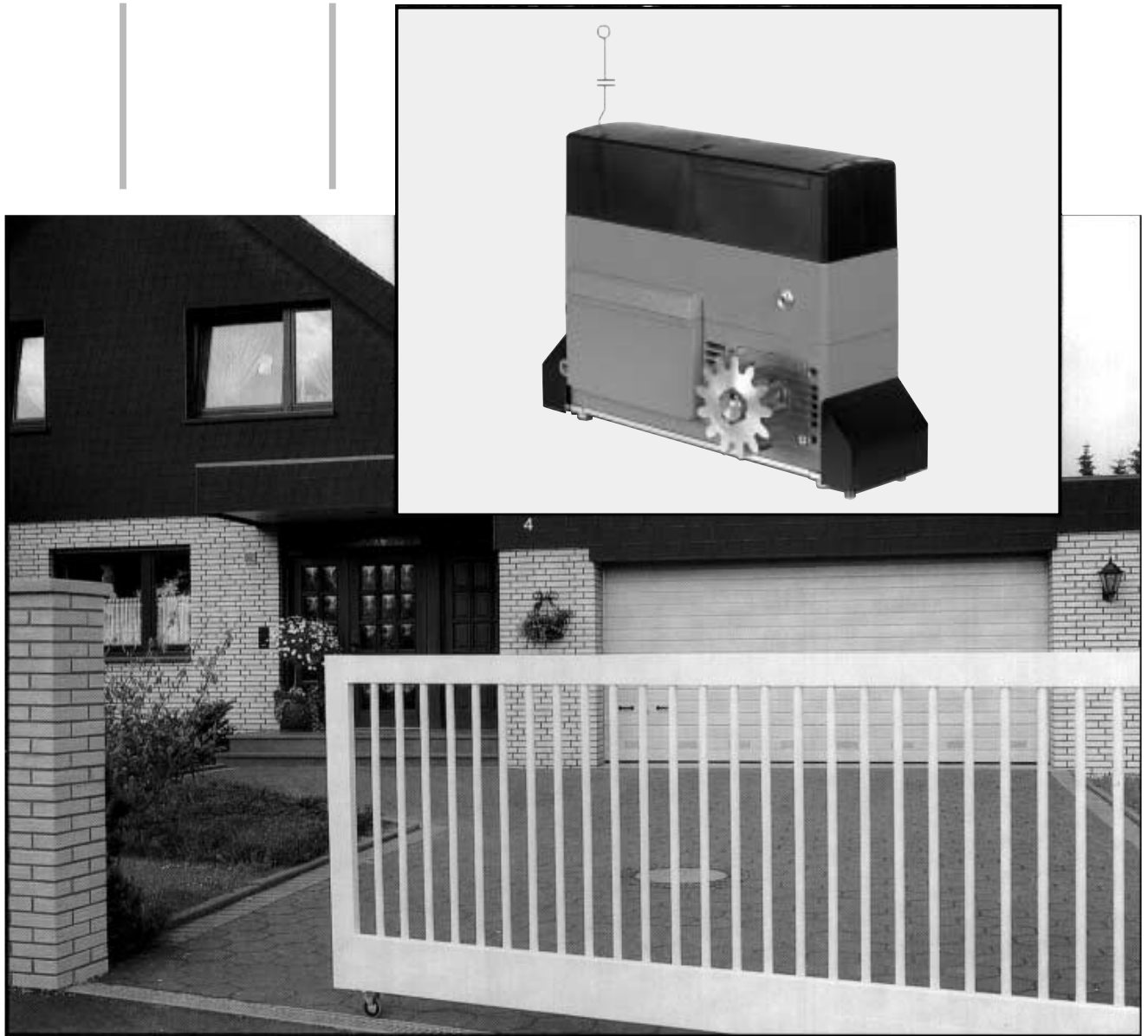


Comfort 820

Sliding Gate Operator

Installation Instructions

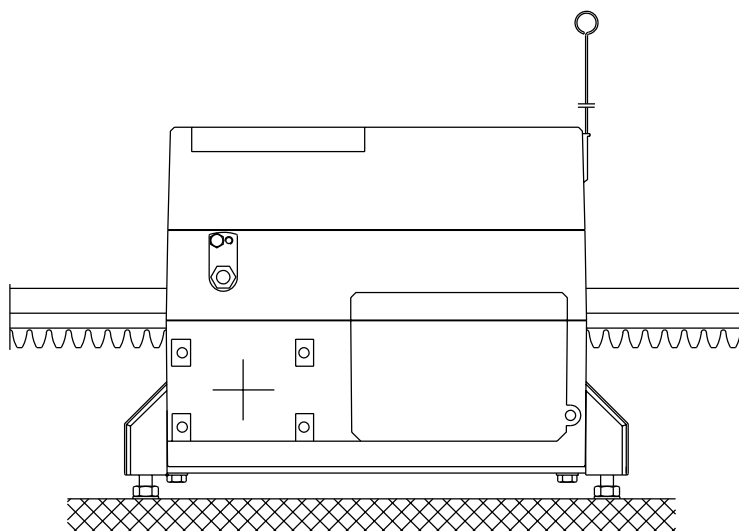


Marantec 

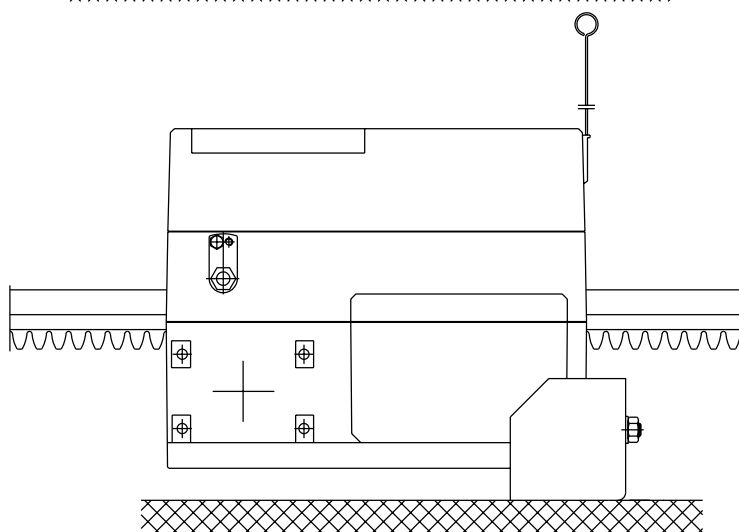
1

Overview

Drive unit with ground console



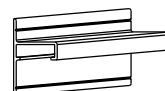
Drive unit with swivel console and height adjustment of the driving axle



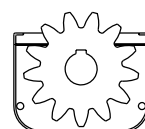
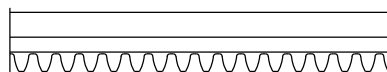
Fitting with steel locating profile



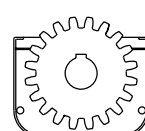
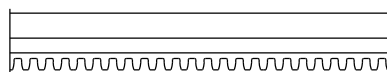
Fitting with aluminium locating profile



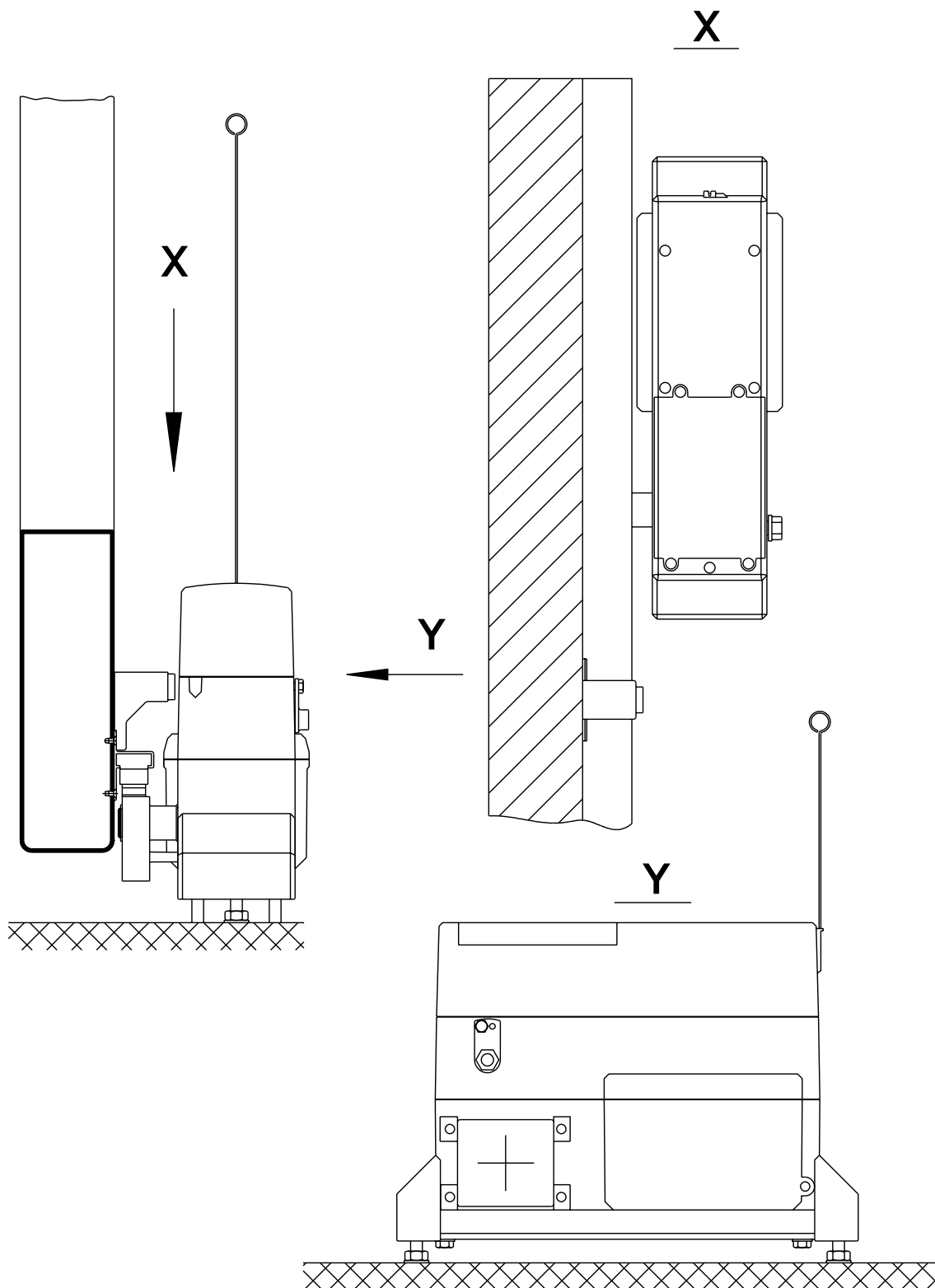
Toothed rack m6 and pinion m6 with finger-trap protection



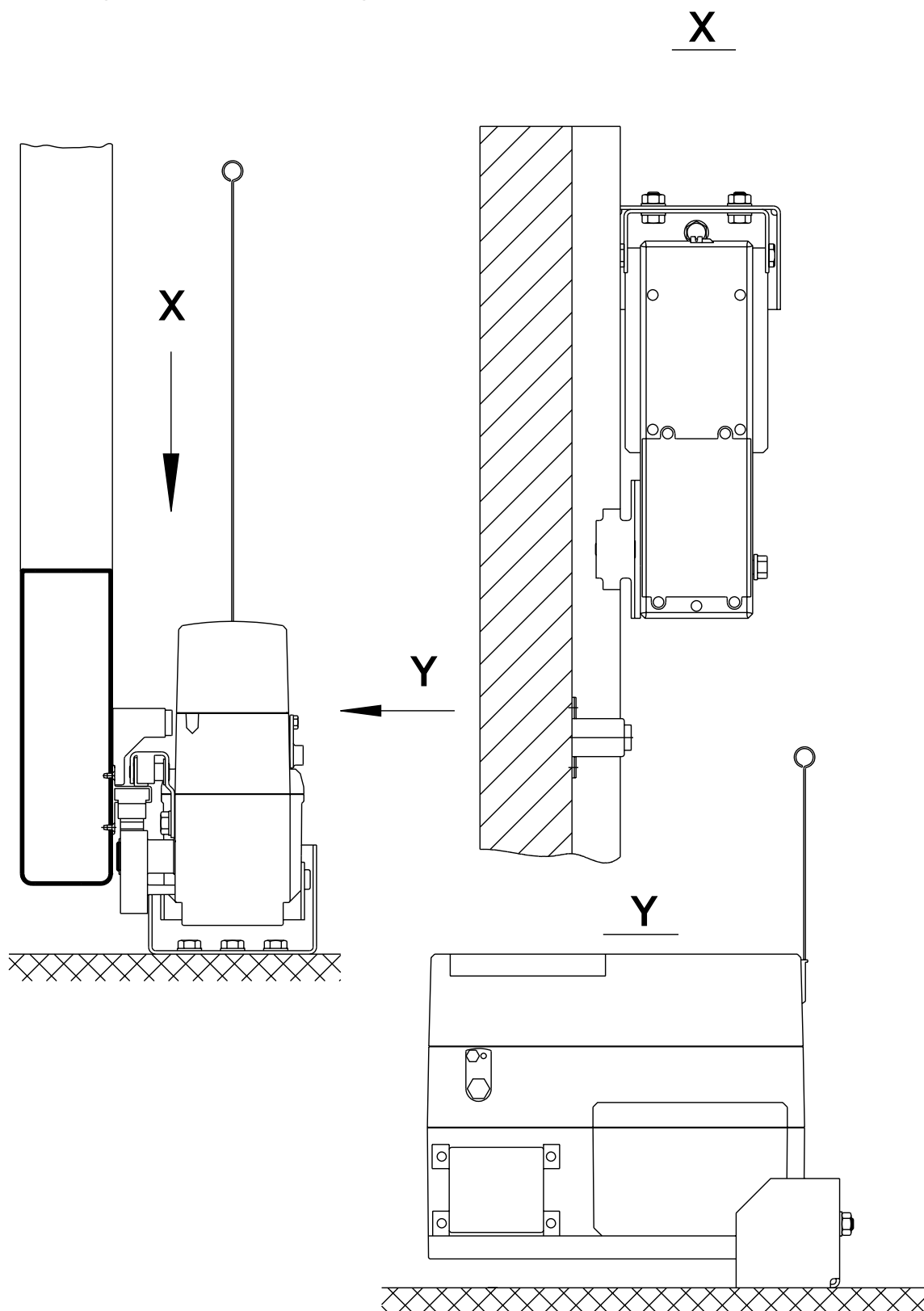
Toothed rack m4 and pinion m4 with finger-trap protection



