode, the program mode is terminated; LED3 (7) goes out.

7.4 Wiping the handheld transmitter button

1. Press the program button (2) for 5 seconds
   → First LED3 (7) lights up, then flashes once intermittently
2. Press whichever button you want (1) to delete on the transmitter.
   → LED3 (7) goes out. The button is deleted from the receiver's memory and now has no assigned function.

7.5 Wiping all handheld transmitter buttons

1. Press the program button (2) for 10 seconds
   → First LED3 (7) lights up, then flashes once intermittently and then shines steadily again
2. Press whichever button you want (1) on the transmitter.
   → LED3 (7) goes out. All buttons are deleted from the receiver's memory and now have no assigned function.

7.6 Setting partial opening

In certain cases, you might want to open the closed door only part of the way, e.g. to put away a bicycle. The “Partial opening” function can be set for this purpose:

1. Close door.
2. Set DIP switch 6 to “ON”.
3. Press the program button (2) for approx. 0.5 seconds.
   → LED3 (7) lights up.
4. Select “Open” function: Press button (5).
   → LED1 (6) flashes once intermittently.
5. Press button (5) once again.
   → LED1 (6) lights up.
6. Press whichever button you want on the transmitter.
   → LED3 (7) goes out.
7. Pressing the same button on the transmitter, open the door to the required position, stop and close.
   → The pressed button is programmed to the “partial opening” function.

8 Operation/Use

The operator explains the operating functions to the users after initial operation.

Caution

There is a risk of getting caught or cut on the mechanism or on the closing edges of the door. Keep away from closing edges while the door is opening or closing.

Supervise children and make sure that they do not play with the control unit.

Never put your hand near the door when it is moving or near moving parts.

Keep children, disabled persons and animals away from the door.

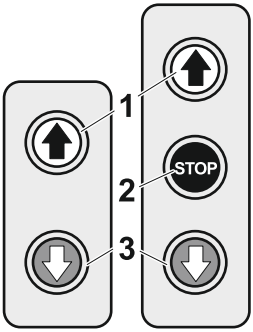
Only pass through the door once it is fully open.

Never stop the door with your hand, unless in case of emergency.

8.1 Operation using pad

The door can be operated via connected command devices or via the membrane button pad on the front:

With the 2- or 3-function pad:



- Press the Open button (1): Door opens; press the button again to stop the door.
- Press the Stop button (2) (only on 3-function pad): Door stops.
- Press the Close button (3): Door closes; press the button again to stop the door.

With pulse button:

Press and release button: button pulses work in the following sequence (Open, Stop, Close, Stop, etc.). The first time the button is pressed after the control unit is switched on gives the “Open” command.

8.2 Operation using handheld transmitter

Caution

The handheld transmitter may only be used if the door’s movement can be watched and no persons or objects are within the range of movement.

Keep the transmitter somewhere where it cannot be pressed inadvertently, e.g., by children or animals.

Do not use transmitters near locations or installations that are susceptible to radio interference (airports, hospitals).

- Use the buttons on the transmitter as programmed.

8.3 Operation using other command devices

To use other command devices you may have connected, please refer to the instruction manual for the individual device.

9 Maintenance and care

Only a qualified electrician (according to the definition given in BGV A3, § 2 Subsection 3; applies only in German) may work on the control unit.

Risk of electric shock

Do not touch live parts (ends of cables, contacts, etc.) if the control unit is connected to the power supply.

The control unit housing must never be splashed with a water hose or high-pressure washer.

Do not use acids or alkalis for cleaning.

Regularly check power cables for insulation defects or cracks. Replace faulty or defective cables immediately, directly after switching off the power supply.

Check the control unit housing regularly for insect infestation and moisture; if necessary clean or dry.

Check that the lid of the control unit housing fits correctly and, if not, rectify.

9.1 Regular testing

Regularly check that safety devices are working properly – at least once a year – and document the test (see BGR 232, Version 2003; only applies in Germany).

Check that pressure-sensitive safety devices (e.g., safety contact strip) are working properly every 4 weeks; see EN 60335-2-95.

9.2 Warranty and customer service

The warranty complies with statutory requirements. Your contact person for warranty claims is your specialist retailer/supplier. Your warranty entitlements only apply to the country in which the product was purchased.

Batteries, fuses and bulbs are excluded from the warranty.

Ownership of replaced parts passes to us.

If you require after-sales service, spare parts or accessories, please contact your specialist retailer/supplier.

We have tried to make the installation and operating instructions as easy as possible to follow. If you have any suggestions as to how we could improve them or if you think more information is needed, please send your suggestions to us:

Fax.: 0049 / 7021 / 8001-403

E-mail: doku@sommer.eu

10 Disassembly

Only a qualified electrician (according to the definition given in BGV A3, § 2 Subsection 3; applies only in Germany) may disassemble the control unit.

Risk of electric shock

Before starting disassembly, switch off the mains, check that it is not live and prevent it from being switched back on.

- The sequence is identical to that described in section “Installation”, but in reverse order.
- Dispose of the control unit and cable properly. Electronic components and batteries do not belong in regular waste.

Your local authority or council will give you further information on how to dispose of them.

11 Assistance in the event of faults

Only a qualified electrician (according to the definition given in BGV A3, § 2 Subsection 3; applies only in Germany) may work on the control unit.

Risk of electric shock

Do not touch live parts (ends of cables, contacts, etc.) if the control unit is connected to the power supply.

