Comfort 257.2

Operator system for underground and collective garages

GB

Installation and Operating Instructions

Marantec

Torantriebe automatisch am besten

www.marantec.com

1. Meaning of symbols

Advice

Caution!
Danger of personal injury!
The following safety advice must be observed at all times so as to avoid personal injury!

Attention!
Danger of material damage!
The following safety advice must be observed at all times so as to avoid material damage!

Advice / Tip

Check

Reference

Identification plate on control unit

Type: _____

Art. No.: _____

Product No.: _____

Motor unit identification plate

Type: _____

Art. No.: _____

Product No.: _____

2. Table of contents

3. General safety advice

Please read carefully!

Target group
This operator system may only be installed, connected and put into operation by qualified and trained professionals!
Qualified and trained specialist personnel are persons
- who have knowledge of the general and special safety regulations,
- who have knowledge of the relevant electro-technical regulations,
- with training in the use and maintenance of suitable safety equipment,
- who are sufficiently trained and supervised by qualified electricians,
- who are able to recognise the particular hazards involved when working with electricity,
- with knowledge regarding applications of the EN 12635 standard (installation and usage requirements).

Warranty
For an operations and safety warranty, the advice in this instruction manual has to be observed. Disregarding these warnings may lead to personal injury or material damage. If this advice is disregarded, the manufacturer will not be liable for damages that might occur.

Batteries, fuses and bulbs are excluded from warranty.

To avoid installation errors and damage to the door and operator system, it is imperative that the installation instructions are followed. The system may only be used after thoroughly reading the respective mounting and installation instructions.

The installation and operating instructions are to be given to the door system user, who must keep them safe.
They contain important advice for operation, checks and maintenance.

This item is produced according to the directives and standards mentioned in the Manufacturer's Declaration and in the Declaration of Conformity. The product has left the factory in perfect condition with regard to safety.

Power-operated windows, doors and gates must be checked by an expert (and this must be documented) before they are put into operation and thereafter as required, but at least once a year.

Correct use
The operator system is designed exclusively for opening and closing garage doors.
The operator must be used in a dry place.
The maximum push and pull force must be observed.

Door requirements
The door must:
- stand still alone (by balance of springs),
- run smoothly.

Beside the advice in these instructions, please observe the general safety and accident prevention regulations!
Our sales and supply terms and conditions are effective.

Information on installing the operator system
- Ensure that the door is in good mechanical condition.
- Ensure that the door can stop in any position.
- Ensure that the door can be easily moved in the OPEN and CLOSE directions.
- Ensure that the door opens and closes properly.
- Remove all unnecessary components from the door (e.g. cables, chains, brackets).
- Render any installations inoperable that will no longer be needed after the operator system has been installed.
- Before commencing cabling works it is very important to disconnect the operator system from the electricity supply.
  Ensure that the electricity supply remains disconnected throughout the cabling works.
- Adhere to the local protection regulations.
- Lay the electricity supply cables and control cables; these MUST be laid separately. The controls voltage is 24 V DC.
- Install the operator system with the door in the CLOSED position.
- Install all the impulse transmitters and control devices (e.g. remote control buttons) within sight of the door and at a safe distance from the moving parts of the door. A minimum installation height of 1.5 m must be observed.
- Permanently fix the warning signs, which advise of the danger of becoming trapped, at conspicuous locations.
- Ensure that no part of the door extends across public footways or roads when the installation is complete.

Information on commissioning the operator system
After initial operation, the persons responsible for operating the door system, or their representatives must be familiarised with the use of the system.
- Make sure that children cannot access the door control unit.
- Before moving the door, make sure that there are neither persons nor objects in the operating range of the door.
- Test all existing emergency command devices.
- Never insert your hands into a running door or moving parts.
- Pay attention to any parts of the door system that could cause crushing or shearing damage or accidents.
  The EN 13241-1 regulations must be observed.

Information on servicing the operator system
Grease and oil can attack the plastic materials of the drive system and lead to the plastic becoming cracked and fractured. To prevent damage, the drive system must not be oiled or greased.
To ensure proper operation, the following items must be checked regularly and repaired if necessary.
Before any works to the door system are undertaken, the operator system must be disconnected from the mains.
- Check once a month to ensure that the operator system reverses if the door encounters an obstacle.
  Depending on the operational direction of the door, place a 50 mm high/wide obstacle in its path.
- Check the settings of the OPEN and CLOSE automatic cut-out function.
- Check all movable parts of the door and operator system.
- Check the door system for signs of wear or damage.
- Check whether the door can be easily moved by hand.

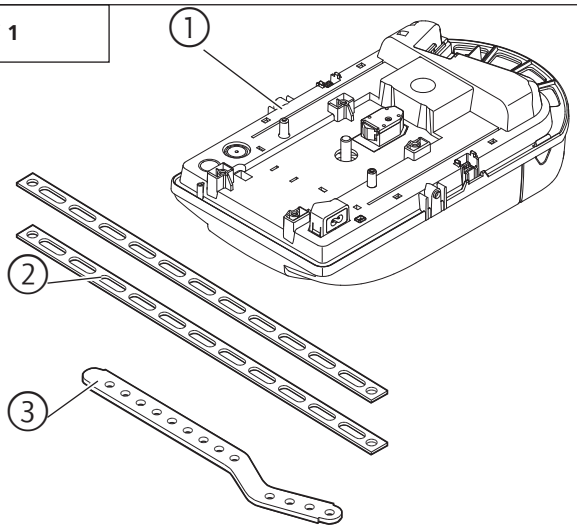
Information on cleaning the operator system
Never use water jets, high pressure cleaners, acids or bases for cleaning.

4. Product overview

4.1 Comfort 257.2 supply package

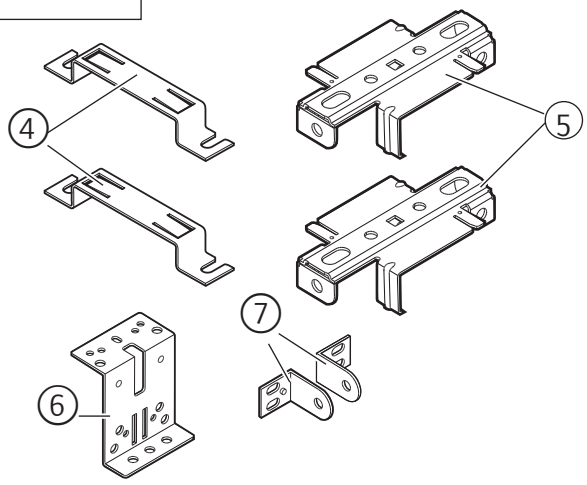
Standard package

4.1 / 1



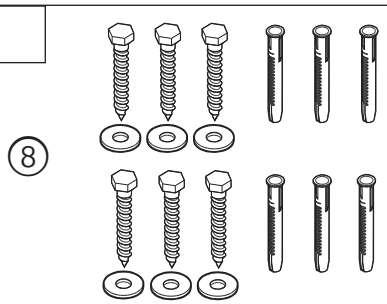
1 Comfort 257.2 motor unit
2 Support plate
3 Door link

4.1 / 2



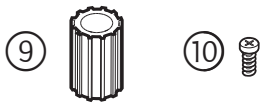
4 Boom clamps (2x)
5 Suspension cramps (2x)
6 Door connector element
7 Door link bracket (2x)

4.1 / 3



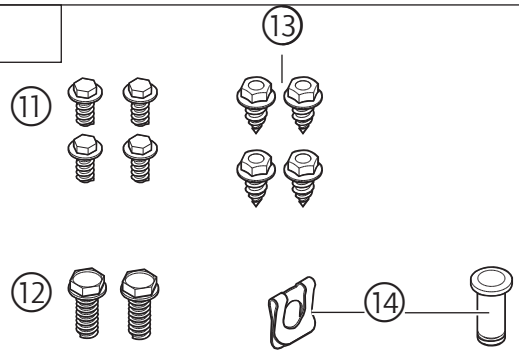
8 Fixing materials for the boom

4.1 / 4



9 Adapter sleeve
10 Screw 4.0 x 10

4.1 / 5



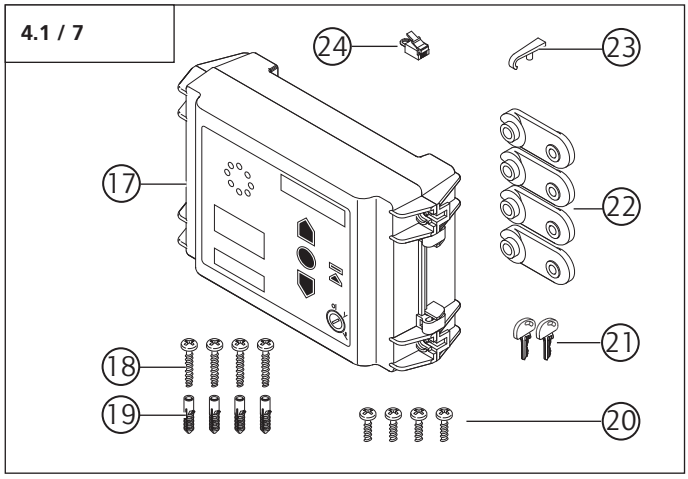
11 Screw 6 x 14 (4x)
12 Hexagonal head screw M6 x 20 (2x)
13 Self-tapping screw 6.3 x 16 (4x)
14 Bolt A8 with locking plate

4.1 / 6

15 Warning sticker
16 Sticker for express programming

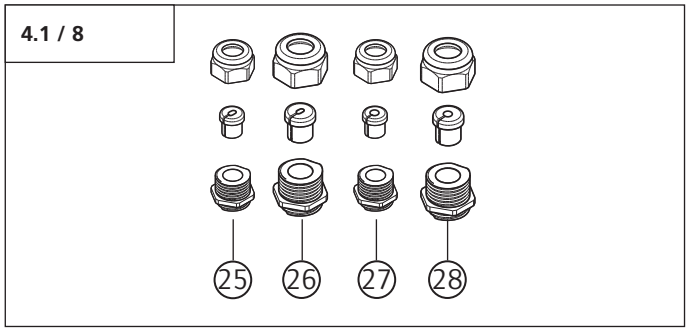
In addition to the components included in the standard package, the following accessories are required for the installation:
- Operating control
- Drive boom

Control vario control unit



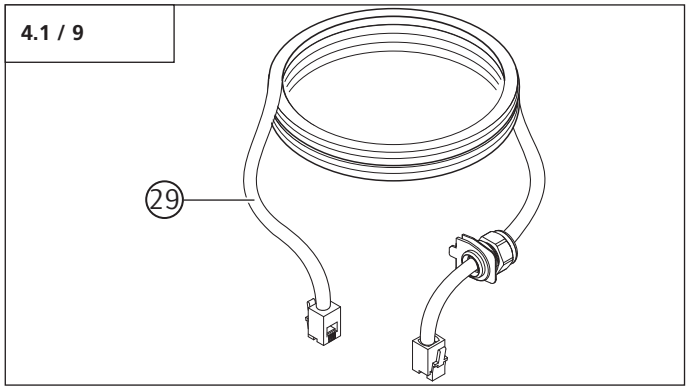
17 Control vario control unit
18 Wood screw 4 x 35 (4x)
19 Wall plug (4x)
20 Plastic screw 4 x 10 (4x)
21 Key (2x)
22 Foot for control unit housing (4x)
23 Operating handle
24 Shorting plug

Screw connection set



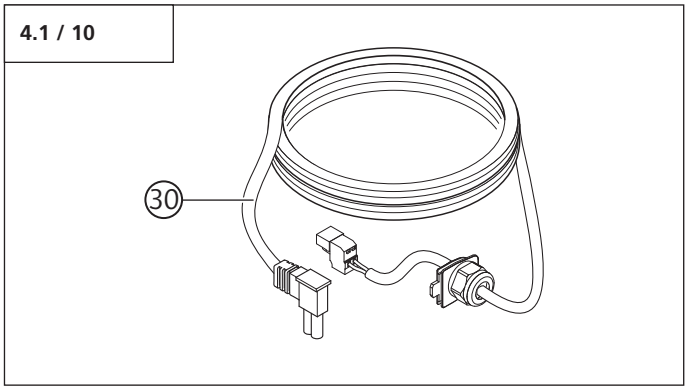
25 M16 screw fixing for 4-pole flat cable
26 M20 screw fixing for 6-pole flat cable
27 M16 screw fixing for 4 - 6 mm round cable
28 M20 screw fixing for 6 - 9 mm round cable

Cable loom, motor unit - control unit



29 Cable loom, motor unit - control unit

Cable loom, motor unit – mains routing

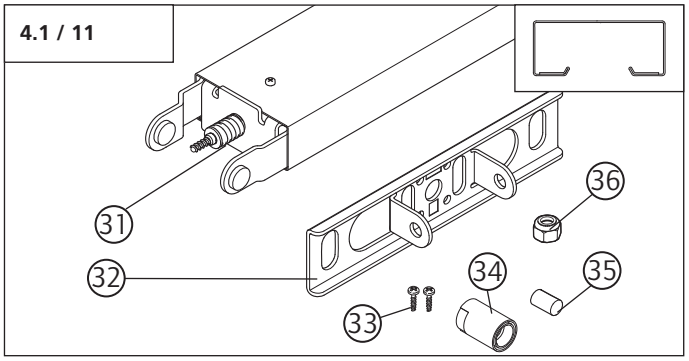


30 Cable loom, motor unit – mains routing

Drive booms

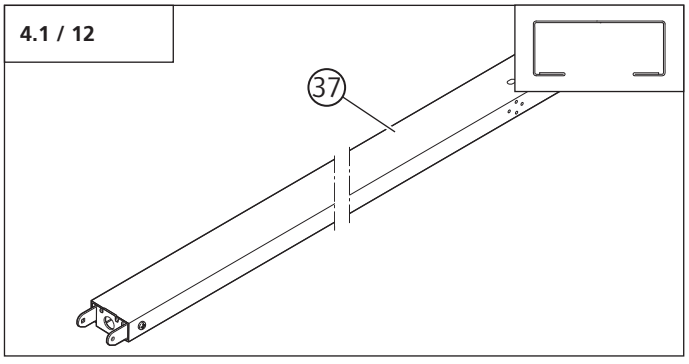
The motor unit can be combined with various types of drive boom.