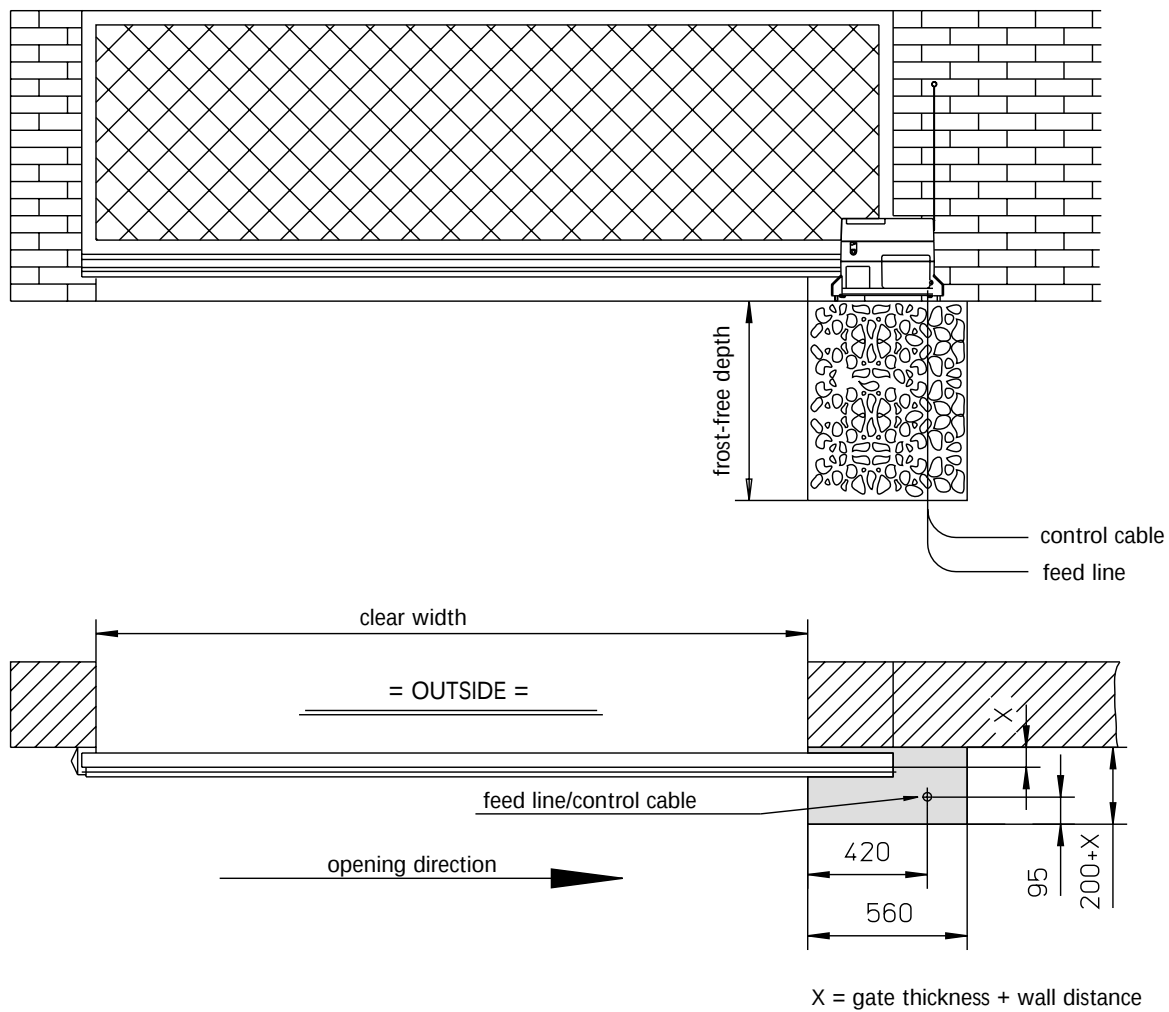
② Sliding gate operator with ground console



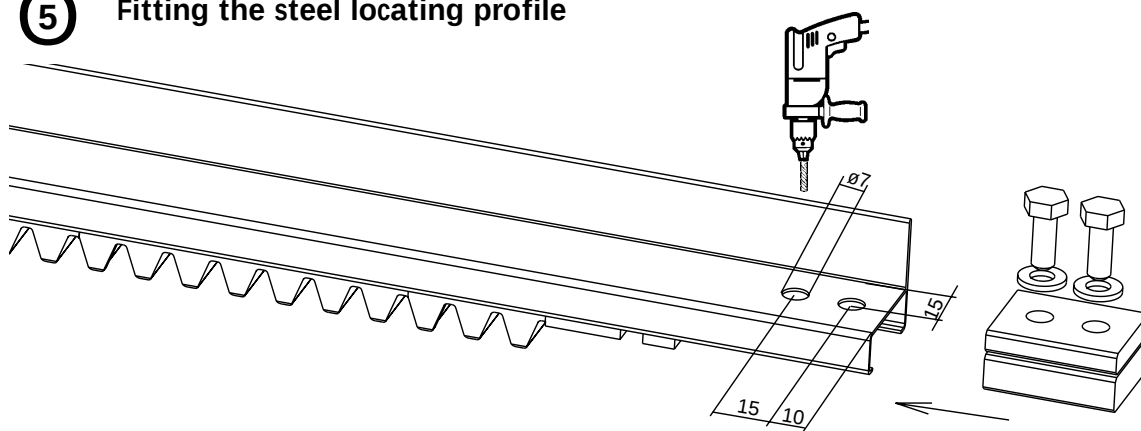
③ Sliding gate operator with swivel console and height adjustment of the driving axle



④ Foundation plan

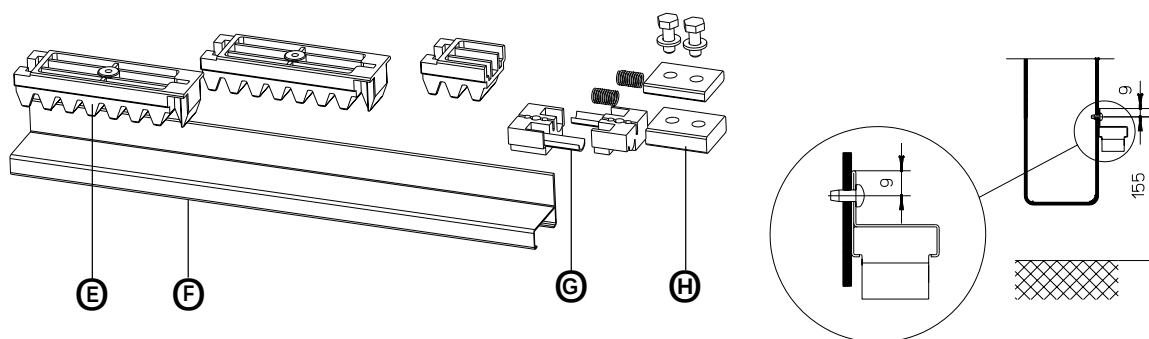


5 Fitting the steel locating profile



If necessary, shorten or extend the length of steel profile (F) as follows:

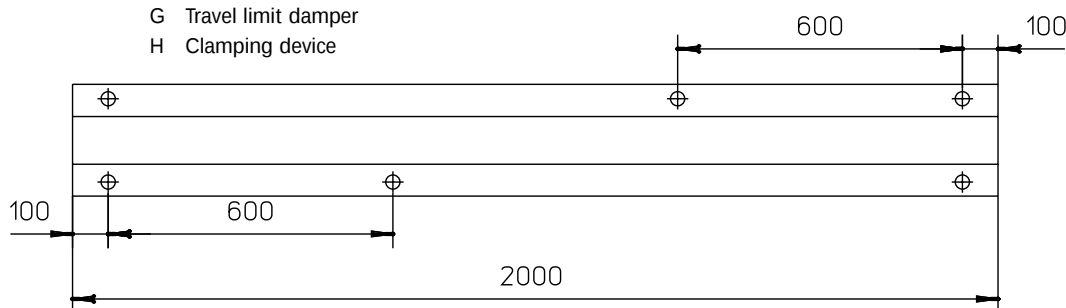
To shorten, remove travel limit damper (G) and withdraw toothed rack segments (E). Saw through profile (F) at the appropriate point maintaining a 90° cutting angle. Re-insert the required number of toothed rack segments with the travel limit dampers and enclosed clamping device (H). Drill the two through holes for the screws of the clamping device (7 mm $\varnothing$) in such a way (see above) that the toothed rack is seated within the profile under slight initial tension (free from play). Tighten the screws.



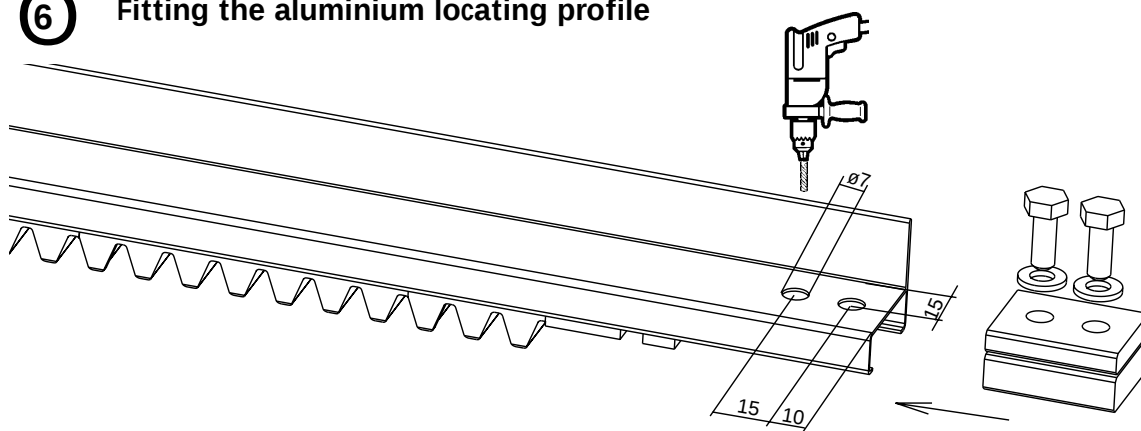
To connect several toothed rack units, remove the travel limit dampers. Clip the segments together (use enclosed segments) and push completely back into the profile together with the travel limit dampers and the clamping device. Fit the clamping device as described above. To fasten the steel profile to the gate, drill the fixing holes in the profile (5 mm $\varnothing$) in accordance with the structural conditions on site.

ATTENTION: Height of fixing screws in the bottom profile of the sliding gate from the ground = 155 mm.
Screw holes in the profile from the top edge of the profile down = 9 mm.