Tips on troubleshooting

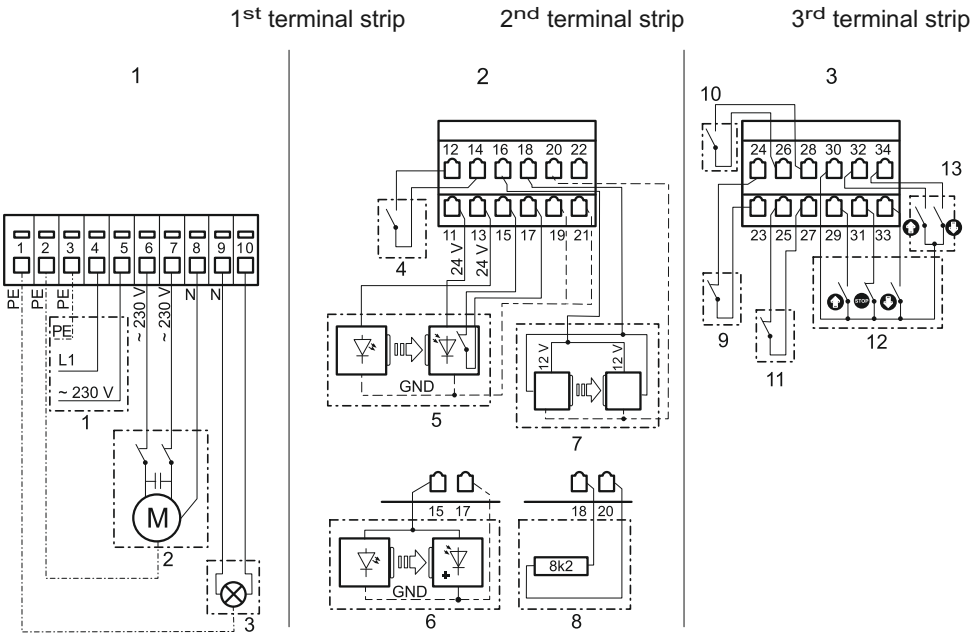
If the following table does not include the fault, proceed as follows:

- Disconnect the elements (e.g., light barrier) from the terminal and place a bridge; see Chapter “3.2 Connecting up the control unit”;
- Set all DIP switches to “OFF” (factory setting);
- Switch off both potentiometers (set to the left);
- If settings have been changed using TorMinal, do a “Reset” on the TorMinal; see “6.12 TorMinal”.

Problem	Possible cause	Solution
Drive/Control doesn't function.	No power supply available. LED1 (Status) not lit.	• Turn on main switch. • Check fuse in power cable. • Control faulty → exchange.
Door can neither be opened nor closed with either the handheld transmitter or the function pad.	Safety measure or bridge not connected, depending on version.	• Connect necessary safety measures. • Place bridges.
	Control performs a self-test, LED1 (Status) not lit.	• Wait for self test to finish, takes approx. 4 secs.
	Light barrier broken, faulty or not correctly recognised. LED2 (Safety) flashes twice intermittently.	• Remove obstacle. • Check light barrier, e.g., power supply.
	Electrical safety contact strip activated, faulty or not correctly recognised. LED2 (Safety) flashes once intermittently.	• Remove obstacle. • Check electrical safety contact strip.
	Optische Sicherheitskontaktleiste von FRABA betätigt, faulty or not correctly recognised. LED2 (Safety) flashes once intermittently.	• Remove obstacle. • Check optical safety contact strip.
	Pad input sets of constant signal.	• Connect pad correctly or exchange it. • Timer at pad input.
	EMERGENCY OFF active.	• Lock EMERGENCY OFF
Door cannot be opened or closed using the handheld transmitter.	Handheld transmitter not programmed.	• Program handheld transmitter, see Chapter "7 Radio receiver".
	Handheld transmitter battery is dead.	• Change battery, see handheld transmitter instruction manual.
	Pad not connected correctly or faulty, gives constant signal.	• Connect pad correctly or exchange it, see Chapter "6.4" or "6.5".

Problem	Possible cause	Solution
Door can only be opened or closed as long as a function pad is activated (dead man operation).	Safety measure triggered, e.g., light barrier broken. LED2 (Safety) flashes twice intermittently.	• Check light barrier, e.g., power supply. • Remove obstacle.
	Dead man operation active, DIP switch 7 “ON”.	• Deactivate dead man operation: Set DIP switch 7 to “OFF” • Note: Different safety regulations apply for dead man operation as for automatic operation.
	Electrical safety contact strip activated, faulty or not correctly recognised. LED2 (Safety) flashes once intermittently.	• Remove obstacle. • Check electrical safety contact strip.
	Optical safety contact strip activated, faulty or not correctly recognised. LED2 (Safety) flashes once intermittently.	• Remove obstacle. • Check optical safety contact strip.
Connected warning light not lit.	Fuse faulty.	• Exchange fuse.
	Bulb faulty.	• Exchange bulb.
Automatic closing doesn’t function.	Dead man operation active.	• Deactivate dead man operation: Set DIP switch to “OFF”.
	Constant command “OPEN”.	• External timeswitch connected → no error, see Chapter “6.14 Automatic closing”.
	Light barrier broken, faulty or not correctly recognised. LED2 (Safety) flashes once intermittently.	• Remove obstacle.

12 Terminal diagram (overview)



1. Mains voltage: AC 230 V ± 10% 50/60 Hz
2. Motor connection (max. motor power 800 W)
3. Warning light (max. 80 W)
4. Pre-limit switch
5. Light barrier with NC contact
6. 2-wire light barrier (alternative to 5)
7. Optical safety contact strip from FRABA
8. Electrical 8kOhm safety contact strip (alternative to 7)
9. Arrester
10. Pulse button
11. EMERGENCY OFF switch
12. 3-function pad
13. 2-function pad

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