Rail type 1



31 Operator rail
32 Lintel joining plate, rail type 1
33 Screw B4 4.2 x 13 (2x)
34 Securing sleeve, short
35 Bolt 8 x 12.5
36 M6 nut, self-locking

Rail type 2



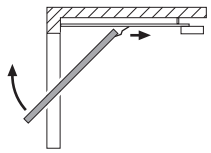
37 Operator rail

4.2 Door variations

The standard package with the appropriate operator boom is suitable for the following types of door.

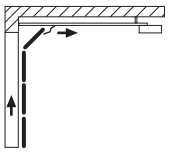
Swing out retractable up-and-over door

4.2 / 1



Sectional door, up to 3 m wide

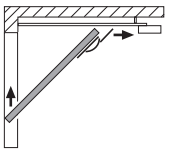
4.2 / 2



Special accessories are necessary for the following door type.

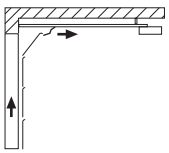
Non-swing out retractable up-and-over door

4.2 / 3



Sectional door, greater than 3 m wide

4.2 / 4



5. Preparation for mounting

Attention!
In order to guarantee correct mounting, carry out the following checks before installing.

Supply package
- Check the package to ensure that all the parts are included.
- Check that you have all the additional components that are necessary for your particular installation requirements.

Garage
- Check whether your garage has a suitable mains connection and a mains disconnection facility.

Door system

Attention!
For garages without a second entrance: the garage door must be fitted with an emergency release system to allow access to the garage if a fault occurs.

If a release kit is used:
- Check that the door locks are functioning correctly. The door locks may not be disabled under any circumstances.

If a release kit is **not** used:
- Dismantle or disable the door locks.
- Check that the door to be operated fulfils the following conditions:
  - the door must be easily moveable by hand,
  - the door should automatically remain in every position into which it was moved.

Reference:
When using and installing accessories, always observe the specific instructions included with the equipment.

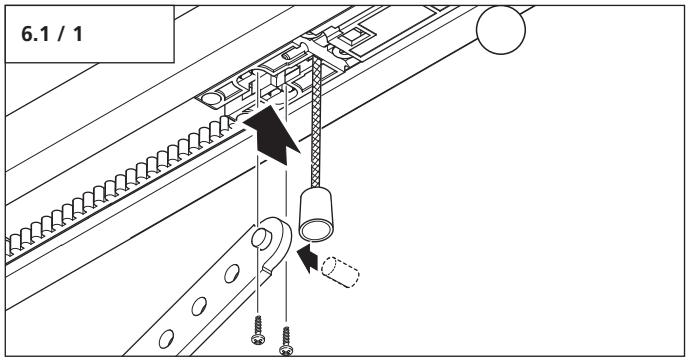
6. Installation

6.1 Installing the motor unit and drive boom

Attention!
Grease and oil can attack the plastic materials of the drive system and lead to the plastic becoming cracked and fractured. To prevent damage, the drive system must not be oiled or greased.

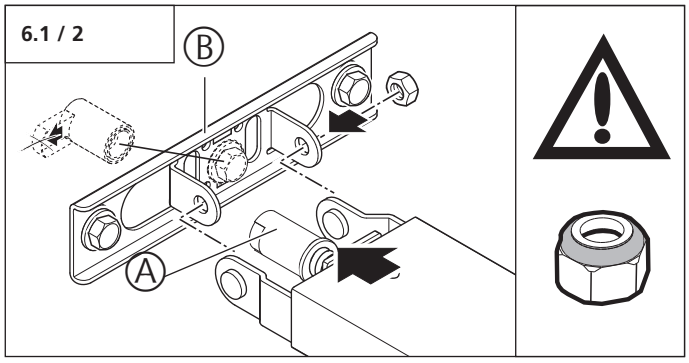
Installation, rail type 1

6.1 / 1



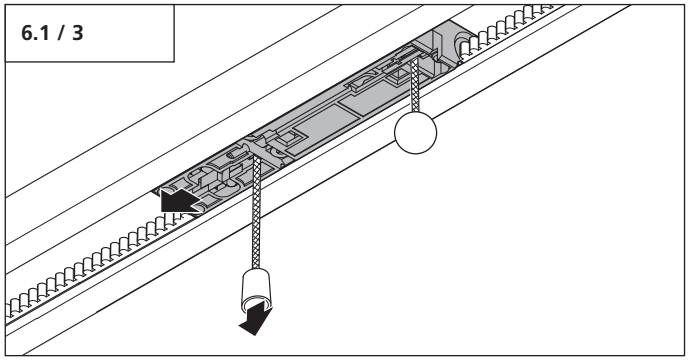
• Fit the door link.

6.1 / 2



• Insert the securing sleeve (A).
• Install the lintel joining plate (B).

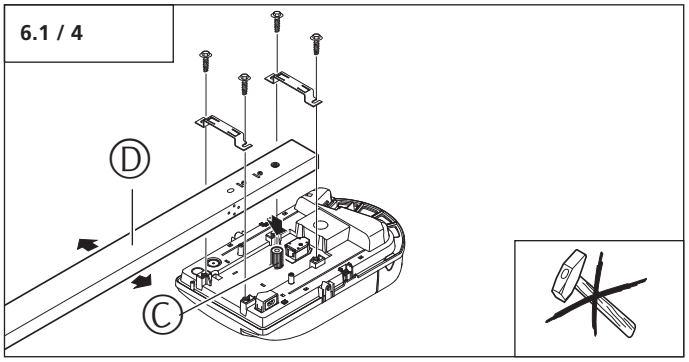
6.1 / 3



• Release the carriage.

Attention!
The drive boom (C) must be carefully mounted on the motor unit (F).
Do not use force, as this could damage the gear teeth!

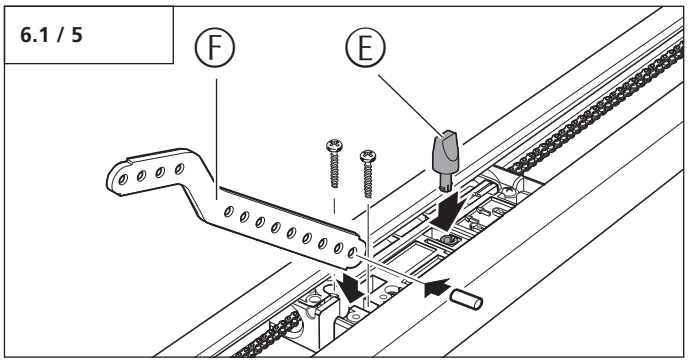
6.1 / 4



• Push the adapter sleeve (C) onto the drive shaft.
• Mount the boom (D) on the motor housing.

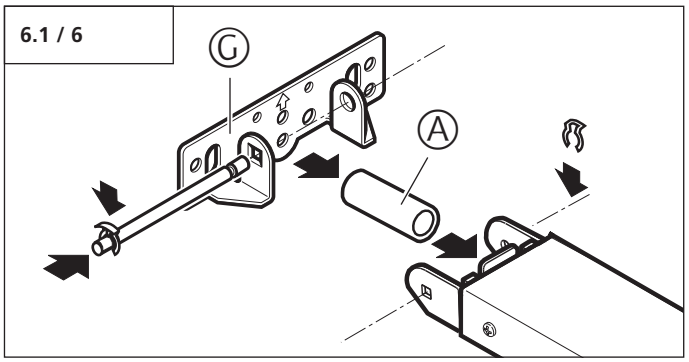
Installation, rail type 2

6.1 / 5



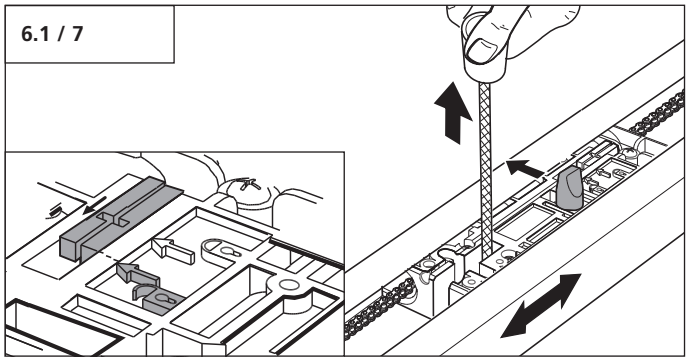
• Insert the release pin (E).
• Fit the door link (F).

6.1 / 6



• Insert the securing sleeve (A).
• Install the lintel joining plate (G).

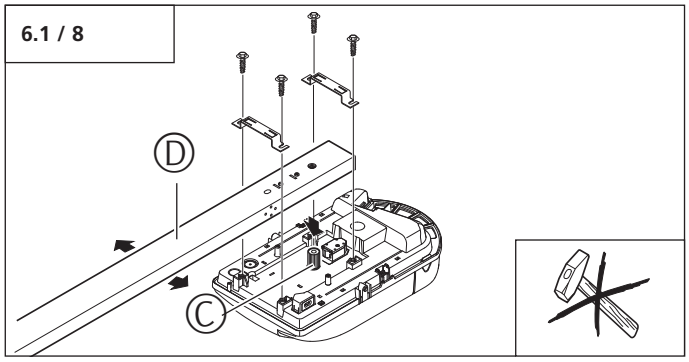
6.1 / 7



• Release the carriage.

Attention!
The drive boom must be carefully mounted on the motor unit.
Do not use force, as this could damage the gear teeth!

6.1 / 8



• Push the adapter sleeve (C) onto the drive shaft.
• Mount the boom (D) on the motor housing.

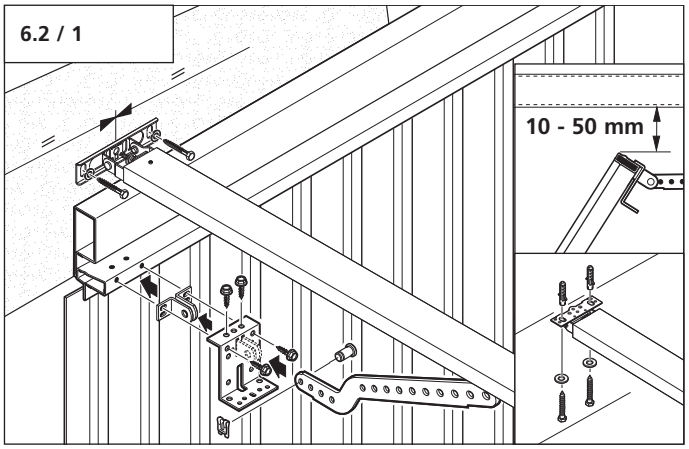
6.2 Installation on the door

Caution!
The drive system must be prevented from falling before it has been properly fixed.

Attention!
In order to ensure that the door balance is correct:
- the lintel joining plate for the operator rail must be mounted at the mid point, above the door connector,
- at the highest point reached by the door, the upper edge of the door leaf must be 10 - 50 mm below the horizontal underside of the operator rail.