- E Toothed rack segment
- F Locating profile
- G Travel limit damper
- H Clamping device

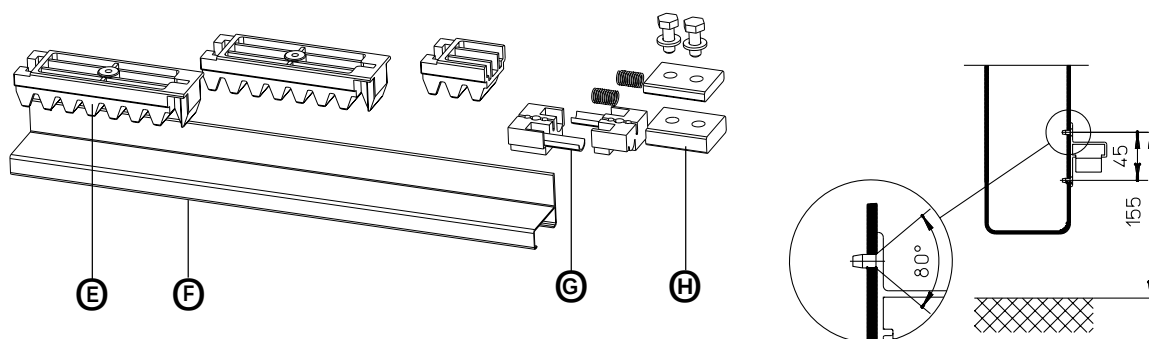


6 Fitting the aluminium locating profile



If necessary, shorten or extend the length of aluminium profile (F) as follows:

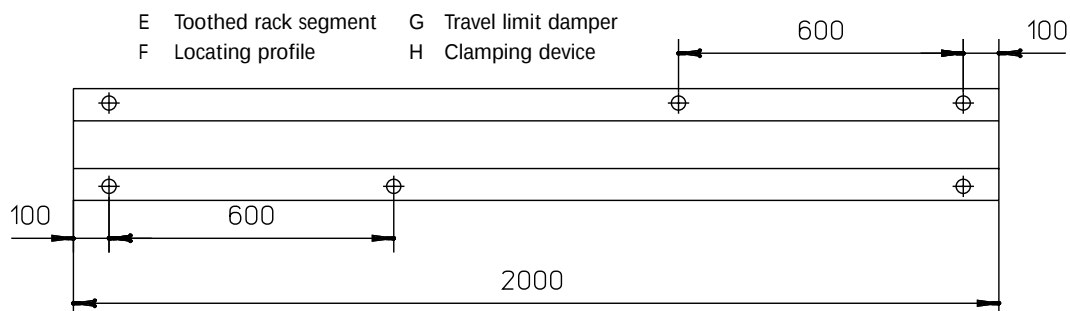
To shorten, remove travel limit damper (G) and withdraw toothed rack segments (E). Saw through profile (F) at the appropriate point maintaining a 90° cutting angle. Re-insert the required number of toothed rack segments with the travel limit dampers and enclosed clamping device (H). Drill the two through holes for the screws of the clamping device (7 mm $\varnothing$) in such a way (see above) that the toothed rack is seated within the profile under slight initial tension (free from play). Tighten the screws.



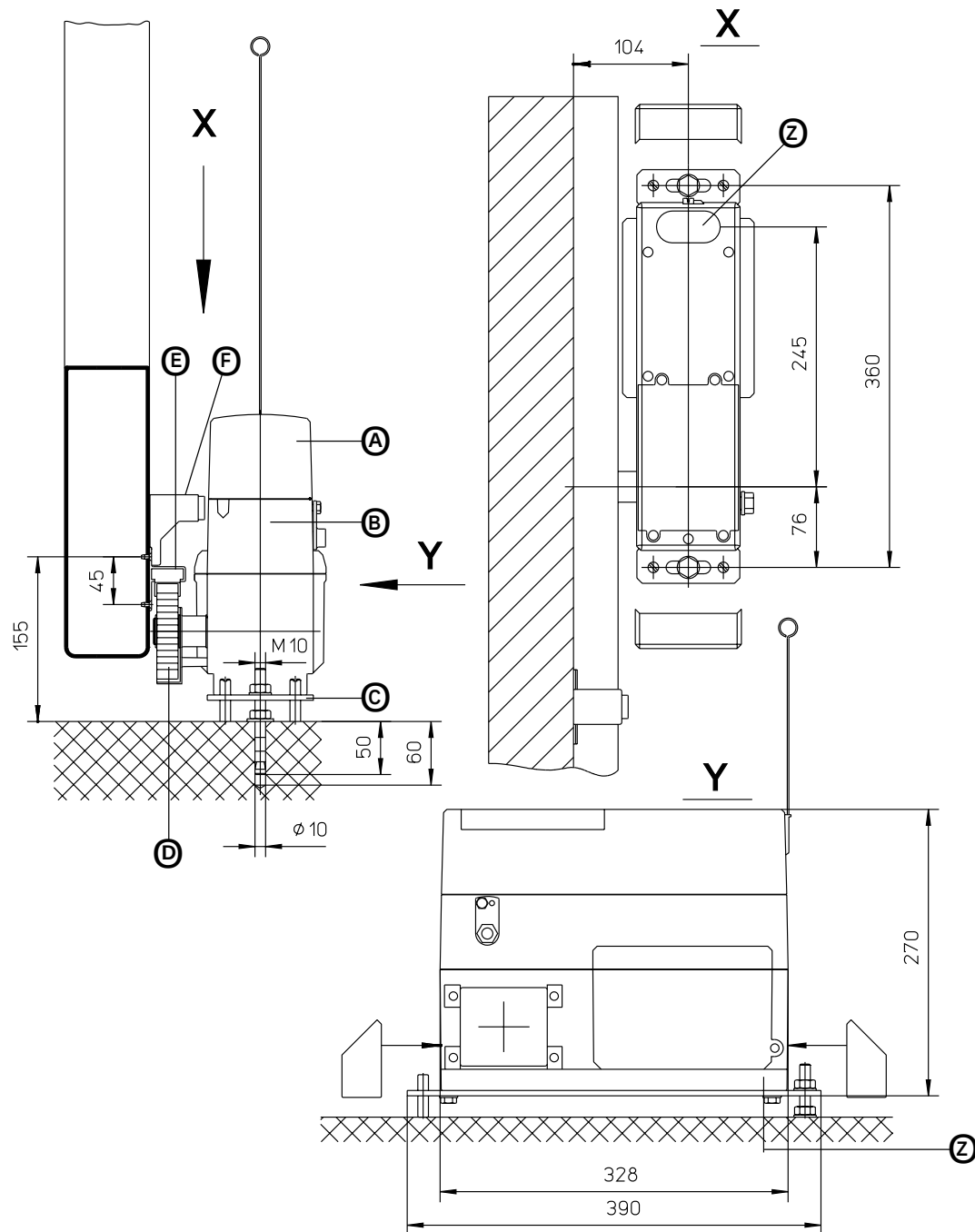
To connect several toothed rack units, remove the travel limit dampers. Clip the segments together (use enclosed segments) and push completely back into the profile together with the travel limit damper and clamping device. Fit the clamping device as described above. To fasten the aluminium profile to the gate, drill the fixing holes in the profile (5 mm $\varnothing$) in accordance with the structural conditions on site.

Recommendation: 6 screws to every 2 metre length of toothed rack (3 screws in the top groove, 3 in the bottom groove).

ATTENTION: Height of top fixing screws in the bottom profile of the sliding gate from the ground = 155 mm.
Distance of screw holes in the profile = 45 mm (in the profile chamfer) Holes in the locating profile with 80° countersinking for countersunk screws Bz 4.2 x 13.



7 Fitting the sliding gate operator with ground console



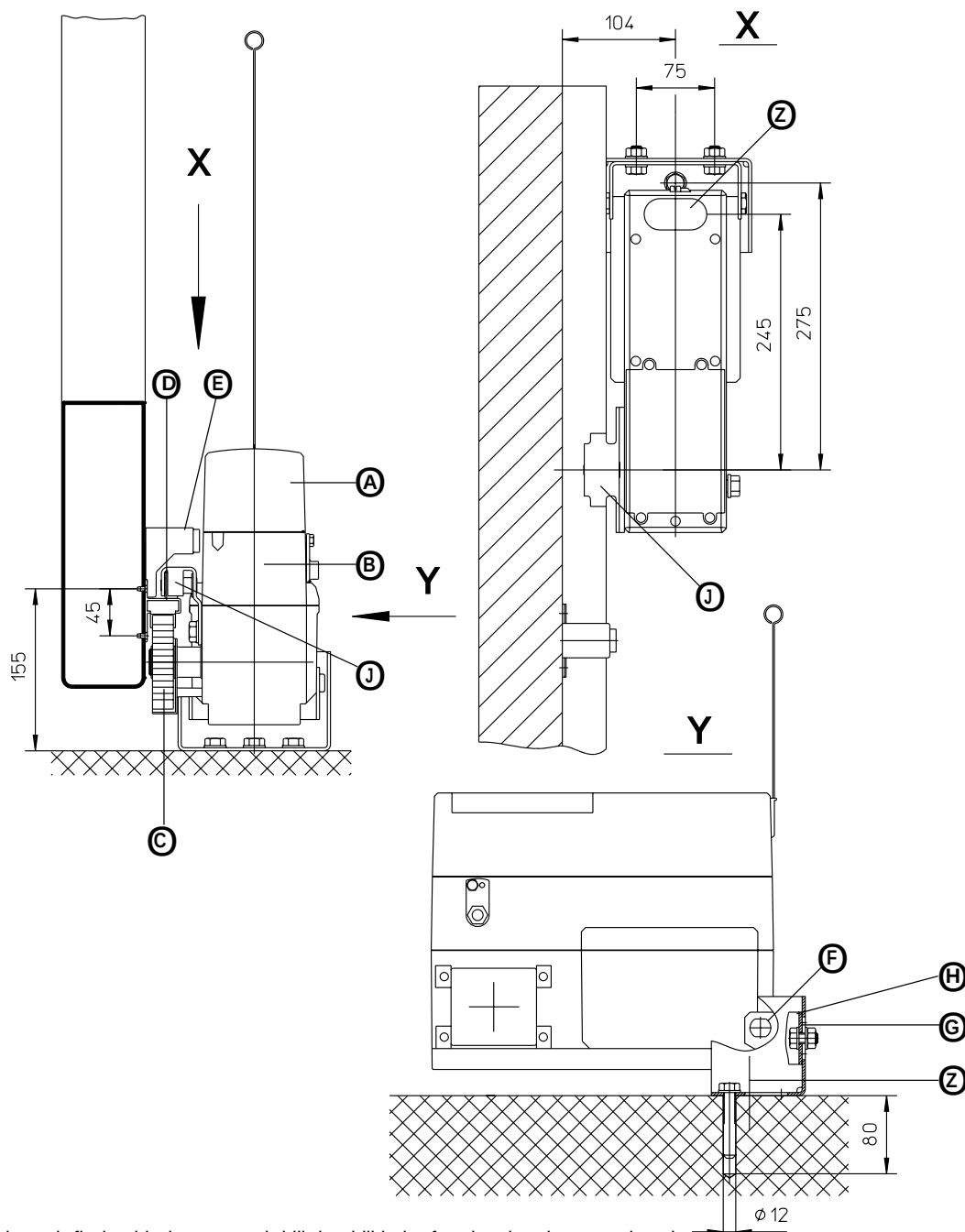
Align the drive unit flush with the gate and fasten with plugs.

Heavy-duty plugs: Observe the drilling depth. Push plugs right in and tension with a nut.

Screw drive unit (B) to base plate (C), slot onto the threaded rods and fasten with setscrews. Actuate the emergency release in accordance with point 12. Fasten locating profile (E) to the gate. By means of the setscrews, adjust the drive unit in the height just sufficiently to allow gearwheel (D) to mesh into the toothed rack profile free from play. Open/close the gate by hand to allow the locating profile to accommodate any unevenness on the ground. Then tighten the screws. Slot the supplied caps over the screws on the ground plate at the sides.

- | | |
|------------------------|---------------------|
| A Control unit | D Gearwheel |
| B Drive unit | E Locating profile |
| C Base plate | F Magnet receptacle |
| Z Area for cable entry | |

8 Fitting the sliding gate operator with swivel console and height adjustment of the driving axle



Align the drive unit flush with the gate and drill the drill holes for plugging the ground angle.

Heavy-duty plugs: Observe the drilling depth. Push the plugs right in and tension with a nut.

Screw drive unit (B) and drive unit angle (H) to load-bearing bolt (F). Loosely screw ground angle (G) to drive unit angle (H).