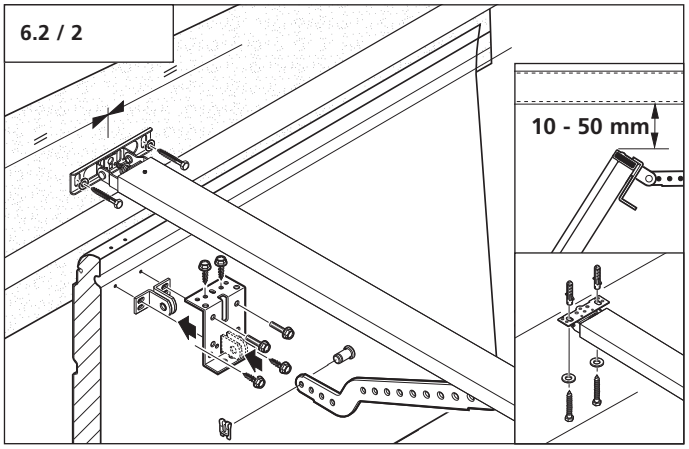
Installation on the up-and-over door

6.2 / 1



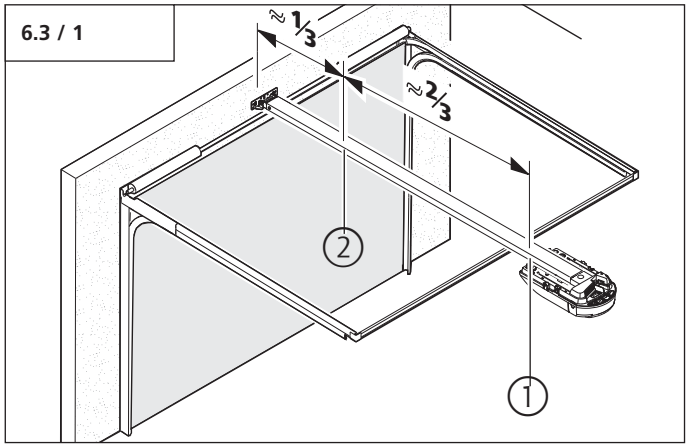
Installation on the sectional door

6.2 / 2



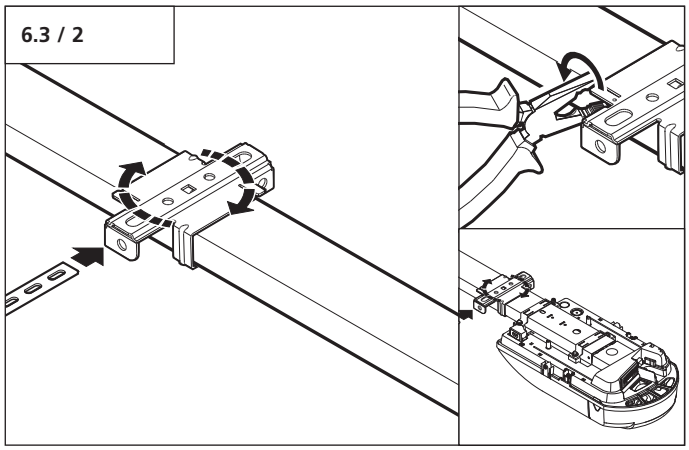
6.3 Installation on the ceiling

6.3 / 1



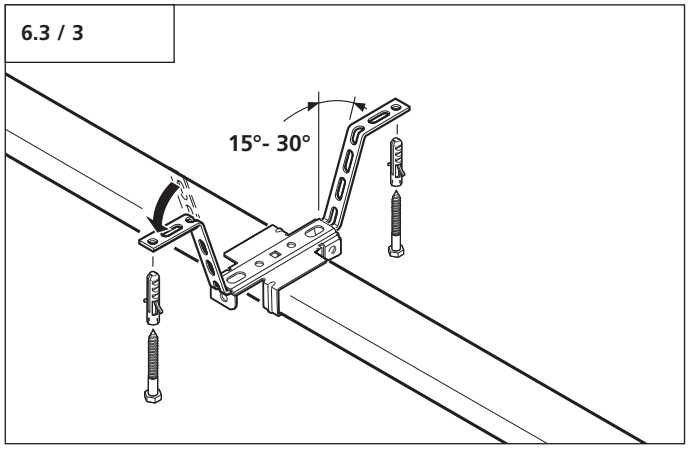
• Determine mounting positions 1 and 2.

6.3 / 2



• Mount the suspension cramps at mounting positions 1 and 2.

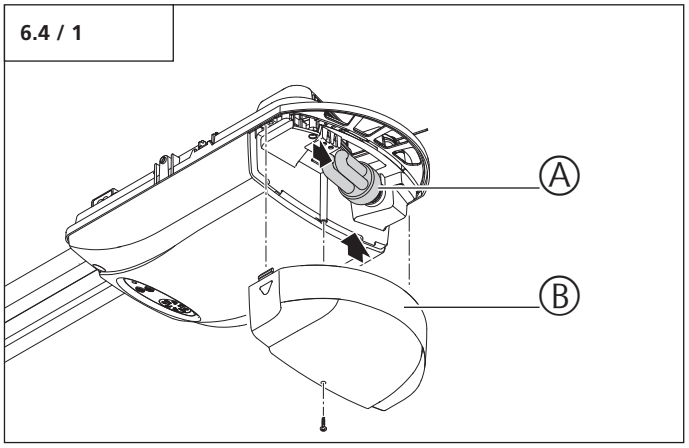
6.3 / 3



• Bend the support plates.
• Fix the support plates to the ceiling.

6.4 Lighting

6.4 / 1



• Fit the energy saving bulb (A).
• Screw the lamp cover (B) firmly into place.

6.5 Release

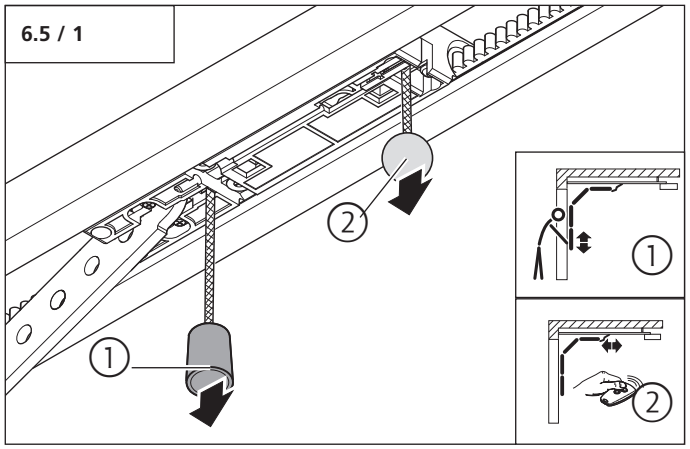
Caution!
Uncontrolled door movements may occur when the release function is activated:
- if the door springs are weak or broken;
- or if the door is not balanced.

When opening the door manually, the carriage can collide with the motor unit.

If the door has been released, it should only be moved at a moderate speed!

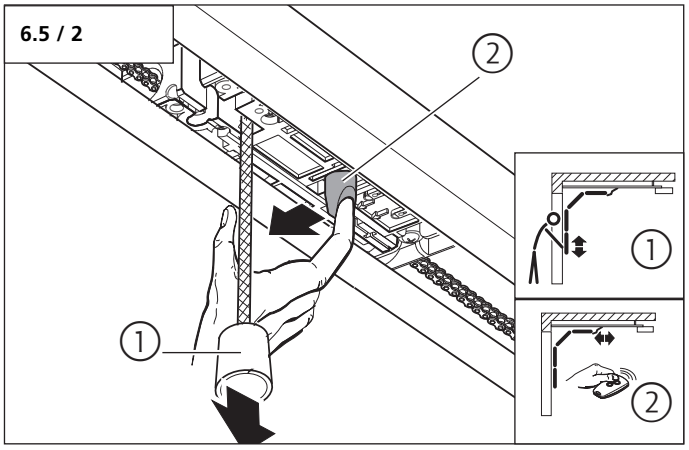
- Construct a physical barrier to limit the extent of the door travel in the opening direction.
- Check that the release pull cord is at a minimum height of 1.8 m.
- Attach the "release warning sign" to the release pull cord.

Rail type 1



1. Disconnect door from the motor unit.
2. Reconnect door and motor unit.

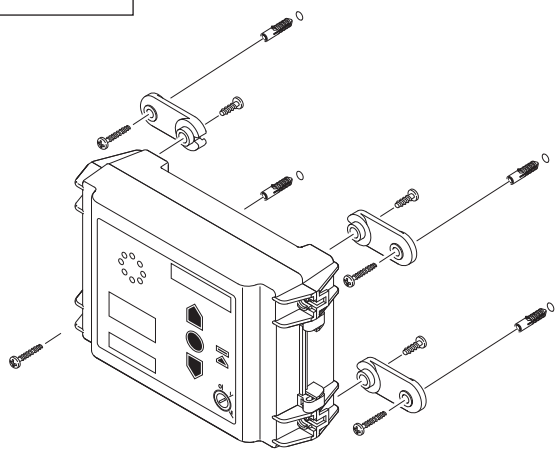
Rail type 2



1. Disconnect door from the motor unit.
2. Reconnect door and motor unit.

6.6 Mounting the Control vario control unit

6.6 / 1

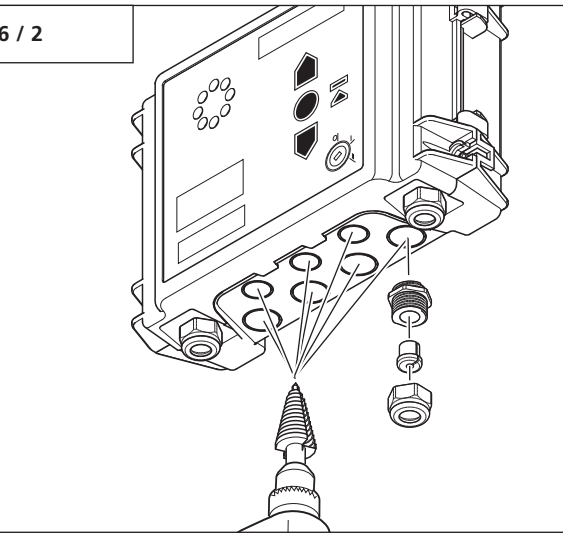


- Mount the Control vario control unit on the same side as the motor unit.

Creating further cable inlets

It is only necessary to create further cable inlets if additional systems are to be connected to the control unit.

6.6 / 2



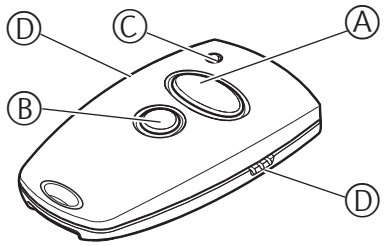
- Using a step drill, open up the corresponding cable inlet.
- Close the inlet using the corresponding screw fitting.

7. Hand transmitter

7.1 Operation and accessories (optional)

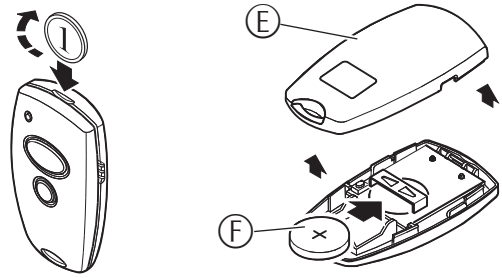
Caution!
- Children are not allowed to operate the hand transmitters!
- Before operating the hand transmitter, make sure that there are neither persons nor objects in the operating range of the door.

7.1 / 1 Overview.

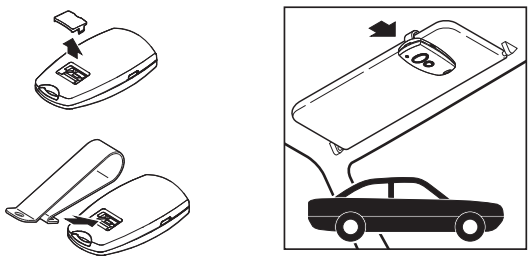


A Operating button - large
B Operating button - small
C Battery - transmission control light
D Transmission socket
E Reverse side of the hand transmitter
F Battery 3V CR 2032

7.1 / 2 Replace battery.



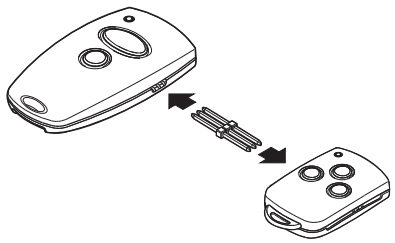
7.1 / 3 Accessory sun visor clip.



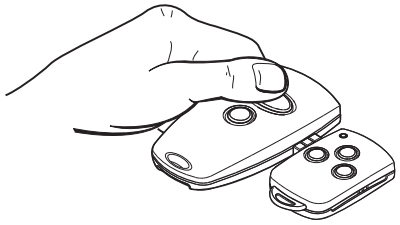
7.2 Hand transmitter coding

7.2.1 Transfer the coding

7.2.1 / 1 Connect hand transmitter.

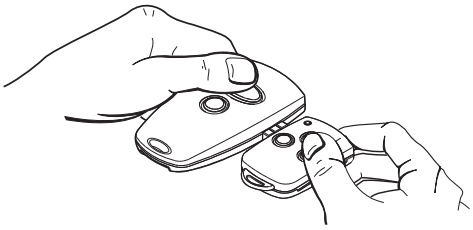


7.2.1 / 2 Operating the master transmitter.



- Actuate the master transmitter and hold the button. The transmitter LED lights up.

7.2.1 / 3 Transferring the code.



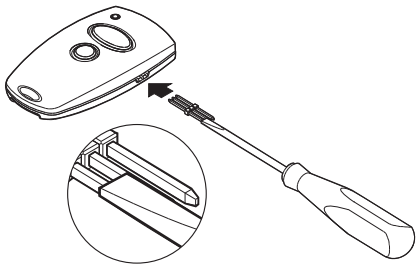
- Whilst keeping the button on the master transmitter depressed, press the desired button on the other hand transmitter. The LED flashes.

After 1 - 2 seconds, the LED on the newly programmed transmitter lights up permanently. The programming procedure is complete.

- Remove the transmission plug.

7.2.2 Change coding

7.2.2 / 1 Changing the code.



- Connect one end of the transmission plug to the hand transmitter.
- At the free end of the transmission plug, short-circuit one of the outer pins with the centre pin adjacent to it (e.g. using a screw driver).
- Press the desired button on the hand transmitter. A new code is then generated by the integrated random coding facility. The LED flashes quickly.

As soon as the LED lights up permanently, the hand transmitter has been programmed with a new code. The button can then be released and the transmission plug removed.

Advice:
- After the hand transmitter has been re-programmed, the operator system must also be re-programmed to respond to the new code.
- For multi-channel transmitters, the programming process must be carried out for each button separately.

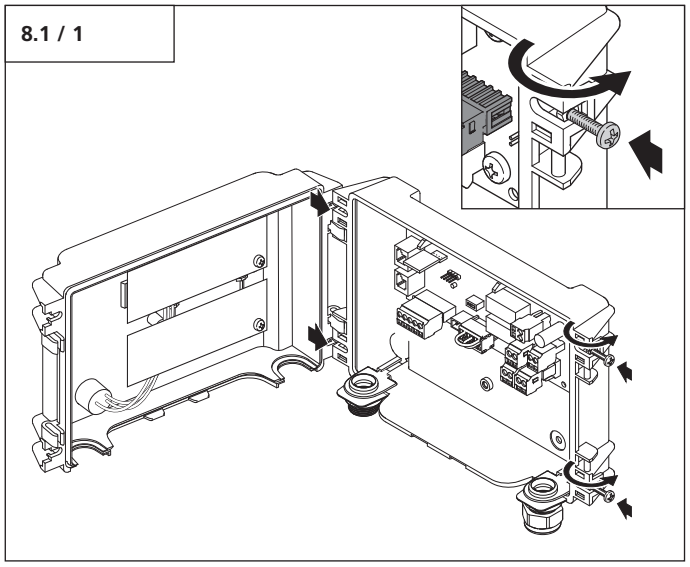
8. Initial operation

8.1 Cabling of the operator system and the Control vario control

Caution!
Danger of electric shock:
Before cabling works commence, a check must be carried out to ensure that the cables are at zero voltage.
Measures must be taken to ensure that the cables remain dead for the duration of the works (e.g. prevent the power supply from being switched back on).

Attention!
- To avoid damage, it is essential that the following points be observed:
  - The local protection regulations are to be complied with at all times.
  - The mains cables and control cables MUST be laid separately.
- To maintain the specified protection category of the operating system, the cables must be fitted with the correct gaskets.

8.1 / 1

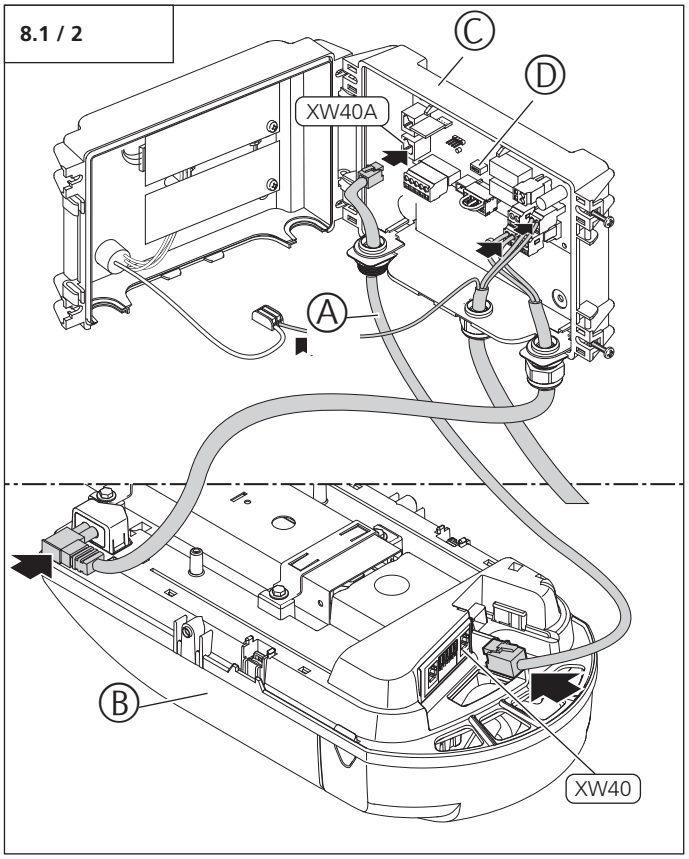


Advice:
The screws need not be removed in order to open the housing cover.

- Loosen all 4 screws on the housing cover.
- Swivel all four screws away from the cover.
- Open the housing cover out to one side.

Attention!
To ensure that the system functions properly,
- the plugs of the system cable (A) must be inserted in the designated sockets in the motor unit (B) and in the operating control (C), and
- the connecting cables (E + F) must be connected up correctly.

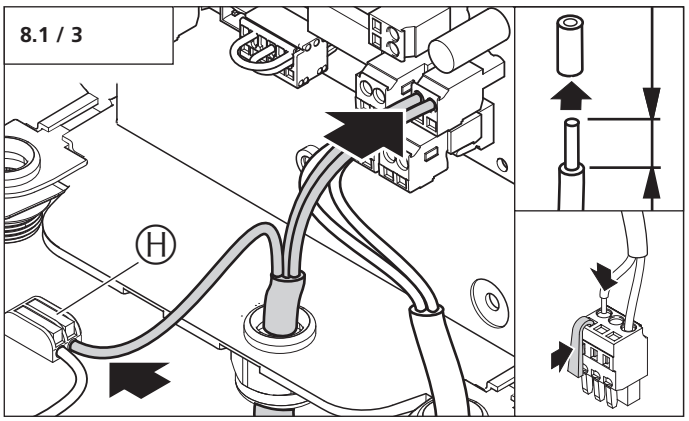
8.1 / 2



Motor unit	Connection	Control unit
XW40	<--->	XW40A

- Connect the mains routing cable (E) to the motor unit (B) and the control unit (C).
- Break open the cable inlet in the control unit (C) at position (G).
- Feed the mains cable (F) into the control unit (C) through opening (G).

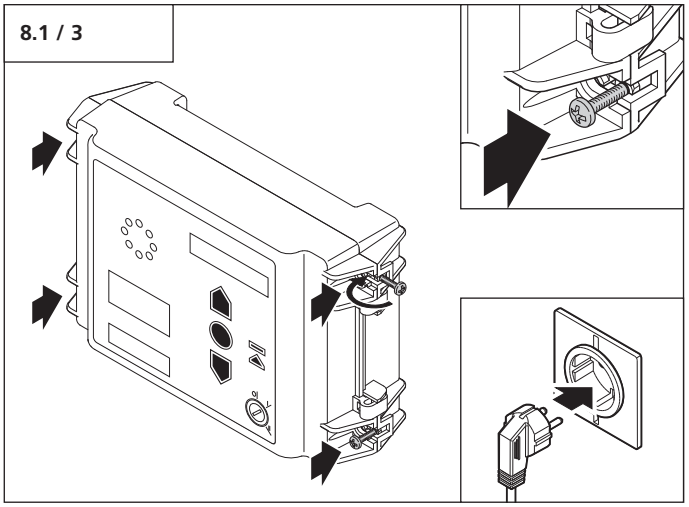
Advice:
Programming can be disabled with the DIP switch (D).
ON Programming enabled
OFF Programming disabled



• Connect the mains cable to terminal XN 81 and to the PE connection (H).

Designation	Terminal colour
L	Brown
N	Blue
H	Green/yellow

Attention!
- To avoid damage to the cabling, care must be taken not to trap the cables when closing the cover.
- To maintain the specified protection category of the operator system
  - the inlet openings must be fitted with suitable cable gaskets,
  - the cables must lie correctly in the inlets,
  - the plug-in cable inlets must be correctly connected to the control unit.



• Close the housing cover.

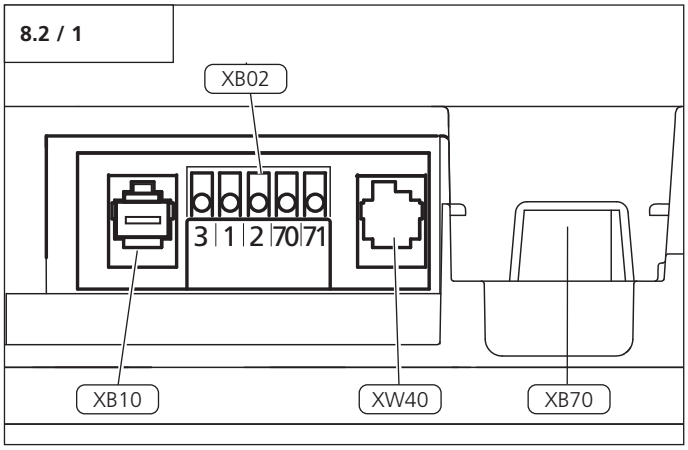
• Swivel all four screws into place above the housing cover.

• Screw the housing cover tight..

8.2 Control connections for operator system

Caution!
Danger of electric shock:
Before any cabling works begin, it must be ensured that the cables are disconnected from the power supply.
During cabling works, it must be ensured that the cables remain disconnected from the power supply at all times (e.g. prevent reconnection).

Attention!
In order to avoid damaging the controls:
- The local safety regulations must be complied with at all times.
- It is very important that mains cables are laid separately from control cables.
- The controls voltage must be 24 V DC.
- If external voltages are applied at terminals XW40, XB10 or XB02, the entire electronic system will be destroyed.
- Only potential-free normally open contacts may be connected to terminals 1 and 2 (XB02).
- The shorting plug should never be plugged into the XP020 system socket!



Label	Type / function	i
XB02	Connection of external control elements without system cabling and two-wire photocell	9.3 / Level 5 / Menu 1
XB10	Connection of external control elements with system cabling	-
XW40	Connection for operating control	8.1
XB70	Has no function	-

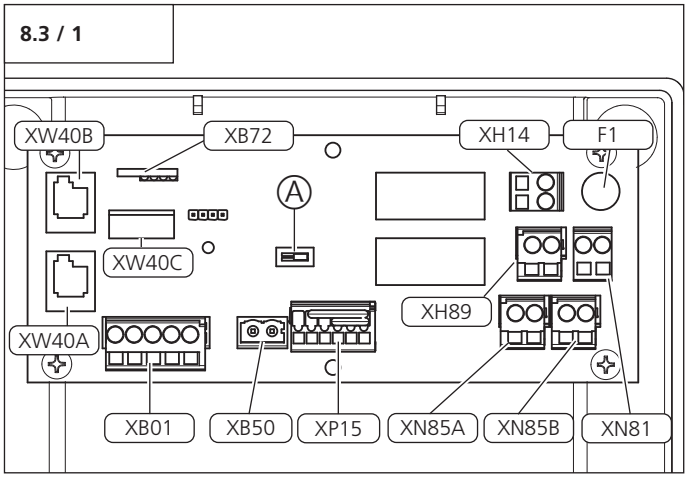
Reference:
When installing external control elements, or safety and signal equipment, the relevant instructions must be observed.

Advice:
Before connecting a control element to the terminals with system sockets, the corresponding shorting plug must first be removed.

8.3 Control connections for operating control

Caution!
Danger of electric shock:
Before cabling works commence, a check must be carried out to ensure that the cables are at zero voltage.
Measures must be taken to ensure that the cables remain dead for the duration of the works (e.g. prevent the power supply from being switched back on).