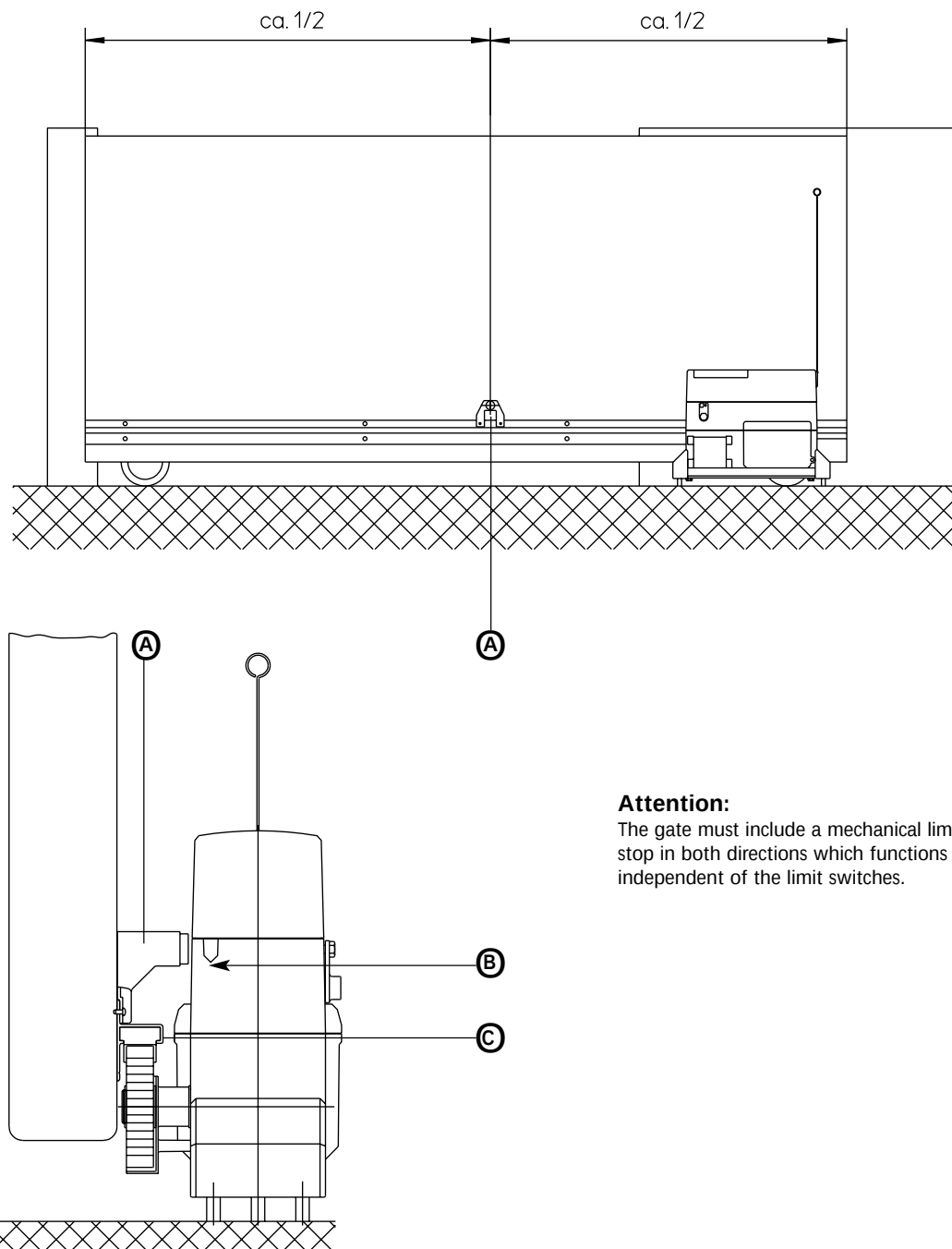
Fasten locating profile (D) to the gate. Fit thrust bearing (J) to the drive unit. Actuate the emergency release in accordance with point 12 and push gate onto gearwheel (C). Adjust the thrust bearing in the height just sufficiently to allow gearwheel (C) to mesh into the toothed rack profile free from play. Open/close the gate by hand and ensure horizontal alignment of the drive unit. Then tighten the screws.

A Control unit
B Drive unit
C Gearwheel
D Locating profile

E Magnet receptacle
F Load-bearing bolt
G Ground angle
H Drive unit angle

J Thrust bearing
Z Area for cable entry

⑨ Fitting the magnetic reference point



Attention:

The gate must include a mechanical limit stop in both directions which functions independent of the limit switches.

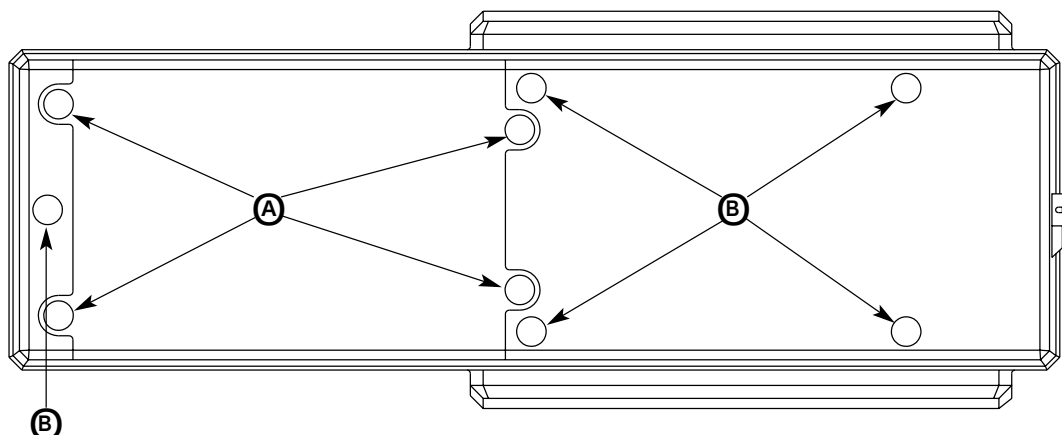
A microprocessor control unit ensures automatic cut-out at the "OPEN" and "CLOSE" end of travel positions without using mechanical limit switches. The actual gate position is recorded by a reference point sensor, which is integrated into the control unit and, is guided by a magnet.

Fit magnet retainer (A) so that it is resting on the locating profile (C) as shown. The bottom edge of the magnet should align with arrow (B) in the drive unit housing.

Important: Before carrying out any work, always disconnect the drive unit from the mains!

- A Magnet retainer
- B Reference point sensor
- C Locating profile

10 Opening the housing cover



To detach the housing cover, remove the 5 screws (B).

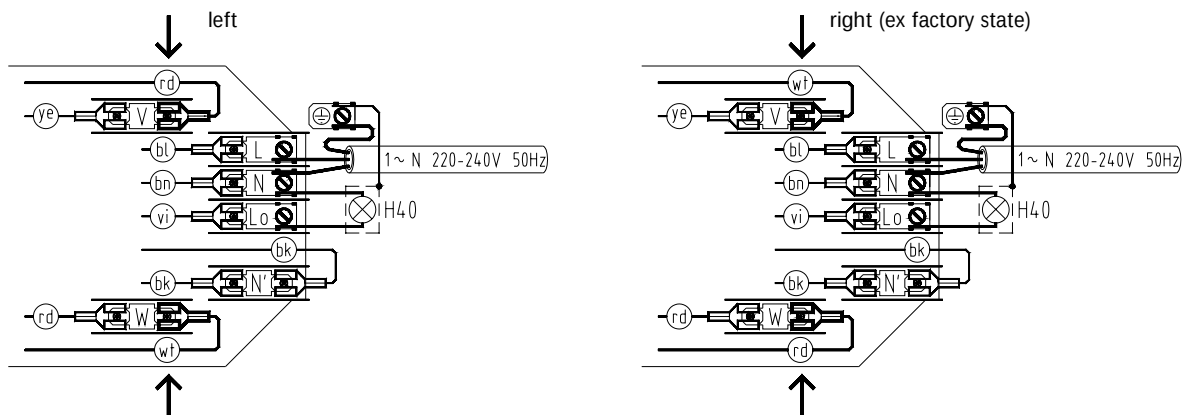
Remove the caps over the screw heads and then loosen the screws with an SW 4 socket spanner.

To set the control unit, the control unit cover must be removed. Remove screws (A). Remove the sealing caps over the screw heads and then loosen the screws with an SW 4 socket spanner.

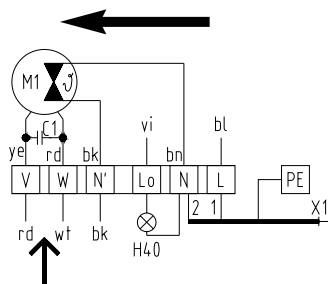
On screwing down the housing cover and the control unit cover check that the toroidal sealing ring is properly seated in the lining groove. After screwing down the covers, return the caps to the screw heads in the drill holes.

11 Electrical connection

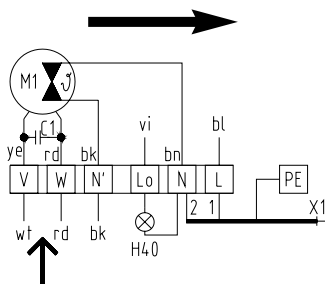
Fitting the operator (on the inside with closed gate)



Fitting inside left



Fitting inside right



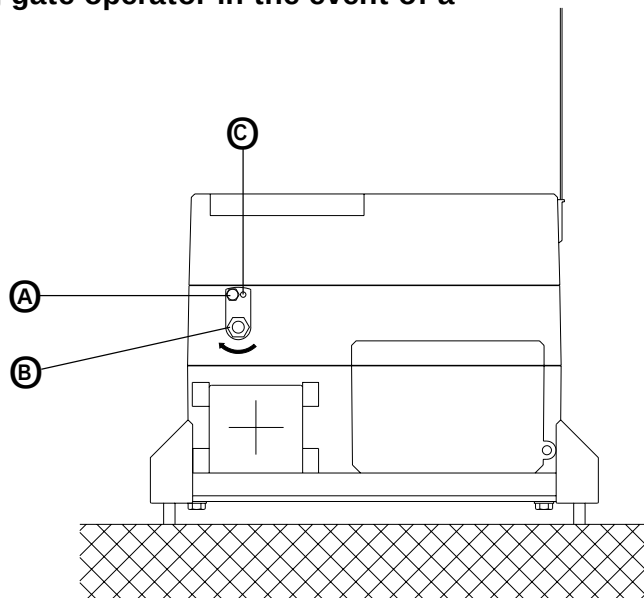
Legend:

- C1 Motor capacitor
- H40 x) Signal light
- M1 Motor with thermal overload protection
- X1 +) Mains cable

- bk. black
- bl. blue
- bn. brown
- ye. yellow
- rd. red
- vi. violet
- wt. white

- +) on site
- x) if fitted

12 Disengaging the sliding gate operator in the event of a power failure

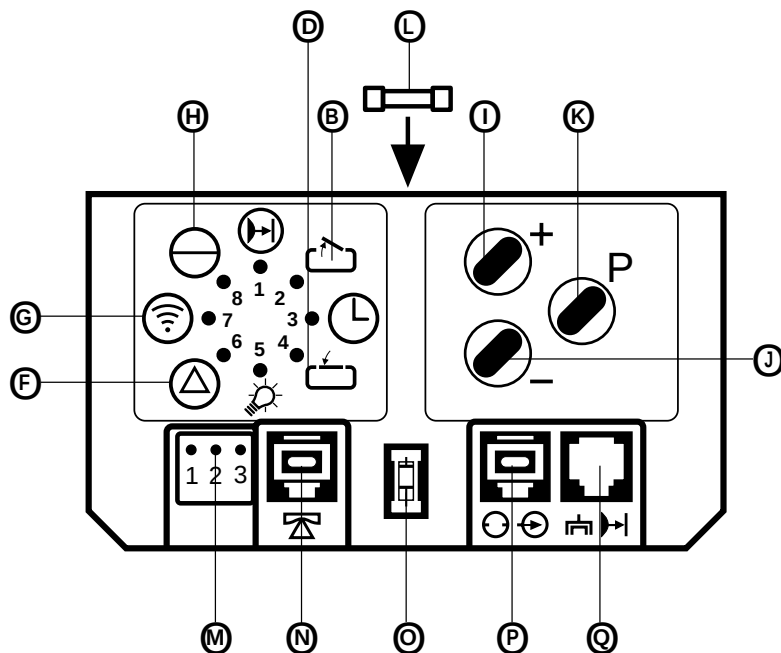


Emergency release:

Remove securing screw (A). Using an SW 17 ring spanner, turn hexagon head (B) in direction of arrow and screw securing screw (A) into position (C). The drive unit is now mechanically disengaged and the gate can be moved manually. The control unit is cut off at the same time.

- A Securing screw
- B Hexagon head of the emergency release
- C Position of the securing screw in the disengaged state

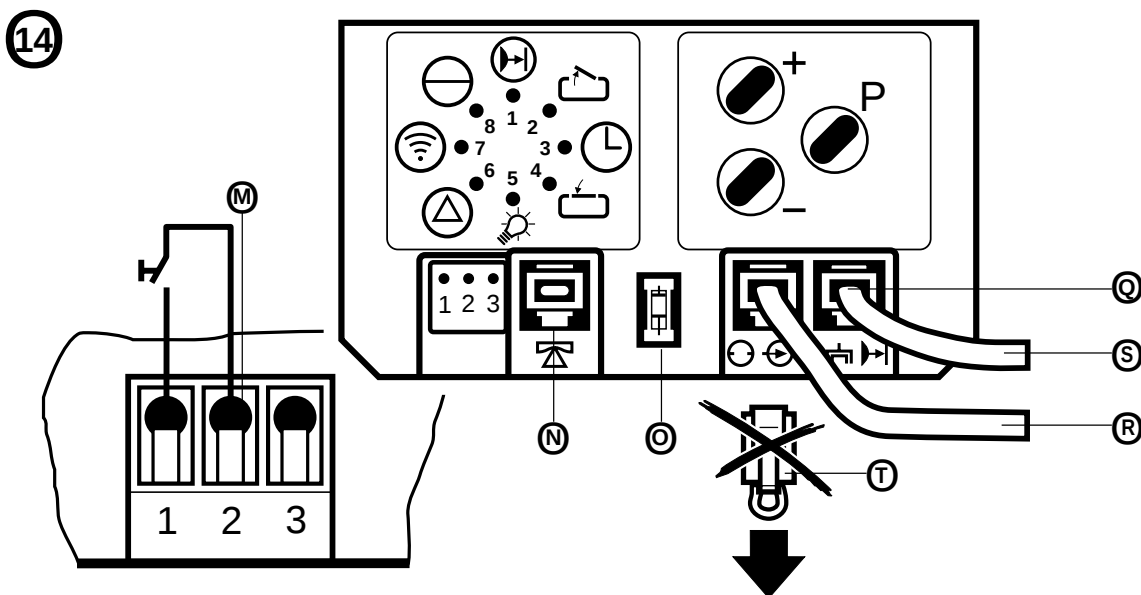
13



Electronic control unit:

- | | | |
|---|--|---|
| F | Fault display | - flashes when fault registered |
| G | Impulse display | - glows when button pressed |
| | | - flashes on valid signal from hand transmitter |
| H | Power supply display | - glows when voltage o.k. |
| | | - goes out for a second when motor stops |
| B | Door open display | - glows when opening limit is reached |
| D | Door closed display | - glows when closing limit is reached |
| I | "OPEN" test button | |
| J | "CLOSE" test button | |
| K | Programming button P | |
| M | Connecting terminals for external impulse buttons | |
| P | Plug socket for "external control elements" | |
| Q | Plug socket for "electronic aerial", "external photocell" | |
| L | Mains fuse 4 A MT max. | |
| N | Plug socket for external closing edge safety device | |
| O | Programming switch for bottom safety edge device with self check | |

Symbols	Explanation
	On, mains voltage
	Impulse operation
	Fault
	External photocell
	Automatic timer
	Operator lighting
	Door open
	Door closed
	External connecting terminals
	Programming button + "OPEN" test button
	Programming button - "CLOSE" test button
	Programming button
	"STOP" button
	External control elements
	Electronic aerial
	External photocell
	External closing edge safety device



Connecting external control elements

R Connecting cable for control elements (Marantec system cabling). To connect, remove short-circuit plug (T) - (button inside or key switch outside; not part of the Comfort 820 supply package).