Control connections for operating control

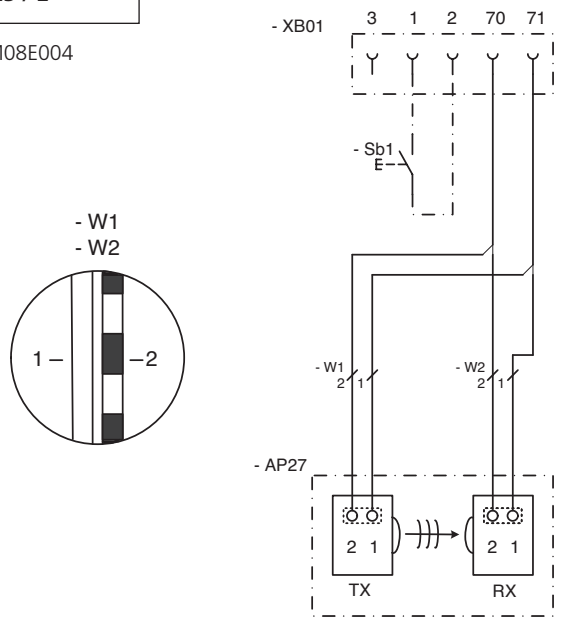


Label	Type / function	
A	DIP switch programming	8.1
F1	Fuse 6.3 A	–
XB01	Two-wire photocell / external photocell and impulse button	8.3 / 2, 8.3 / 3
XB50	Supply of external control elements, 24 V DC, max. 100 mA	8.3 / 8
XB72	Connection of modular antenna	–
XH14	Wiping impulse connection	8.3 / 7
XH89	Signal light connection NO supplied with 230 V	8.3 / 7
XN81	Plug for mains connection 1N~230 V	8.3 / 5
XN85A	Mains connection protected for routing to motor	8.3 / 6
XN85B	Mains connection protected for routing to EWM modules	8.3 / 6
XP15	Strip, 6-pole / control - safety circuit	8.3 / 4
XW40A	MS BUS motor	–
XW40B	MS BUS extension module	–
XW40C	MS BUS display	–

Connection XB01 (two-wire photocell)

8.3 / 2

M08E004

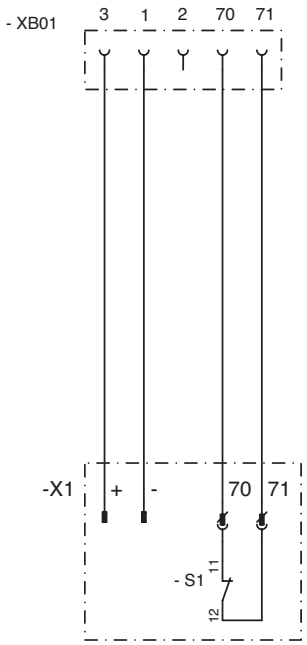


Label	Type / function
1	GND 0V
2	Impulse
3	24 V
70	GND CLOSE connection
71	Connection of photocell CLOSE
AP27	Photocell transmitter TX, receiver RX
RX	Photocell receiver RX
TX	Photocell transmitter TX
Sb1	Impulse button
XB01	Connecting terminal for control element

Connection XB01 (external photocell)

8.3 / 3

M09E045



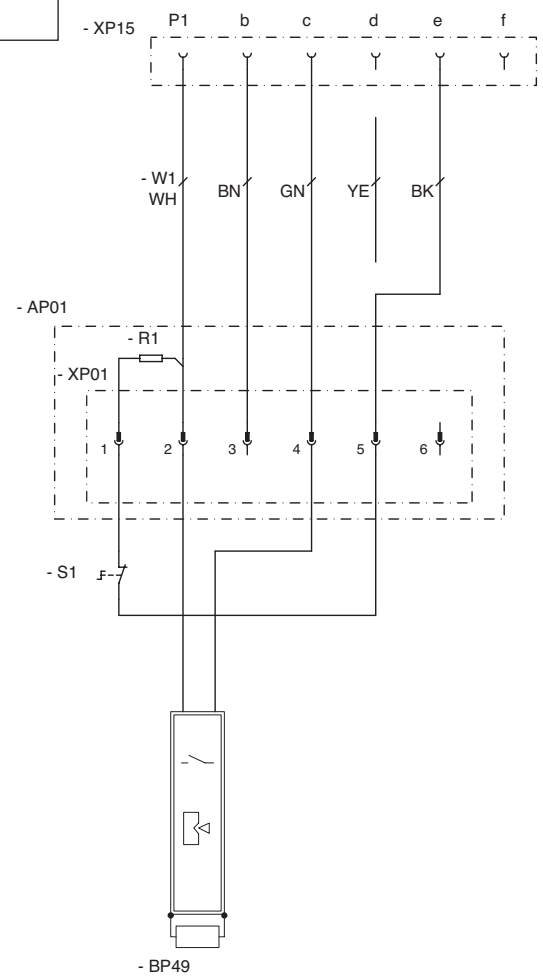
Label	Type / function
XB01	Connecting terminal for control element
1 (XB01)	GND 0V
2 (XB01)	Impulse
3 (XB01)	+ 24 V DC
70 (XB01)	GND connection
71 (XB01)	Connection of photocell CLOSE
X1	External receiver
70 (X1)	Connection of potential-free NC contact
71 (X1)	Connection of potential-free NC contact
+ (X1)	+ 24 V DC
- (X1)	GND
S1	Potential-free NC contact of photocell

Reference:
After connecting a photocell to XB01, a bus reset must be carried out. (Section 9.3 / Level 1 / Menu 8)

Connection of contact strip and closed circuit

8.3 / 4

M09E042

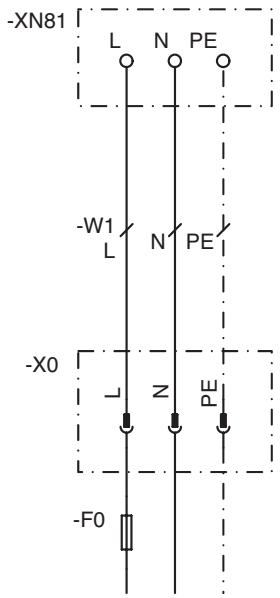


Label	Type / function
AP01	Connection unit on one side
R1	Resistor 8K2
XP01	Terminal strip, 6-pole
BP49	Contact edge CLOSED
S1	Slack rope switch
XP15	Strip, 6-pole / control - safety circuit
BN	Coiled cable, brown
BK	Coiled cable, black
GN	Coiled cable, green
WH	Coiled cable, white
YE	Coiled cable, yellow

MS BUS vario connections for underground car park control

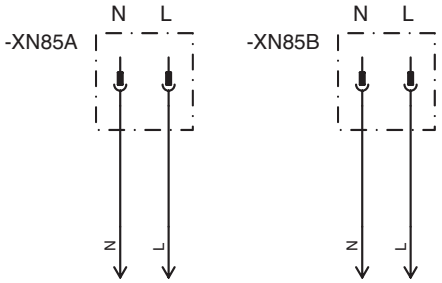
8.3 / 5

M10E022



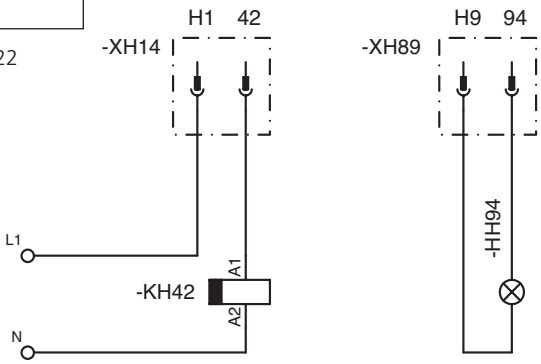
8.3 / 6

M10E022



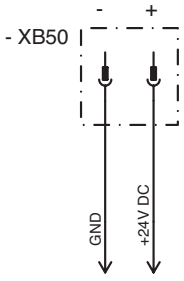
8.3 / 7

M10E022



8.3 / 8

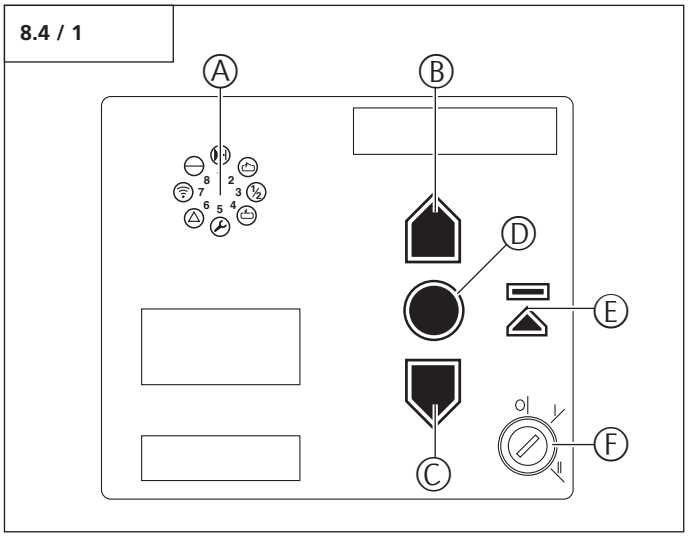
M10E022



Label	Type / function
XB50	Supply of external control elements, 24 V DC, max. 100 mA
F0	Max. 16 A
HH94	Signal light
KH42	Time relay 3-minute light
X0	Plug for mains connection 1N~50..60 Hz 230 V
XH14	Wiping impulse connection
XH89	Connection of signal light NO supplied with low voltage
XN81	Plug for mains connection 1N~230 V
XN85A	Mains connection protected for routing to motor
XN85B	Mains connection protected for routing to EWM modules
L1 (XH14)	On-site supply voltage
N (XH14)	On-site supply voltage

8.4 Overview of the Control vario control unit

8.4 / 1



Operating elements

Label	Type / function	
A	Carousel display	10.1
B	OPEN button (+) (e.g. to drive the door to the OPEN position or to increase parameters in the programming mode)	-
C	CLOSE button (-) (e.g. to drive the door to the CLOSED position or to decrease parameters in the programming mode)	-
D	STOP button (P) (e.g. to switch to programming mode or to save parameters)	-
E	Intermediate OPEN button (e.g. to drive the door to the intermediate OPEN position, or to close the door from the intermediate OPEN position)	-
F	Key switch 0 = Locked I = Control vario control unit ready for operation II = Keypad on cover disabled	-

8.5 Express programming

8.5.1 General notes on express programming

Advice:
- The carriage stop must be fitted before carrying out express programming.
- For proper initial operation of the operator system, the express programming procedure must be carried out. This applies for initial operation and after a reset.

The basic functions of the operator system are set during the express programming procedure.
- Door OPEN position
- Door CLOSED position
- Remote control

The programming procedure is a consecutive process. It is essential that this procedure be carried out.

Preconditions
The following conditions must be assured before express programming can commence:
- The door must be in the CLOSED end position.
- The carriage must be connected up.
- The DIP switch is set to ON.

Advice:
When programming the OPEN and CLOSED door positions, the reference point must be passed.

8.5.2 Programming buttons

The controls are programmed using the OPEN (+), CLOSE (-) and STOP (P) buttons.
If no buttons are pressed within 120 seconds while in programming mode, the controls revert to operating mode.
A corresponding message is displayed.

Reference:
The messages are explained in Section 10.

Starting the express programming

Advice:
The operator system is already in express programming mode when set in operation for the first time.

- Turn the key to the "0" position.
- Press the STOP button and keep it pressed.
- Switch the key from position "0" to position "1" within 4 seconds and then release the STOP button.

The complete express programming is shown in the following operation plan.

Advice:
The express programming can be exited at any time by pressing the P button 3 times.

8.5.3 Express programming sequence

Operating mode	1.	<4s	**Start express programming / Programme the door OPEN end position**
	2.		Drive the door to the OPEN position
	3.		Correct the "door OPEN" position using (+) and (–)
	4.	1x <1s	**Save the "door OPEN" position / Programme the "door CLOSED" position**
	5.		Drive the door to the CLOSED position
	6.		Correct the "door CLOSED" position using (+) and (–)
	7.	1x <1s	**Save the "door CLOSED" position / Programme the remote control**
	8.		Press the hand transmitter button
	9.		Release the hand transmitter button
	10.	1x <1s	**Save the remote control settings / End the express programming procedure**

Legend:	
LED off	○
LED on	●
LED flashes slowly	☀
LED pulses	☀
LED flashes quickly	☀
Factory default setting	
Not possible	–

8.6 Function test

8.6.1 Learning run for determining the driving power

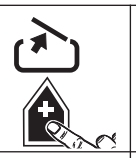
Check:
After express programming and after making changes to the programming menu, the following learning runs and checks must be carried out.

The operator system determines the maximum required driving power during the first two runs after setting the end positions of the door.

- Operate the operator system (with the door coupled) to drive the door once from the CLOSED position to the OPEN position and back to the CLOSED position without interruption.

During this learning run, the operator system determines the maximum push and pull forces and the reserve power required to move the door.