M Connection of site control elements may only be made to the connecting terminals

- 1 GND
- 2 Impulse
- 3 24 V DC max. 50 mA

T Short-circuit plug

S Connection for electronic aerial.



Attention:

Do not insert short-circuit plug (T) into plug socket (Q).

N Connection for closing edge safety device (SKS)

O Programming switch for bottom safety edge device with self check



Attention:

- Set the switch always in position 'OFF'.
- In case of the connection of a bottom safety edge device, pay attention to the reversing modes according to programming table level 6, menus 5 and 6.

15

Hand transmitter:

- A Flashing battery control
- B Operation buttons
- C Battery compartment cover
- D Battery 12V A 23
- E Programming contacts

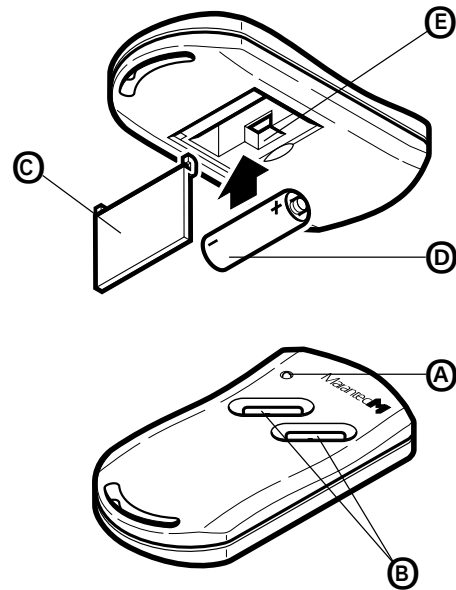
To change and insert the battery, open the cover.
When changing the battery, be sure to pole correctly.

Batteries are not covered by the warranty.

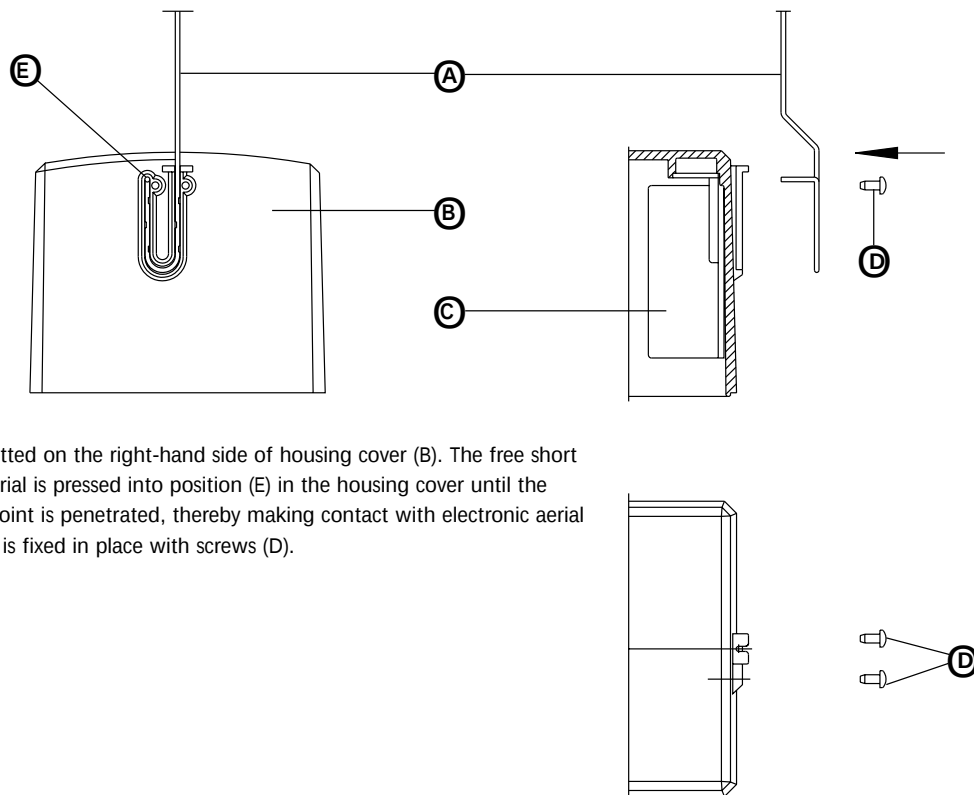
Important:

Only operate the hand transmitter when certain that neither persons nor objects are located within the door's area of travel.

Keep hand transmitters well out of the reach of children!



16 Fitting the rod aerial

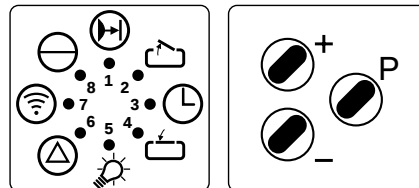


Rod aerial (A) is fitted on the right-hand side of housing cover (B). The free short end of the rod aerial is pressed into position (E) in the housing cover until the thin wall at this point is penetrated, thereby making contact with electronic aerial (C). The rod aerial is fixed in place with screws (D).

17

Overview of the programming options

Indicator functions



As soon as the control unit is switched on it runs a self-test (all the control lights glow for approx. 2 seconds).

Error messages

If the MALFUNCTION control light (6) flashes, then after briefly pressing button P (10) the corresponding error number is displayed (indicators flash erratically). The error number is established by adding together the flashing digits. Refer to point 21 "Error numbers").

Programming the basic functions of the operator

Press button P (10) for longer than 2 seconds. The control unit then changes from the operating state to the programming state of the basic functions and indicator 1 flashes. Button P can now be released.

Using the ⊕ (11) or ⊖ (12) buttons, changes can be made in the programming menu which can then be stored by pressing button P. (If button P is pressed without any change having been made with the ⊕ or ⊖ buttons, then the programming menu is skipped and the settings remain unchanged). After the last programming menu, programming of the basic functions of the operator is completed, recognizable by all indicators going out in the sequence 8 - 1.

Programming the extended operator functions

Press button P (10) for longer than 10 seconds. The control unit then changes from the operating state to the programming level for extended operator functions, indicator 8 flashes rapidly and all other indicators glow. **Keeping button P depressed**, operate the ⊕ (11) or ⊖ (12) buttons to select the desired programming level (the level indicator flashes rapidly, all other indicators glow). Button P can now be released.

The first programming menu of the selected level is called up (indicator 1 flashes, all other indicators glow). Using the ⊕ or ⊖ buttons, changes can be made in the programming menu which can then be stored by pressing button P. (If button P is pressed without any change having been made with the ⊕ or ⊖ buttons, then the programming menu is skipped and the settings remain unchanged). After the last programming menu, programming of the extended operator functions is completed, recognizable by all indicators going out in the sequence 8 - 1.

Extended operator functions		
Explanation of the functions		
Programming level	Functions	Explanation
Level 8 Operating modes	- OPEN press-and-release - CLOSE press-and-release - Impulse commands - Directional commands (OPEN/CLOSE pushbutton) - OPEN impulse function	After start operator travels to OPEN end-of-travel position. After start operator travels to CLOSE end-of-travel position. As an option a running operator can be stopped or not stopped via a command unit. As an option a running operator can be stopped or not stopped via a command unit. Change of direction or opening priority.
Level 3 Automatic timer	- Open phase - Warning phase - Start-up warning - Early closing after driving past the through-traffic photocell	The phase during which the gate stays open before it automatically closes again. The phase during which the signal light flashes before the gate automatically closes again. The phase during which the signal light flashes before the gate starts to move. The gate closes either after the set OPEN phase or early after driving past the through-traffic photocell.
Level 5 Operator lighting/ Signal lights	- Lighting phase - Signal lights - Lighting	The time the operator lighting stays on after the gate has moved (see pt. 22). The signal lights flash or glow on power operation of the gate. The operator lighting flashes or glows during the warning phase (see pt. 22).
Level 6 Reverse modes	- OPEN power limit - CLOSE power limit - OPEN photocell - CLOSE photocell - OPEN closing edge safety device - CLOSE closing edge safety device	Adjustable as to whether operator stops, reverses short or long. Adjustable as to whether operator stops, reverses short or long. Adjustable as to whether operator stops, reverses short or long. Adjustable as to whether operator stops, reverses short or long. Adjustable as to whether operator stops, reverses short or long. Adjustable as to whether operator stops, reverses short or long.

18

Programming the control unit Basic functions of the operator

Programming the external photocell

(Attention: the gate operator is preprogrammed at the factory. The gate can only be closed by press-and-release provided a photocell is connected. If this photocell is not connected, the operator must be reprogrammed in accordance with point 1. Otherwise the gate can only be closed by press-and-hold).

1. Press programming button P for approx. 2 seconds until indicator 1 flashes.

By pressing the  button, the operator can be run without an external photocell.

Indicator 1 flashes.

Via the  button it is possible to connect an external photocell. Indicator 1 glows.

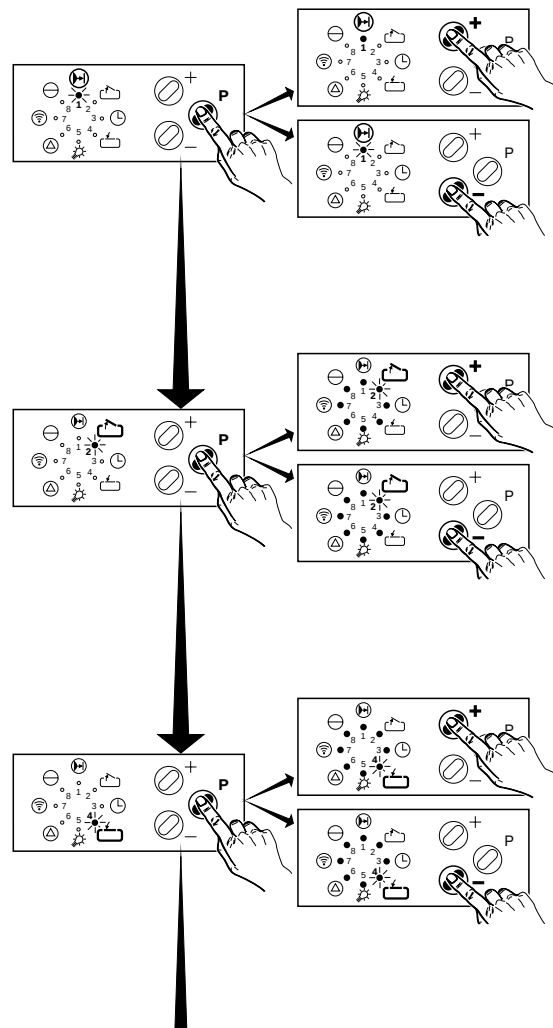
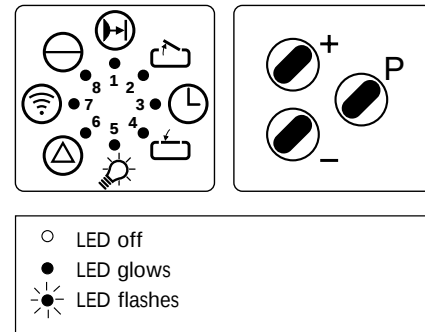
Store by pressing programming button P.

Programming the "OPEN" travel limit

2. Display 2 flashes.
Allow the door to reach its final "OPEN" position by operating the  or  buttons. (Drive unit operates with press and hold.) Store the "OPEN" travel limit by pressing programming button P.

Programming the "CLOSE" travel limit

3. Display 4 flashes.
Allow the door to reach its final "CLOSE" position by operating the  or  buttons. (Drive unit operates with press and hold.) Store the "CLOSE" travel limit by pressing programming button P.



Programming the "OPEN" automatic cut-out

4. Displays 2 and 6 flash.

By operating the $\oplus$ or $\ominus$ buttons, the automatic cut-out can be set in increments from 1 (most sensitive setting) to 16.

Display 1 flashes = increment 1

Display 1 glows = increment 2

Display 1 glows, display 2 flashes = increment 3

...

Displays 1 to 8 glow = increment 16

Store by pressing programming button P.

Set the automatic cut-out to be as sensitive as possible (150 N max. at the top edge of the door leaf).

Programming the "CLOSE" automatic cut-out

5. Displays 4 and 6 flash.

By operating the $\oplus$ or $\ominus$ buttons, the automatic cut-out can be set in increments from 1 (most sensitive setting) to 16.

Display 1 flashes = increment 1

Display 1 glows = increment 2

Display 1 glows, display 2 flashes = increment 3

...

Displays 1 to 8 glow = increment 16

Store by pressing programming button P.

Set the automatic cut-out to be as sensitive as possible (150 N max. at the bottom edge of the door leaf).

Programming the remote control

6. Indicator 7 flashes

The multi-bit hand transmitter is precoded at the factory. Operate the corresponding button of the hand transmitter until LED 7 flashes rapidly. The code is stored by pressing programming button P and the programming process is completed; recognizable by all indicators going out in the sequence 8 - 1.

The control unit is now in the operating state (in the event of a power failure all settings are retained).

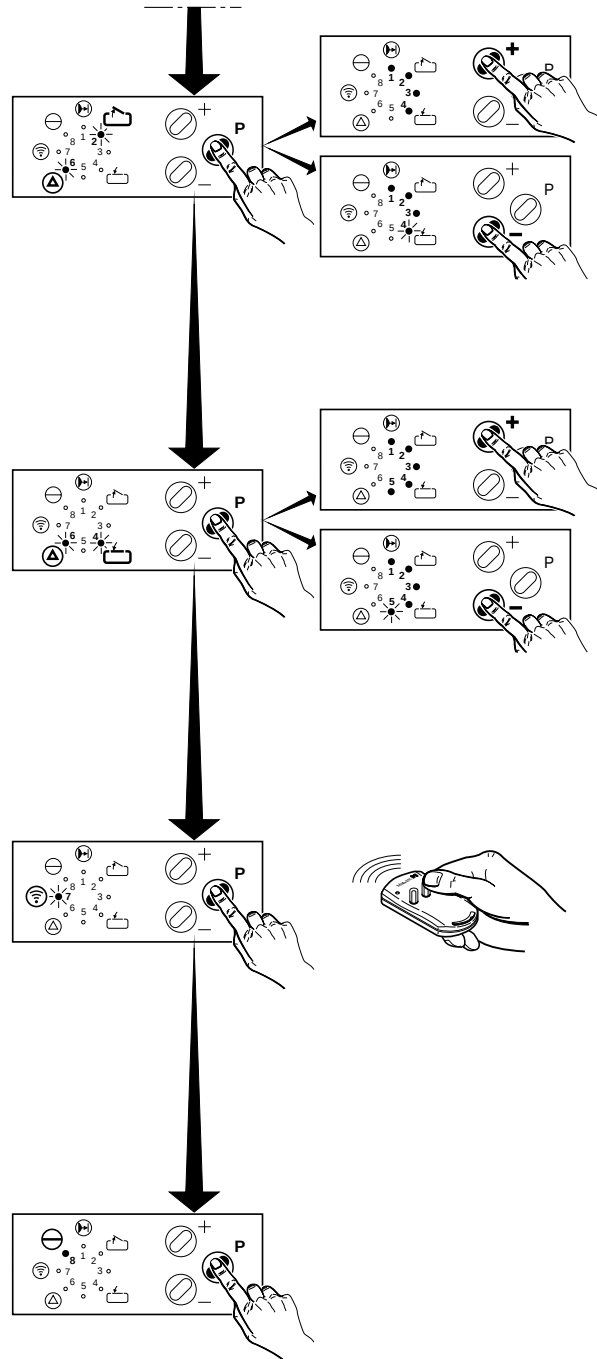
Programming individual functions e.g. the "CLOSE" automatic cut-out

Press programming button P for approx. 2 seconds until display 1 flashes.

Repeatedly press programming button P until displays 4 and 6 flash.

Carry out programming (see pt. 5).

Press programming button P again to complete the programming procedure; recognizable by all indicators going out in the sequence 8 - 1.



19

Programming the control unit

Extended operator functions

Programming the automatic timer

(If an automatic timer is used, an external photocell to monitor the through-traffic area must be connected and activated in accordance with pt. 18/1, otherwise no automatic timer function is possible.)

The control unit is in the operating state as described under point 17. If button P is pressed for longer than 10 seconds, the control unit changes to the programming level for extended operator functions (indicator 8 flashes rapidly). Keeping button P depressed, operate the $\oplus$ or $\ominus$ buttons to select programming level 3 (**indicator 3 flashes, all other indicators glow**) and release button P. Now indicator 1 flashes. The open phase can now be set using the $\oplus$ or $\ominus$ buttons (see table of phase settings on the next page).

At the end of this section you will find an overview (Programming Table) that will help you to set the desired open phase. Here you can also enter your own stored settings for later reference.

Once button P is no longer pressed, **indicator 1 (open phase) flashes**.

Using the $\oplus$ or $\ominus$ buttons, the **open phase** can be set in accordance with the table.

Minimum value: 5 seconds (top of table)
Maximum value: 255 seconds (bottom of table)

Store by pressing programming button P.

Once button P is no longer pressed, **indicator 2 (warning phase) flashes**.

Using the $\oplus$ or $\ominus$ buttons, the **warning phase** can be set in accordance with the table.

Minimum value: 2 seconds (top of table)
Maximum value: 70 seconds (bottom of table)

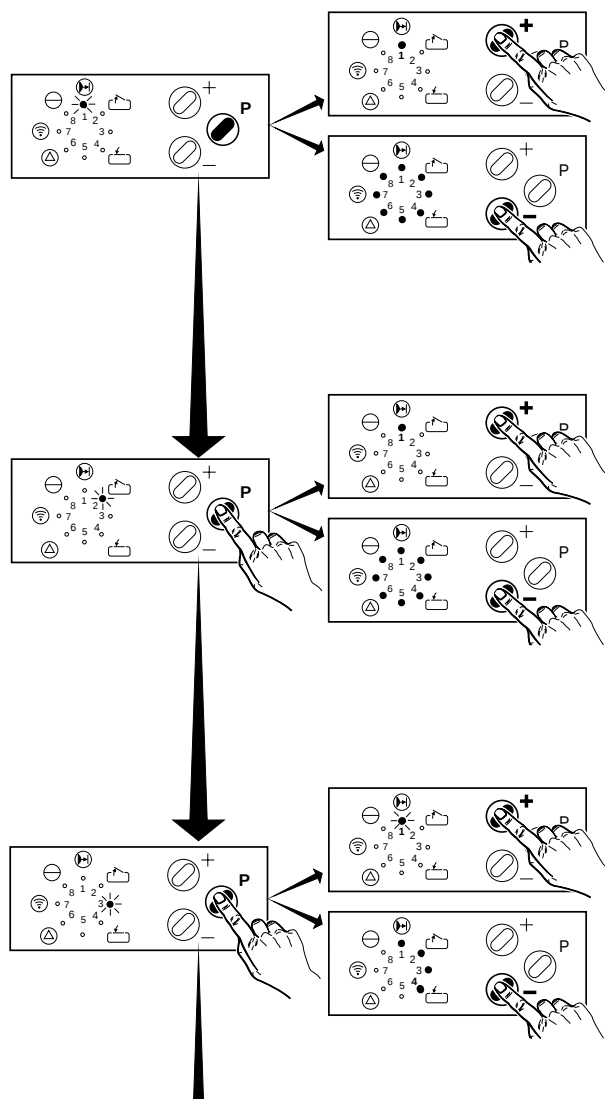
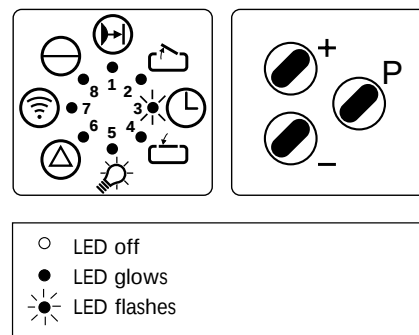
Store by pressing programming button P.

Once button P is no longer pressed, **indicator 3 (start-up warning) flashes**.

Using the $\oplus$ or $\ominus$ buttons, the **start-up warning** can be set in accordance with the table.

Minimum value: 0 seconds (top of table)
Maximum value: 7 seconds (bottom of table)

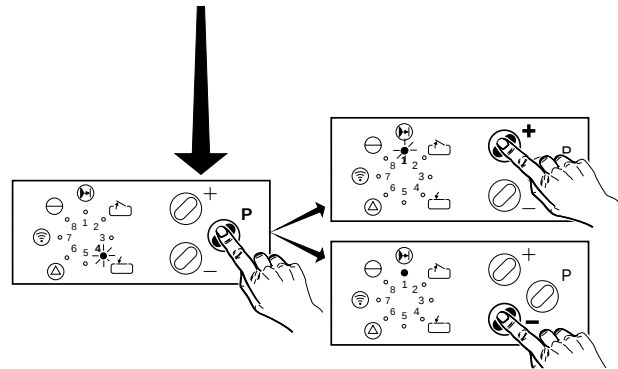
Store by pressing programming button P.



Once button P is no longer pressed, **indicator 4 flashes (early closing after driving past the through-traffic photocell)**.

Using the $\oplus$ or $\ominus$ buttons, it is possible to programme the function "**early closing after driving past the through-traffic photocell**" or the set phase.

Indicator 1 flashes: Gate closes after the set phase.
Indicator 1 glows: Gate closes after driving past the through-traffic photocell.



Press button P again to complete the programming procedure; recognizable by all indicators going out in the sequence 8 - 1. The control unit then returns to the operating state (indicator 8 glows: if the gate is in the open or closed state, the corresponding indicators 2 or 4 glow as well).

Deactivating the automatic timer (both phases without function)

If the open or warning phase is set at "without function" in accordance with the table, then the automatic timer function is switched off.

Comfort 820 Programming Table

Level 3: Automatic Timer

		← BUTTON ⊖								BUTTON ⊕ →							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BUTTON P ↓	Menu 1	Open phase															
		Timer deactivated	5 seconds	10 seconds	15 seconds	20 seconds	25 seconds	30 seconds	35 seconds	40 seconds	50 seconds	80 seconds	100 seconds	120 seconds	150 seconds	180 seconds	255 seconds
	Menu 2	Warning phase															
		Timer deactivated	2 seconds	5 seconds	10 seconds	15 seconds	20 seconds	25 seconds	30 seconds	35 seconds	40 seconds	45 seconds	50 seconds	55 seconds	60 seconds	65 seconds	70 seconds
	Menu 3	Start-up warning															
		0 seconds	1 seconds	2 seconds	3 seconds	4 seconds	5 seconds	6 seconds	7 seconds								
	Menu 4	Early closing after passing the photocell															
		No	Yes														

Legend:

* LED flashes

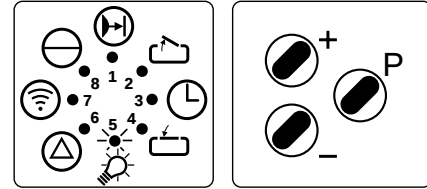
● LED glows

○ LED doesn't glow

Factory setting

Not possible

Programming the operator lighting/signal lights



- LED off
- LED glows
- ⚡ LED flashes

Operator lighting

The operator allows connection of external operator lighting, provided the relay retrofit kit "OPEN-CLOSE+light gate function" for standard operators in a housing (item no. 152 137) is connected.

Signal lights

A signal light (60 watt) can be connected at any time. This output can be programmed in such a way that the signal lights flash or glow permanently.

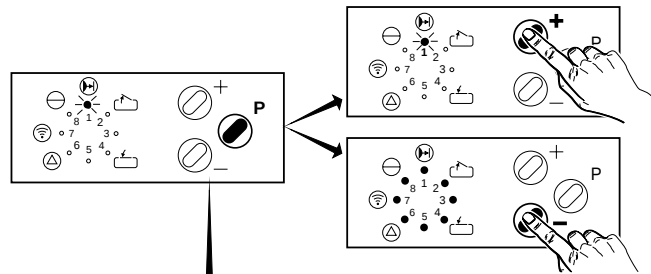
The control unit is in the operating state as described under point 17. If button P is pressed for longer than 10 seconds, the control unit changes to the programming level for extended operator functions (indicator 8 flashes rapidly). Keeping button P depressed, operate the ⊕ or ⊖ buttons to select programming level 5 (**indicator 5 flashes, all other indicators glow**). Release button P.

At the end of this section you will find an overview (Programming Table) that will help you to set the desired lighting phase. Here you can also enter your own stored settings for later reference.

Once button P is no longer pressed, **indicator 1 (lighting phase) flashes**.

Using the ⊕ or ⊖ buttons, the **lighting phase** can be set in accordance with the table.

Store by pressing programming button P.