Test:

1.		After pressing the (+) button: The door must open and travel to the saved OPEN end position.
2.		After pressing the (–) button: The door must close and travel to the saved CLOSED end position.
3.		After pressing the hand transmitter button: The operator system must move the door in either the OPEN or CLOSE direction.
4.		After pressing the hand transmitter button while the operator system is running: The operator system must stop.
5.		When the button is pressed again, the operator system moves in the opposite direction.

8.6.2 Checking the automatic cut-out

Caution!
The automatic cut-out must be correctly programmed for the CLOSE and OPEN directions to prevent damage to persons or property.

Automatic cut-out, OPENING
For drive systems where the door has openings in the door wing (diameter of opening > 50 mm):

- Apply a load of 20 kg to the middle of the lower edge of the door whilst the door is running.

The door must stop immediately.

Automatic cut-out, CLOSING
- Place a 50 mm high obstacle on the ground.

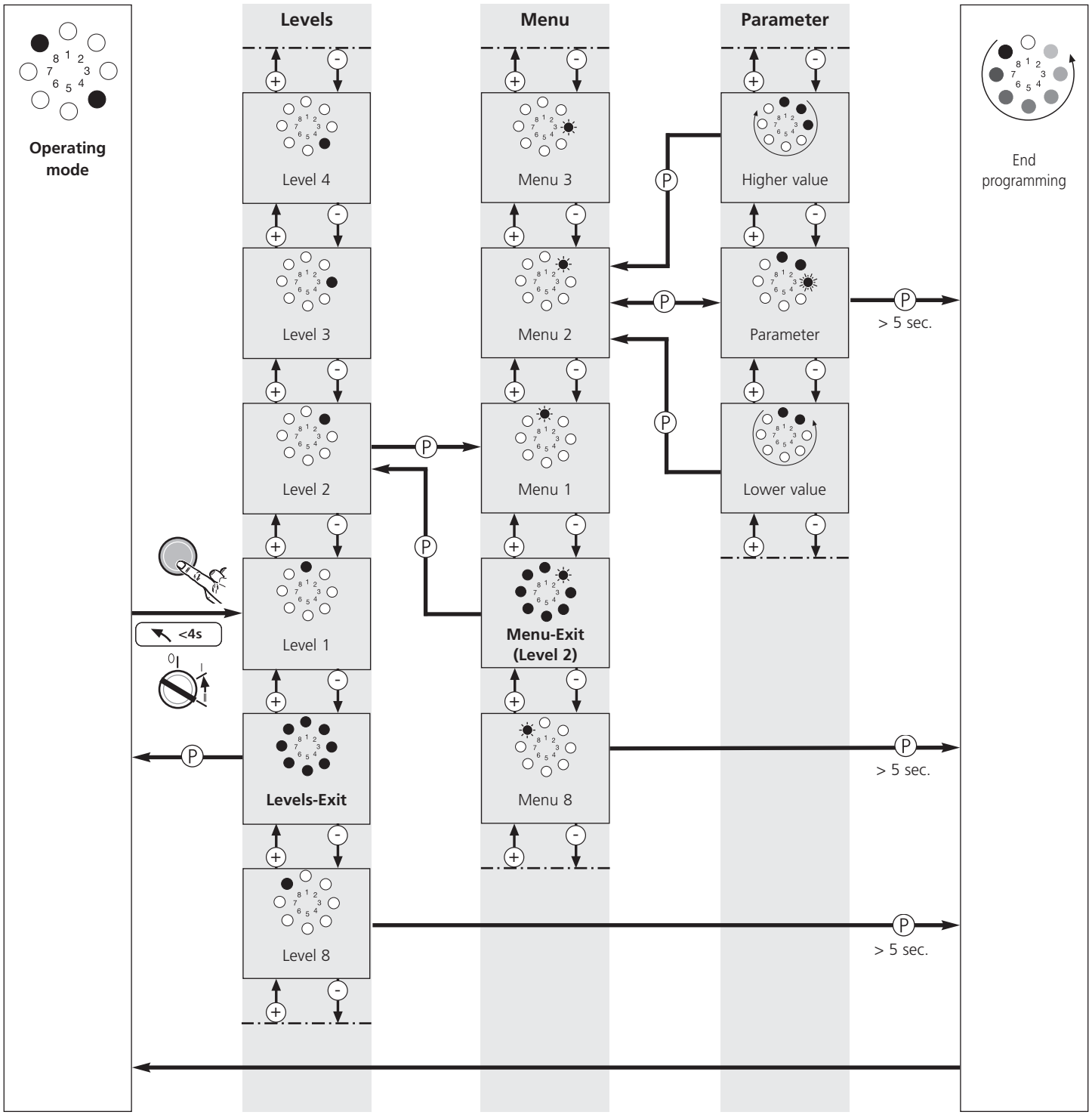
- Drive the door towards the obstacle.

The drive system must stop and reverse when it comes into contact with the obstacle.

Advice:
The parameter settings are still saved if the power supply is disconnected.
Only a reset causes the driving power settings for the OPEN and CLOSE directions to revert to the factory settings.

9. Extended operator functions

9.1 Programming structure for extended operator functions (Example for Level 2, Menu 2)



Legend:	
LED off	○
LED on	●
LED flashes slowly	☀
LED pulses	☀
LED flashes quickly	☀
Factory default setting	
Not possible	–

9.2 General overview of the programmable functions

Level	Menu	Factory default setting
Level 1 – Basic functions	Menu 3: Intermediate position OPEN	–
	Menu 4: Intermediate position CLOSE	–
	Menu 7: Relay output extension	Signal light
	Menu 8: RESET	No reset
Level 2 – Operator settings	Menu 1: Required driving power OPEN	Setting 8
	Menu 2: Required driving power CLOSE	Setting 8
	Menu 3: Automatic cut-out OPEN	Setting 8
	Menu 4: Automatic cut-out CLOSE	Setting 8
Level 3 – Automatic closing timer	Menu 1: Automatic closing timer	Deactivated
	Menu 3: Door open duration	2 Seconds
	Menu 4: Warning time	1 Seconds
	Menu 5: Start-up warning	0 Seconds
	Menu 7: Signal light	Door movement / Warning: flashing Door stoppage: off
	Menü 8: Relay output 2 lane control	Reporting faults
Level 4 – Remote programming	Menu 2: Intermediate position OPEN	–
	Menu 3: Intermediate position CLOSE	–
	Menu 4: OPEN	–
	Menu 5: CLOSE	–
	Menu 6: Entry request	–
	Menu 7: Exit request	–
	Menu 8: EWM relay output (Level 1, Menu 6, L 6)	–
Level 5 – Special function	Menu 1: Programmable impulse input	Impulse
	Menu 4: Lighting duration	180 Seconds
Level 6 - Variable speed	Menu 1: Speed OPEN	Setting 16
	Menu 2: Soft run speed OPEN	Setting 7
	Menu 3: Soft run position OPEN	–
	Menu 4: Speed CLOSE	Setting 16
	Menu 5: Smart run speed CLOSE	Setting 10
	Menu 6: Soft run speed CLOSE	Setting 7
	Menu 7: Smart run position CLOSE	–
	Menu 8: Soft run position CLOSE	–
Level 7 - Servicing and maintenance	Menu 1: Door cycle counter	–
	Menu 2: Maintenance counter	–
	Menu 3: Set the maintenance interval	OFF
	Menu 8: Reset servicing and maintenance	No reset
Level 8 – System settings	Menu 1: Photocell	Operation without photocell
	Menu 2: Closing edge safety device	Door reverses a little (OPEN/CLOSE)
	Menu 3: Automatic cut-out	Door stops (OPEN) Door reverses a little (CLOSE)
	Menu 4: Operating modes	Press-and-release (OPEN/CLOSE)
	Menu 5: Function of the direction command transmitters	Not active
	Menu 6: Function of the impulse command transmitters	STOP only, then standard sequence

9.3 Functions overview for the levels

Caution!
Important factory default settings can be changed using the extended functions.
All the parameters must be set correctly to avoid damage to persons or property.

Level 1 – Basic functions																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Menu 3: Intermediate position OPEN																
Set using the (+ / OPEN) and (- / CLOSE) buttons "Intermediate position OPEN" – closing function is possible with automatic closing timer																
Menu 4: Intermediate position CLOSE																
Set using the (+ / OPEN) and (- / CLOSE) buttons																
Menu 7: Relay output extension																
	A7	B7	C7	D7	E7	F7	G7	H7	I7	J7	K7	L7	–	–	–	–
Menu 8: RESET																
	A8	B8	C8	D8	E8	F8	G8	–	–	–	–	–	–	–	–	–

Attention!
After a reset, all the parameters revert to the factory settings.
In order to ensure that the controls operate properly:
- all the required functions must be re-programmed,
- the remote control unit must be re-programmed,
- the drive system must be driven once to the OPEN and CLOSED door positions.

Advice:
- Only the intermediate position that was programmed last can be used.
- If an automatic closing timer is activated (Level 3 / Menu 1), the relay output (Level 1 / Menu 7) cannot be programmed.

Reference:
If changes are made in Menus 3 and 4 in Level 1, a new performance check must be carried out (Section 8.5).

Menu 7: Relay output extension

Setting	Function (with optional signal light relay only)	Explanation / Advice	i
A7	Signal light	Function	Level 3 Menu 7
B7	Door position: OPEN	-	-
C7	Door position: CLOSED	-	-
D7	Intermediate position OPEN	-	-
E7	Intermediate position CLOSED	-	-
F7	Drive system starts running	Wiping impulse 1 second	-
G7	Problem	-	-
H7	Lighting	Lighting duration	Level 5 / Menu 4
I7	Automatic locking release	Drive system is running	-
J7	Lock release	Drive system starts running / Wiping impulse 3 seconds	-
K7	Push-open security device	-	-
L7	Radio remote control	Relay switches for the duration of the impulse	-

Menu 8: Reset

Setting	Function	Explanation / Advice	i
A8	No reset	Unchanged	-
B8	Reset control unit *	Factory default setting	-
C8	Reset remote control	Messages are deleted	-
D8	Reset extension, automatic closing timer	Level 3, Menu 1-7	-
E8	Reset extended operator functions only *	Except door OPEN/CLOSED positions and remote control impulse	-
F8	Reset safety devices *	Photocell	-
G8	Reset bus modules	The bus modules connected are programmed	-

* All connected and operational safety devices are recognised automatically after resetting.

Legend:	
LED off	○
LED on	●
LED flashes slowly	✺
LED pulses	☼
LED flashes quickly	✹
Factory default setting	
Not possible	–

9. Extended operator functions

Level 2 – Operator settings																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
																
Menu 1:	**Required driving power OPEN (sensitivity in increments*)**															
	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 2:	**Required driving power CLOSE (sensitivity in increments*)**															
	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 3:	**Automatic cut-out OPEN (sensitivity in increments**)**															
	**OFF**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 4:	**Automatic cut-out CLOSE (sensitivity in increments**)**															
	**OFF**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

* The higher the setting, the higher the driving power.
** The lower the setting, the more sensitive the automatic cut-out.

Caution!
After switching off or increasing the automatic cut-out increments (Menu 3 and 4):
To exclude any risk of injury, the tests specified in EN 12453 and EN 12445 for validating the correct limitation of force must be performed.

Level 3 - Automatic closing timer																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
																
Menu 1:	**Automatic closing timer**															
	**A1**	**B1**	**C1**	**D1**	**E1**	**F1**	**G1**	**H1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Menu 3:	**Door open duration (in seconds)**															
	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**	**80**	**100**	**120**	**150**	**180**	**255**
Menu 4:	**Warning time (in seconds)**															
	**1**	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
Menu 5:	**Start-up warning (in seconds)**															
	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Menu 7:	**Signal light**															
	**A7**	**B7**	**C7**	**D7**	**E7**	**F7**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Menu 8:	**Extension module relay output**															
	**A8**	**B8**	**C8**	**D8**	**E8**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**

9. Extended operator functions

Advice:
- The automatic closing timer can only be programmed if a photocell barrier is connected.
- The functions in Menu 1 can be altered as desired via the time settings in Menus 3 and 4

Menu 1: Automatic closing timer

Setting	Door open duration (seconds)	Warning time (seconds)	Automatic closing timer	Other functions
A1	-	-	Deactivated	-
B1	15	5	Activated	Extension of door OPEN time only through impulse signal (button, hand transmitter)
C1	30	5	Activated	
D1	60	8	Activated	
E1	15	5	Activated	Interruption of the door open duration after the photocell barrier has been driven past
F1	30	5	Activated	
G1	60	8	Activated	
H1	Unlimited	3	Activated	Closes after the photocell barrier has been driven past / closing prevention

Advice:
Without a connected photocell or closing prevention device, only parameter A1 can be adjusted.