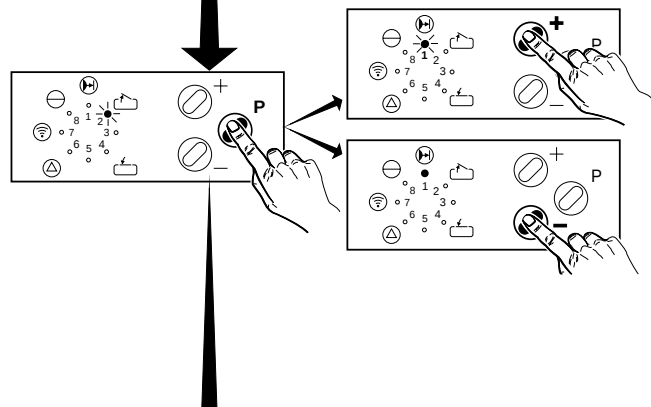


Once button P is no longer pressed, **indicator 2 (signal lights) flashes**.

Using the ⊕ or ⊖ buttons, the **signal lights** function can be set.

Indicator 1 flashes: External signal light glows.
Indicator 1 glows: External signal light flashes.

Store by pressing programming button P.



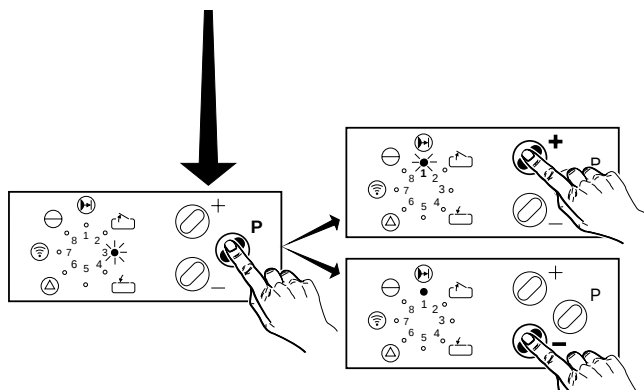
Once button P is no longer pressed, **indicator 3 (lighting) flashes**.

Using the $\oplus$ or $\ominus$ buttons, the **lighting** function can be set.

Indicator 1 flashes: Operator lighting glows during the warning phase.

Indicator 1 glows: Operator lighting flashes during the warning phase.

Press programming button P again to complete the programming procedure; recognizable by all indicators going out in the sequence 8 - 1. Afterwards, the control unit returns to the operating state (indicator 8 glows; if the gate is in an open or closed state, the corresponding indicators 2 or 4 glow as well).



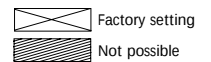
Comfort 820 Programming Table

Level 5: Operator Lighting / Signal Lights

[illegible]

Legend:

- * LED flashes
- LED glows
- LED doesn't glow



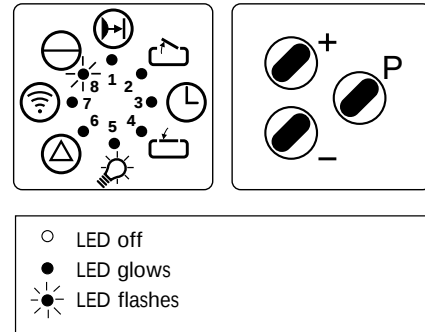
Programming the operating modes

The control unit is already preset at the factory for the operating mode "OPEN" by press-and-release; "CLOSE" by press-and-release; "sequential control" impulse commands. If it is necessary to alter an operating mode, this is carried out in programming level 8 (operating modes).

The control unit is in an operating state as described under point 17.

If button P is pressed for longer than 10 seconds, the control unit changes to the programming level for extended operator functions (indicator 8 flashes rapidly). Keeping button P depressed, operate the $\oplus$ or $\ominus$ buttons to select programming level 8 (**indicator 8 flashes, all other indicators glow**). Release button P.

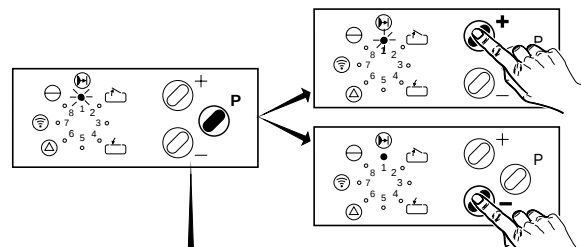
At the end of this section will find an overview (Programming Table) which will help you to set the desired operating modes. Here you can also enter your own stored settings for later reference.



Once button P is not longer pressed, **indicator 1 (OPEN press-and-release) flashes**.

Using the $\oplus$ or $\ominus$ buttons, the function can be set in accordance with the table.

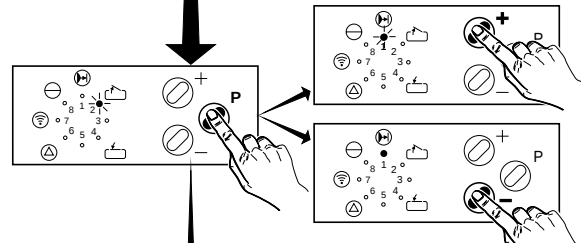
Store by pressing programming button P.



Once button P is not longer pressed, **indicator 2 (CLOSE press-and-release) flashes**.

Using the $\oplus$ or $\ominus$ buttons, the function can be set in accordance with the table.

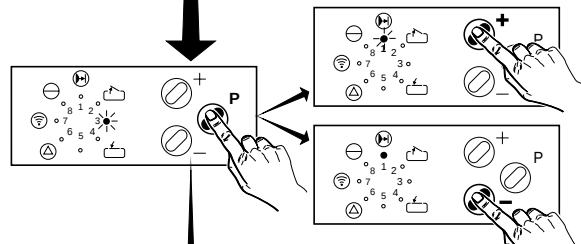
Store by pressing programming button P.



Once button P is not longer pressed, **indicator 3 (impulse commands) flashes**.

Using the $\oplus$ or $\ominus$ buttons, the function can be set in accordance with the table.

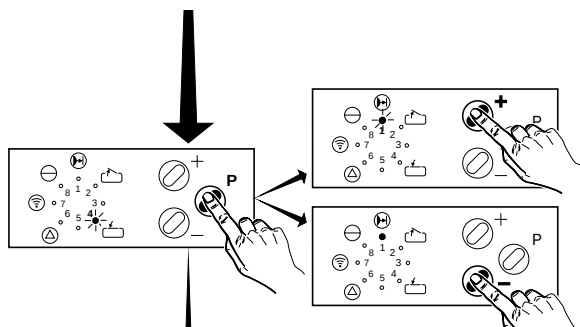
Store by pressing programming button P.



Once button P is not longer pressed, **indicator 4 (directional commands) flashes.**

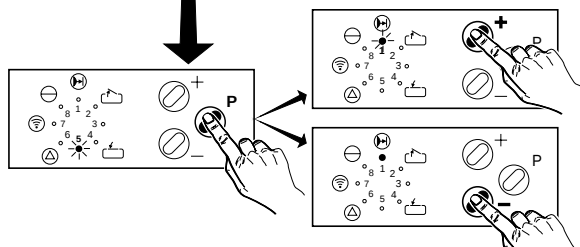
Using the $\oplus$ or $\ominus$ buttons, the function can be set in accordance with the table.

Store by pressing programming button P.



Once button P is not longer pressed, **indicator 5 (OPEN impulse function) flashes.**

Using the $\oplus$ or $\ominus$ buttons, the function can be set in accordance with the table.



Press button P again to complete the programming procedure; recognizable by all indicators going out in the sequence 8 - 1 (running light). Afterwards, the control unit returns to the operating state (indicator 8 glows; if the gate is in the open or closed state, the corresponding indicators 2 or 4 glow as well).

Comfort 820 Programming Table

Level 8: Operating Modes

		← BUTTON ⊖								BUTTON ⊕ →							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BUTTON P ↓	Menu 1	Press-and-release for OPEN direction															
		OFF	ON														
	Menu 2	Press-and-release for CLOSE direction															
		OFF	ON														
	Menu 3	Impulse command units stop a running operator															
		NO	YES														
	Menu 4	OPEN/CLOSE command units stop a running operator															
		NO	YES														
	Menu 5	Impulse function															
		STANDARD reverse direction	OPEN open direction														

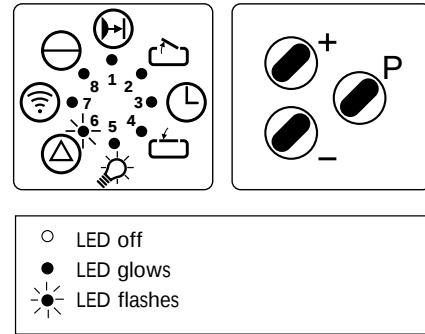
Legend:

- * LED flashes
- LED glows
- LED doesn't glow

Factory setting
 Not possible

Programming the reverse modes

The control unit is in an operating state (indicator 8 glows; if the gate is in the "open" or "closed" state, the corresponding indicators 2 or 4 glow as well). If button P is pressed for longer than 10 seconds, the control unit changes to the programming level for extended operator functions (indicator 8 flashes rapidly). Keeping button P depressed, operate the $\oplus$ or $\ominus$ buttons to select programming level 6 (**indicator 6 flashes, all other indicators glow**). Release button P.

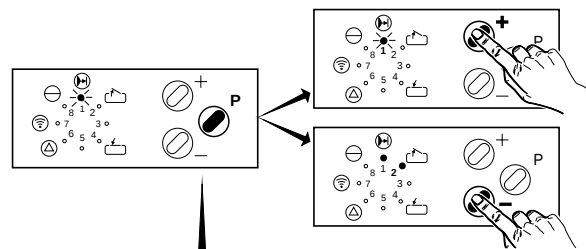


At the end of this section you will find an overview (Programming Table) which will help you to set the desired reverse mode. Here you can also enter your own stored settings for later reference.

Once button P is no longer pressed, **indicator 1 flashes (OPEN power limit)**.

Using the $\oplus$ oder $\ominus$ buttons, the function can be set in accordance with the table.

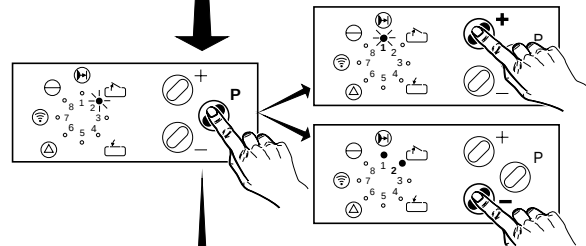
Store by pressing programming button P.



Once button P is no longer pressed, **indicator 2 flashes (CLOSE power limit)**.

Using the $\oplus$ oder $\ominus$ buttons, the function can be set in accordance with the table.

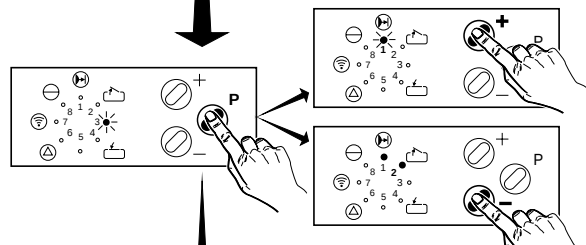
Store by pressing programming button P.



Once button P is no longer pressed, **indicator 3 flashes (OPEN photocell)**.

Using the $\oplus$ oder $\ominus$ buttons, the function can be set in accordance with the table.

Store by pressing programming button P.



Once button P is no longer pressed, **indicator 4 flashes (CLOSE photocell).**

Using the $\oplus$ oder $\ominus$ buttons, the function can be set in accordance with the table.

Store by pressing programming button P.

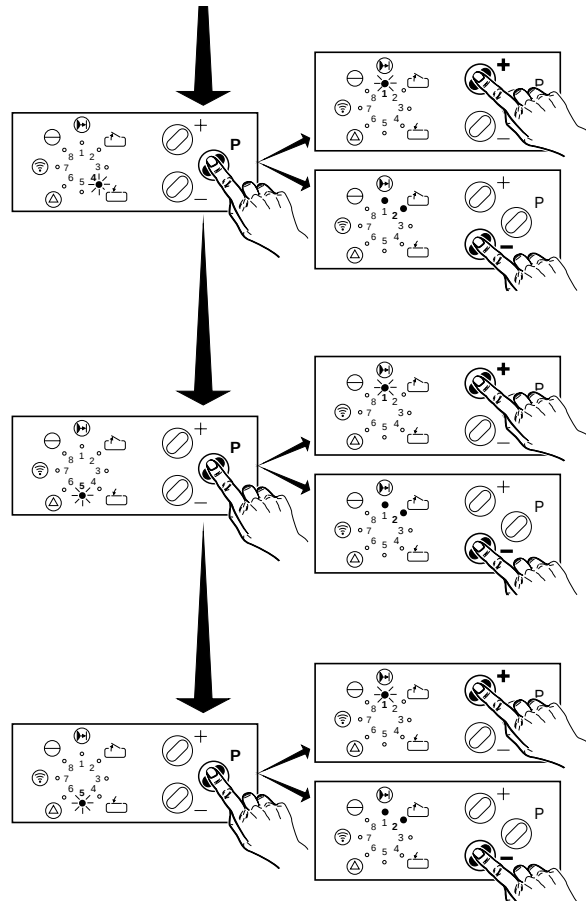
Once button P is no longer pressed, **indicator 5 flashes (OPEN closing edge safety device).**

Using the $\oplus$ oder $\ominus$ buttons, the function can be set in accordance with the table.

Store by pressing programming button P.