Menu 7: Signal light

Setting	Door movement / Warning	Door stoppage
A7	Flashing	OFF (Electricity saving)
B7	Lighting	OFF (Electricity saving)
C7	Flashing	Flashing
D7	Lighting	Lighting
E7	Flashing	Lighting
F7	Lighting	Flashing

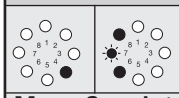
Reference:
The signal light connection can be adjusted in Level 1, Menu 7.

Menu 8: Extension module relay output
The relay output function of the extension module is programmed here.

Setting	Function	Explanation / Advice	
A8	Reporting faults	1 second	-
B8	Every request wiping impulse	1 second	-
C8	Entry impulse	1 second	-
D8	Exit impulse	1 second	-
E8	Locking start impulse	1 second	-

Legend:	
LED off	○
LED on	●
LED flashes slowly	☀
LED pulses	☀
LED flashes quickly	☀
Factory default setting	
Not possible	–

9. Extended operator functions

Level 4 – Remote programming	
	
Menu 2:	**Intermediate OPEN position**
	LED 7 flashes slowly -> press the hand transmitter button -> LED 7 flashes quickly
Menu 3:	**Intermediate CLOSE position**
	LED 7 flashes slowly -> press the hand transmitter button -> LED 7 flashes quickly
Menu 4:	**OPEN**
	LED 7 flashes slowly -> press the hand transmitter button -> LED 7 flashes quickly
Menu 5:	**CLOSE**
	LED 7 flashes slowly -> press the hand transmitter button -> LED 7 flashes quickly
Menu 6:	**Entry request (only with MS BUS additional module)**
	LED 7 flashes slowly -> press the hand transmitter button -> LED 7 flashes quickly
Menu 7:	**Exit request (only with MS BUS additional module)**
	LED 7 flashes slowly -> press the hand transmitter button -> LED 7 flashes quickly
Menu 8:	**EWM relay output (Level 1, Menu 5, L5, Menu 6, L6, Menu 7, L7)**
	LED 7 flashes slowly -> press the hand transmitter button -> LED 7 flashes quickly

Level 5 – Special function																
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
																
Menu 1:	**Programmable impulse input (Terminal 1/2)**															
	**A1**	**B1**	**C1**	**D1**	**E1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Menu 4:	**Lighting duration (in seconds)**															
	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**	**80**	**100**	**120**	**150**	**180**	**255**

Legend:	
LED off	○
LED on	●
LED flashes slowly	
LED pulses	
LED flashes quickly	
Factory default setting	
Not possible	–

9. Extended operator functions

Menu 1: **Programmable impulse input**

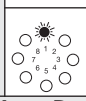
Setting	Function (with optional signal light relay only)	Explanation / Advice
A1	Impulse	Normally closed contact only
B1	Closing prevention device	Normally closed contact only
C1	Stops and reverses	Only in CLOSE direction – normally open contact only
D1	Stops and reverses	Only in CLOSE direction – normally closed contact only
E1	Impulse OPEN	Induction loop – normally closed contact only

Reference:
- The programming of the special function is dependent on terminal XB02. Terminal XB02 is described in Section 8.2.

Level 6 - Variable speed																
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 1:	**Speed OPEN (in increments)**															
	–	–	–	–	–	–	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 2:	**Soft run speed OPEN (in increments)**															
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 3:	**Soft run position OPEN**															
	Set using the (+ / OPEN) and (- / CLOSE) buttons															
Menu 4:	**Speed CLOSE (in increments)**															
	–	–	–	–	–	–	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 5:	**Smart run speed, CLOSE (in increments)**															
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 6:	**Soft run speed CLOSE (in increments)**															
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Menu 7:	**Smart run position, CLOSE**															
	Set using the (+ / OPEN) and (- / CLOSE) buttons															
Menu 8:	**Soft run position CLOSED**															
	Set using the (+ / OPEN) and (- / CLOSE) buttons															

Reference:
If changes are made in Menus 1, 2, 3, 4, 6 and 8 in Level 6, a new performance check must be carried out (Section 8.6).

9. Extended operator functions

Level 7 - Servicing and maintenance																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
																
Menu 1: Door cycle counter																
	**A1**	**B1**	**C1**	**D1**	**E1**	**F1**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Menu 2: Maintenance counter																
	**A2**	**B2**	**C2**	**D2**	**E2**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Menu 3: Set the maintenance interval																
	**A3**	**B3**	**C3**	**D3**	**E3**	**F3**	**G3**	**H3**	**I3**	**J3**	**K3**	**L3**	**M3**	**N3**	**O3**	**P3**
Menu 8: Reset servicing and maintenance																
	**A8**	**B8**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**

Menu 1: Door cycle counter

The door cycle counter of the controls displays the number of cycles here as a six-digit number (up to 999,999).
The display function is illustrated in the flow chart below.
The number of operations is shown as 1s, 10s, 100s, etc.
Pressing the (+) or (-) button displays the next or the previous digit of the number of operations.

A1	Door cycle counter – number of hundreds of thousands	D1	Door cycle counter – number of hundreds
B1	Door cycle counter – number of tens of thousands	E1	Door cycle counter – number of tens
C1	Door cycle counter – number of thousands	F1	Door cycle counter – number of units

Menu 2: Maintenance counter

The maintenance counter of the controls displays the number of operations here as a five-digit number (up to 99,999).
The display function is illustrated in the flow chart below.
The number of operations still required is shown as 1s, 10s, 100s, etc.
The digits are displayed as described for Menu 1.

A2	Maintenance counter – number of tens of thousands	D2	Maintenance counter – number of tens
B2	Maintenance counter – number of thousands	E2	Maintenance counter – number of units
C2	Maintenance counter – number of hundreds		

Menu 3 Set the maintenance interval

The number of door operations after which the controls indicate that maintenance is required can be programmed here.

A3	Maintenance interval: OFF	I3	Maintenance interval: every 8,000 door operations
B3	Maintenance interval: every 1,000 door operations	J3	Maintenance interval: every 9,000 door operations
C3	Maintenance interval: every 2,000 door operations	K3	Maintenance interval: every 10,000 door operations
D3	Maintenance interval: every 3,000 door operations	L3	Maintenance interval: every 15,000 door operations
E3	Maintenance interval: every 4,000 door operations	M3	Maintenance interval: every 20,000 door operations
F3	Maintenance interval: every 5,000 door operations	N3	Maintenance interval: every 30,000 door operations
G3	Maintenance interval: every 6,000 door operations	O3	Maintenance interval: every 40,000 door operations
H3	Maintenance interval: every 7,000 door operations	P3	Maintenance interval: every 50,000 door operations

Menu 8: Reset servicing and maintenance

The fault memory for servicing, diagnostics and maintenance works can be reset here.

A8	No reset
B8	Reset fault memory

9. Extended operator functions

Level 8 – System settings																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Menu 1: Photocell																
	A1	B1	C1	–	–	–	–	–	–	–	–	–	–	–	–	–
Menu 2: Closing edge safety device																
	A2	B2	C2	D2	–	–	–	–	–	–	–	–	–	–	–	–
Menu 3: Automatic cut-out																
	A3	B3	C3	D3	–	–	–	–	–	–	–	–	–	–	–	–
Menu 4: Operating modes																
	A4	B4	C4	D4	–	–	–	–	–	–	–	–	–	–	–	–
Menu 5: Function of the direction command transmitters																
	A5	B5	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Menu 6: Function of the impulse command transmitters																
	A6	B6	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Menu 1: Photocell

Setting	Photocell (Connection XB02 - Terminal 70/71) Door movement, CLOSE	Other-brand photocell (Connection XB02 - Terminal 70/71) Door movement, CLOSE
A1	Operation without photocell	
B1	Door reverses completely[2]	Not active
C1	Not active	Door reverses completely[2]

Attention!
If a photocell is connected, it is automatically recognised by the controls after MAINS ON.
The photocell can be reprogrammed later.

Advice:
Any photocells that are not required must be disconnected from the terminals, or the control will recognise them.

Reference:
Connection XB02 is described in Section 8.2.

Legend:	
LED off	○
LED on	●
LED flashes slowly	☀
LED pulses	☀
LED flashes quickly	☀
Factory default setting	
Not possible	–

Menu 2: Closing safety edge device

Setting	Door movement, OPEN	Door movement, CLOSE
A2	Door reverses a little[1]	Door reverses a little[1]
B2	Door reverses a little[1]	Door reverses completely[2]
C2	Door reverses completely[2]	Door reverses a little[1]
D2	Door reverses completely[2]	Door reverses completely[2]

Menu 3: Automatic cut-out

Setting	Door movement, OPEN	Door movement, CLOSE
A3	Door stops	Door reverses a little[1]
B3	Door reverses a little[1]	Door reverses a little[1]
C3	Door stops	Door reverses completely[2]
D3	Door reverses completely[2]	Door reverses completely[2]

Menu 4: Operating modes

Setting	OPEN	CLOSE
A4	Press and hold	Press and hold
B4	Automatic closing	Press and hold
C4	Press and hold	Automatic closing
D4	Automatic closing	Automatic closing

[1] Door reverses a little: The drive system moves the door a short distance in the opposite direction in order to free an obstacle.

[2] Door reverses completely: The drive system moves the door to the opposite end position.

Menu 5: Function of the direction command transmitter

Setting	Direction command transmitters	Explanations
A5	Not active	The direction command transmitters only give a command when the door is stationary.
B5	STOP only	A moving door is stopped by every direction command transmitter.

Menu 6: Function of the impulse command transmitter

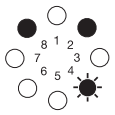
Setting	Impulse command transmitters	Explanations
A6	Not active	The impulse command transmitters only give a command when the door is stationary.
B6	STOP only, then standard sequence	A moving door is stopped by every impulse command transmitter. The next command starts the drive system running in the opposite direction (OPEN - STOP - CLOSE - STOP - OPEN).

10. Messages

10.1 Overview of the display functions

LED displays in operating mode

	Status of safety devices
	Door in door position: OPEN
	The door is moving in the OPEN direction.
	Intermediate OPEN position
	Intermediate CLOSE position
	Door in door position: CLOSED
	Door in door position: CLOSED
	The door is moving in the CLOSE direction.
	Reference point (flashes as the reference point is passed)
	Maintenance
	Safety circuit, motor unit
	Command unit activated
	Remote control activated
	Ready for operation

	**Example:** The door is at the OPEN position. It starts to move towards the CLOSED position as soon as the warning period/ start-up warning expires.

10.2 Status messages

In addition to messages regarding the door position, status messages give information regarding the status of the operator system during operation.

Safety elements:

During operation, LED 1 serves as a status indicator for the safety elements connected (closing edge safety device, photocell).
If the safety element in question is triggered, LED 1 lights up whilst it is activated.

Control elements / remote controls:

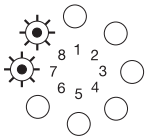
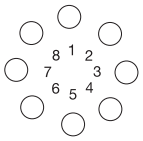
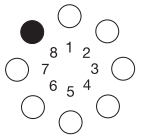
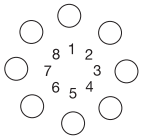
During operation and when carrying out component tests, LED 7 serves as a status indicator for the control elements connected (OPEN, CLOSE, STOP, half OPEN, etc.).
If the control element in question is triggered, LED 7 lights up whilst it is activated.

If a remote signal is received, LED 7 flashes quickly.

Legend:	
LED off	○
LED on	●
LED flashes slowly	☀
LED pulses	☀
LED flashes quickly	☀
Factory default setting	
Not possible	–

10.3 Fault messages

Malfunctions in the system are indicated by a corresponding message number.
The controls switch to message mode.

1.	Message number is displayed for approx. 3 seconds (example: Message 15).	
2.	Pause between messages for approx. 1 second.	
3.	Operating mode is displayed for approx. 3 seconds (example: operating voltage, "door OPEN" position).	
4.	Pause between messages for approx. 1 second.	
5.	Messages 1 to 4 are repeated.	

Advice:
- The controls show the message numbers via one or more rhythmically flashing LEDs. The message number is found by adding together the numbers next to the flashing LEDs.
- During programming, all status messages and other messages are suppressed. The messages in programming mode are never ambiguous.

The message numbers serve two purposes:
1. They indicate why the controls were unable to carry out the drive command given.
2. They indicate which components are faulty. This facilitates better and faster service on site, and only the control components identified as being faulty need be replaced.

The controls remain in message mode until they switch to operating mode or diagnostic mode.

Switching to operating mode
The controls switch to operating mode as soon as they receive a movement impulse.

Switching to diagnostic mode
The controls can be switched to diagnostic mode from either message mode or operating mode.
Before switching to diagnostic mode, the key switch must be in position "1".

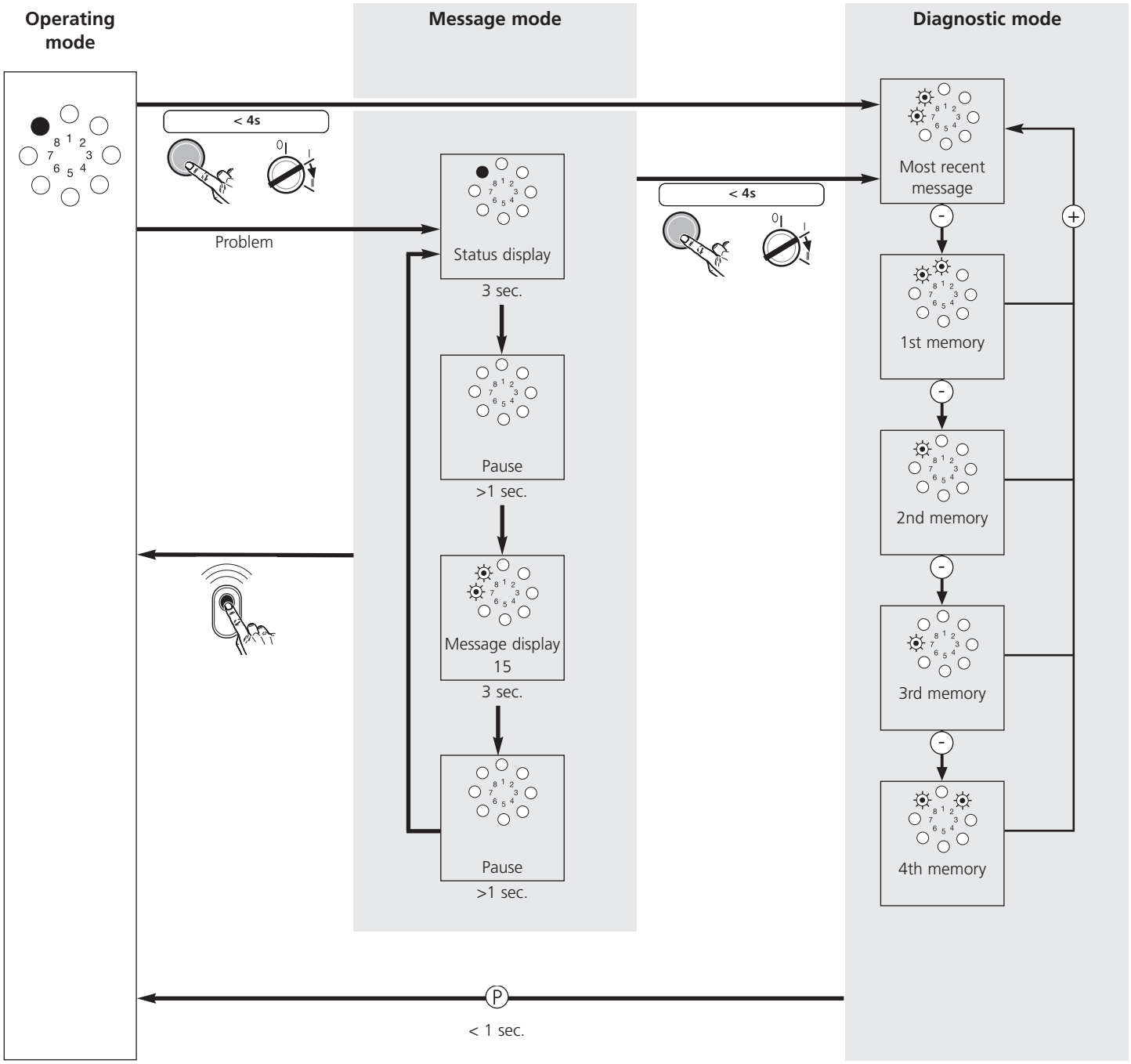
- Press the STOP button and keep it pressed.
- Switch the key switch from position "1" to position "2" within 4 seconds and then release the STOP button.

The controls switch to diagnostic mode.

Button functions in diagnostic mode

(+ / OPEN) button	The current fault is always shown when the (+) button is pressed.
(- / CLOSE) button	When the (-) button is pressed, up to 5 faults from the fault memory are shown in succession.
(P / STOP) button	Pressing the (P) button ends the diagnostic mode. The carousel display runs backwards. The controls return to operating mode.

10.4 Flow chart showing fault messages for control units with keypad on cover and key switch



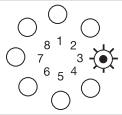
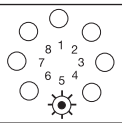
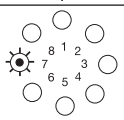
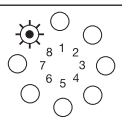
Legend:	
LED off	○
LED on	●
LED flashes slowly	☀
LED pulses	☀
LED flashes quickly	☀
Factory default setting	
Not possible	–

10.5 Rectifying faults

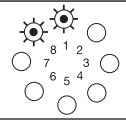
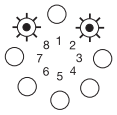
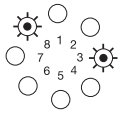
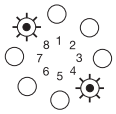
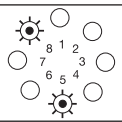
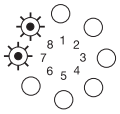
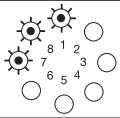
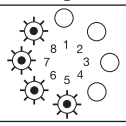
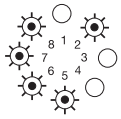
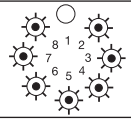
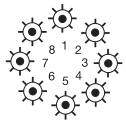
Malfunctions without error messages

Error	Cause	Solution
LED 8 does not light up.	- No voltage.	- Check that the mains power supply is operational. - Check the connection to the mains power supply.
	- Thermal overload protection in power transformer was activated.	- Allow the power transformer to cool down.
	- Defective control unit.	- Have the operator system checked.
No reaction on impulse.	- The connection terminals for the "impulse" button were by-passed, e.g. due to a short-circuit or flattened terminals.	- Try temporarily disconnecting any key switches or interior push buttons that are connected to the control unit (Section 8.2): remove the cable from socket XB02, insert the shorting plug and look for cabling errors.
No reaction on impulse from hand transmitter.	- Module antenna is not plugged in.	- Connect the module antenna to the control unit.
	- The hand transmitter coding does not correspond to the receiver coding.	- Activate hand transmitter again (Section 8.5).
	- Hand transmitter battery is empty.	- Insert new battery (Section 7.1).
	- Defective hand transmitter, control unit electronics or module antenna.	- Have all 3 components checked.
Operator reverses when the door frame photocell is interrupted.	- The programming of the photocell in the door frame area was not performed correctly.	- Carry out a reset of the control (Section 9.4 / Level 1 / Menu F8), repeat express programming again (Section 8.5).

Malfunctions with error messages

Error	Cause	Solution
Message 3 	- CESD testing in OPEN direction was activated.	- Check the door and remove any obstacles.
Message 5 	- CESD testing in CLOSED direction was activated.	- Check the door and remove any obstacles.
Message 7 	- If no buttons are pressed within 120 seconds, the programming mode terminates automatically. - OPEN and CLOSED door positions programmed without passing the reference point.	
Message 8 	- Reference point button defective.	- Have the operator system checked.

10. Messages

Error	Cause	Solution
Message 9 	- No speed sensor impulses, drive system is blocked.	- Have the operator system checked.
Message 10 	- Door movement too stiff. - Door blocked.	- Ensure that the door moves easily.
	- Maximum driving power setting is too low.	- Have the max. driving power (Section 9.4 / Level 2 / Menu 1+2) checked by an expert.
Message 11 	- Excess travel stop.	- Have the operator system checked.
Message 12 	- CESD testing in OPEN direction not OK.	- Check closing edge safety device. - Programme out the closing edge safety device if there is no CESD present (Section 9.4 / Level 8 / Menu 2).
Message 13 	- CESD test in CLOSE direction not OK.	- Check closing edge safety device. - Programme out the closing edge safety device if there is no CESD present (Section 9.4 / Level 8 / Menu 2).
Message 15 	- External photocell interrupted or defective.	- Remove obstacle or have the photocell checked.
	- Programmed for photocell, but no photocell is connected.	- Deactivate or connect the photocell.
Message 16 	- Power sensor for the automatic cut-out is defective.	- Have the motor unit checked.
Message 26 	- Undervoltage, operator system overloaded at maximum power setting, 16.	- Have the external power supply checked.
Message 28 	- Door movement too stiff or irregular. - Door blocked.	- Check the path of the door and ensure that the door moves easily.
	- Automatic cut-out is set to be too sensitive.	- Have the automatic cut-out facility checked by an expert (Section 9.4 / Level 2 / Menu 3+4).
Message 35 	- Electronics are defective.	- Have the operator system checked.
Message 36 	- Wire jumper removed, but stop button not connected.	- Connect stop button or insert shorting plug (Section 8.2).
	- Operator system disengaged. - Closed circuit is interrupted.	- Engage the operator system.

Legend:	
LED off	○
LED on	●
LED flashes slowly	✹
LED pulses	✺
LED flashes quickly	✸
Factory default setting	
Not possible	–

11. Attachment

11.1 Technical Data for Comfort 257.2

Electrical data		
Nominal voltage *)	V	230 / 260
Nominal frequency	Hz	50 / 60
Power consumption	A	0,7
Power input - operation	KW	0,26
Power input - stand-by	W	3,6
Operating mode (operating time)	Min.	KB 5
Control voltage	V DC	24
Protection category, motor unit		IP 20
Protection class		II
*) subject to country-specific alternations		

Mechanical data		
Max. push and pull force	N	1.000
Travel speed	mm/sec.	140
Opening time (door specific)	sec.	15

General data			
Motor unit dimensions	mm	160x215x6,70395	
Weight	kg		
Temperature range	°C		-20
			+60

Supply package *)
Comfort 257.2 motor unit with Control vario external electronic control
*) subject to country-specific alternations

Features / Safety functions	
Reference point technology	x
Soft-Start / Soft-Stop	x
Automatic cut-out	x
Blocking protection	x
Undervoltage protection	x
Excess travel stop	x
Electronic travel cut-out	x
Connection for pushbuttons, code buttons and key switches	x
Error messages	x

Accessories	
Modular antenna, 868 MHz, IP 65	x
Mounting supports for sectional doors	x
Release kits for swinging doors	x
Adapter arm for retractable up-and-over doors	x
Fittings for winged doors	x
Photocells	x
Emergency release	x
Relay for flashing signal light when the automatic closing timer is operational	x
Push button	x
Key switch	x
Code switch	x

11.1 Declaration for the incorporation of a partly completed machine

(Declaration of Incorporation in line with EC Machinery Directive 2006/42/EC in accordance with Annex II, Part 1 B)

Manufacturer:
Marantec Antriebs und Steuerungstechnik GmbH & Co. KG
Remser Brook 11, 33428 Marienfeld, Germany

The partly completed machine (product):
Garage door opener Comfort 257.2
Revision status: R01

has been developed, designed and manufactured in accordance with the:
– EU Machinery Directive 2006/42/EC
– EU RoHS Directive 2011/65/EU
– EU Low Voltage Directive 2014/35/EU
– EU Electromagnetic Compatibility Directive 2014/30/EU
– Radio Equipment Directive (RED) 2014/53/EU

Applied and referenced standards and specifications:
– EN ISO 13849-1, PL "c", Cat. 2
  Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design
– EN 60335-2-95
  Household and similar electrical appliances – Safety – Part 2-95: Particular requirements for drives for vertically moving garage doors for residential use
– EN 60335-2-103
  Household and similar electrical appliances – Safety – Part 2-103: Particular requirements for drives for gates, doors and windows.
– EN 61000-6-3/2
  Electromagnetic compatibility – Emitted interference and immunity

The following requirements of EC Directive 2006/42/EC were complied with:
General principles, No. 1.1.2, 1.1.3, 1.1.5, 1.1.6, 1.2.1, 1.2.2, 1.2.3, 1.2.6, 1.3.1, 1.3.4, 1.3.7, 1.3.8, 1.3.9, 1.4.1, 1.4.3, 1.5.1, 1.5.4, 1.5.6, 1.5.8, 1.5.14, 1.7
Furthermore, we declare that the special technical documentation for this partly completed machine was prepared in accordance with Annex VII Part B and we undertake to supply these documents, in electronic form, to the national authorities in response to a duly reasoned request.

This partly completed machine is intended only for installation in a door system, in order to create a complete machine pursuant to Machinery Directive 2006/42/EC. The door system may not be set in operation until it has been ascertained that the complete system complies with the requirements of the above-mentioned EC directives.

This declaration shall no longer be valid if changes are made to the product without our authorisation.

11. Attachment

Authorised agent for the preparation of the technical documentation:
Marantec Antriebs- und Steuerungstechnik GmbH & Co. KG,
Remser Brook 11 · 33428 Marienfeld · Germany
Fon +49 (5247) 705-0

Marienfeld, 1 February 2016

M. Hörmann
Director

CE EAC

English

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Valid from: 04.2016
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