Once button P is no longer pressed, **indicator 6 flashes (CLOSE closing edge safety device).**

Using the $\oplus$ oder $\ominus$ buttons, the function can be set in accordance with the table.



Press programming button P again to complete the programming procedure; recognizable by all the indicators going out in the sequence 8 - 1 (running light). Afterwards, the control unit returns to the operating state (indicator 8 glows; if the gate is in the "open" or "closed" state, the corresponding indicators 2 or 4 glow as well).

Comfort 820 Programming Table

Level 6: Reverse Modes

		← BUTTON ⊖								BUTTON ⊕ →							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
 BUTTON P ↓	Menu 1	Power limit for OPEN direction															
		STOP	SHORT reverse	LONG reverse	NOT fitted												
																	
	Menu 2	Power limit for CLOSE direction															
		STOP	SHORT reverse	LONG reverse	NOT fitted												
																	
	Menu 3	Photocell for OPEN direction															
		STOP	SHORT reverse	LONG reverse	NOT fitted												
																	
	Menu 4	Photocell for CLOSE direction															
		STOP	SHORT reverse	LONG reverse	NOT fitted												
																	
	Menu 5	Closing edge safety device for OPEN direction															
		STOP	SHORT reverse	LONG reverse	NOT fitted												
																	
	Menu 6	Closing edge safety device for CLOSE direction															
		STOP	SHORT reverse	LONG reverse	NOT fitted												
																	

Legend:

- * LED flashes
- LED glows
- LED doesn't glow

 Factory setting
 Not possible

[illegible]

C1	Motor condenser
F1	Fuse (max. 4A)
H40	x) Signal light
M1	Motor with thermal overload protection
S	x) Main switch
S1	x) "IMPULSE" button
S10	Emergency manual operation switch
S21	RPM sensor
S22	Reference point sensor
S31	Programming switch for "SKS self-monitoring unit"
X0	+) Mains electric socket
X1	Mains feed line with plug

X2c	Controls
-----	----------

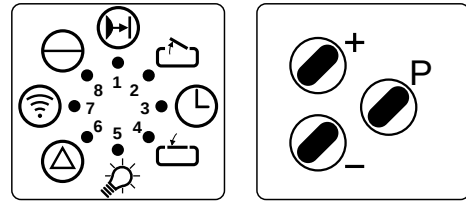
X10	External control elements
X20	Electronic aerial
	External photocell
X31	Closing edge safety device
	Connecting plans for accessories

SKS1 -) Closing edge safety device
W20 Electronic aerial
XS10 -) External control elements

- +) on site
- x) if fitted
-) To connect, remove short-circuit plug

Important! Low voltage!
External voltage at the plug sockets X2C, X10 or screw terminals X30 will completely destroy the electronics.

Important! Observe local safety regulations!
Always lay mains cable and control cable separately.
Control voltage 24V DC.



Test Instructions - only for the specialist - Trouble shooting:

Fault	Cause	Remedy
Display 8 doesn't glow.	No voltage.	Check mains supply. Check electric socket. Check operator mains fuse (pt. 13/L).
	Thermal protection in mains transformer activated.	Allow mains transformer to cool down.
	Operator disengaged.	Check the emergency release (pt. 12).
	Defective control unit.	Cut off mains supply to operator. Remove housing cover (pt. 10). Unscrew control unit, pull slightly forward and withdraw the connecting plug. Remove control unit and have it checked.
Display 6 flashes. Fault 10	Automatic cut-out set too sensitively. Door operation too sluggish. Door blocks.	Re-set automatic cut-out to be less sensitive (pt. 18/4 - "OPEN" direction, pt. 18/5 - "CLOSE" direction). Ensure door moves easily.
Display 6 flashes. Fault 6 or 15	External photocell defective or interrupted.	Remove obstruction or have photocell checked.
No response on impulse. Fault 36	Connecting terminals for "IMPULSE" button bridged, e.g. due to short-circuit or wrong terminal connection.	Temporarily isolate cabled key switches or interior push buttons from control unit. Remove plug (pt. 14/R), insert plug (pt. 14/T) and look for cable fault.
	Short-circuit plug removed (pt. 14/T), but "STOP" button not connected.	Connect "STOP" button.
Drive only operates in "OPEN" but not in "CLOSE" direction. Fault 15	Photocell (pt. 18/1) programmed, but not connected.	Reprogramme photocell function or connect photocell.
Display 7 doesn't flash rapidly on impulse from hand transmitter	Electronic aerial disconnected.	Connect aerial to control unit (pt. 14/S).
	Hand transmitter coding is not consistent with receiver coding.	Check coding (pt. 18/6).
	Flat battery.	Insert new 9V battery IEC 6F22 (pt. 15). Flashing LED in transmitter indicates battery condition.
	Hand transmitter, control unit or electronic aerial defective.	Have all 3 components checked.
Insufficient range of remote control (less than 5 m).	Flat battery.	Insert new 9V battery IEC 6F22 (pt. 15). Flashing LED in transmitter indicates battery condition.
	Wrongly positioned electronic aerial.	Check rod aerial fitting (pt. 16).
Display 6 flashes. Fault 9	RPM sensor defective.	Have operator checked.

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Test Instructions - continued -

The fault number is displayed by briefly pressing the programming button P

Fault	Fault No.	Display flashes irratically
Photocell actuated	6	Display 6
Programming terminated	7	Display 7
Reference point	8	Display 8
Defective RPM sensor	9	Display 8 + 1
Power limit	10	Display 8 + 2
Excess travel stop	11	Display 8 + 3
Safety edge open self-monitoring unit not o.k.	12	Display 8 + 4
Safety edge close self-monitoring unit not o.k.	13	Display 8 + 5
Photocell self-monitoring unit not o.k.	15	Display 8 + 7
Power limit self-monitoring unit	16	Display 8 + 7 + 1
Normally close circuit interrupted	36	Display 1 - 8

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Initial operation

Power-operated windows, doors and gates for industrial or commercial use must be checked by a specialist after initial installation and then regularly at intervals of 1 year minimum.

Maintenance

The Comfort 820 garage door operator is virtually maintenance-free. However, all movable parts of the door and operator system should be checked regularly and kept in an easily movable condition. The "OPEN" and "CLOSE" automatic cut-out settings should be checked regularly. The door must be easy to operate manually.

Technical data:

Comfort 820 Sliding Gate Operator

Connected loads:

230 V, 50 Hz
2.5 A
Short-time duty 4 mins.

Door travel speed:

0.18 m/s

Push and pull force:

800 N

Opening phase (4 m gate width):

approx. 22 secs.

Automatic cut-out:

Electronic power limit through microprocessor and RPM sensor.

Automatic timer:

With additional relay for signal lights connection and photo-cell to monitor the through-traffic area (both items available as accessories). Warning phase adjustable from 2 to 70 seconds. Open phase adjustable from 5 - 255 seconds.

Control voltage:

Low voltage - 24 V DC.

Release:

Through claw coupling integrated into the drive unit with SW 17 ring spanner.

Temperature tolerance:

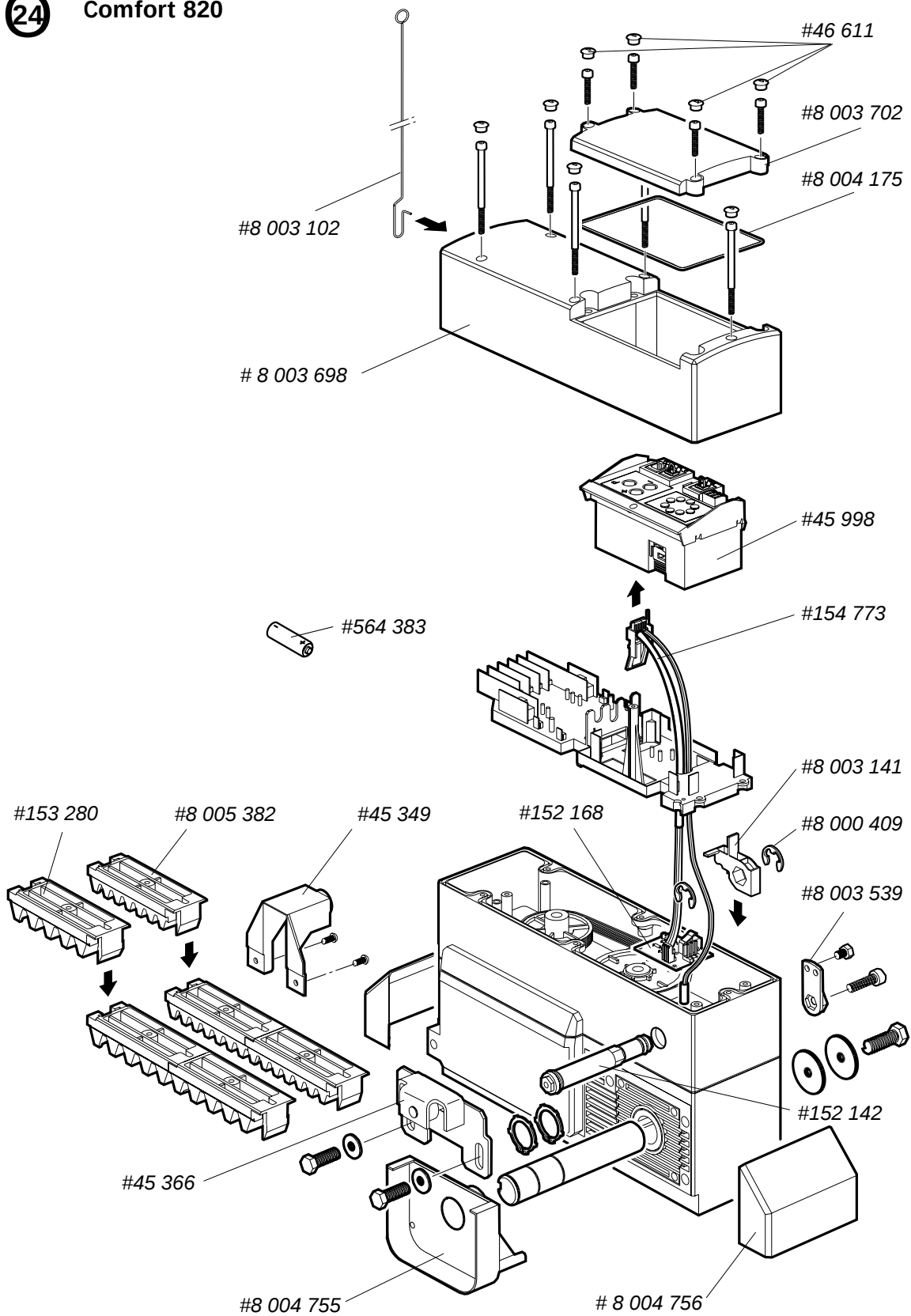
- 20° C bis 60° C

Protection category:

IP 65

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Comfort 820



Herstellererklärung
Manufacturer's Declaration
Déclaration du fabricant
Verklaring van de fabrikant
Declaración del fabricante
Dichiarazione del produttore

(D)

Hiermit erklären wir, daß das nachfolgend bezeichnete Produkt aufgrund seiner Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Richtlinie Elektromagnetische Verträglichkeit, der Maschinen-Richtlinie und der Niederspannungsrichtlinie entspricht.

Bei einer nicht mit uns abgestimmten Änderung der Produkte verliert diese Erklärung ihre Gültigkeit.

(GB)

We hereby declare that the product referred to below, with reference to its design, construction and to the version as marketed by us, conforms to the relevant safety and health requirements contained in the European Council Directives pertaining to electromagnetic compatibility, machines and low voltage.

This declaration becomes null and void in the event of modification or changes to the product not expressly agreed with us.

(F)

Par la présente, nous déclarons que le produit sous-mentionné correspond, de par sa conception et son type de construction, tout comme la version commercialisée, aux conditions fondamentales exigées pour la sécurité et la santé de la directive CE relative à la compatibilité électromagnétique, de la directive concernant les machines et de celle relative à la basse tension.

Cette déclaration perd toute validité en cas de modification des produits, effectuée sans notre accord.

(NL)

Hierbij verklaren wij dat het hierna genoemde product qua ontwerp en constructie alsmede de door ons op de markt gebrachte uitvoering voldoet aan de hiervoor geldende veiligheids- en gezondheidseisen conform de Europese richtlijnen t.w.: EMC-richtlijn, Machinerichtlijn en Laagspanningsrichtlijn.

Ingeval van wijzigingen aan onze producten die niet met ons afgestemd zijn, verliest deze verklaring haar geldigheid.

(E)

Por la presente declaramos que el producto indicado a continuación, en base a su concepción y tipo constructivo, así como en el acabado comercializado por nosotros, cumple con los requisitos básicos obligatorios sanitarios y de seguridad de la directiva de la CE sobre compatibilidad electromagnética, la Directiva de Maquinaria y la Directiva de Baja Tensión.

En caso de una modificación del producto no acordada con nosotros, esta declaración perderá su validez.

(I)

Con la presente dichiariamo che il prodotto di seguito descritto, in base alla sua progettazione e tipo e nella versione da noi messa in commercio, rispetta tutti i requisiti essenziali di sicurezza e sanitari che lo concernono previsti dalla direttiva CE sulla compatibilità elettromagnetica, dalla direttiva relativa alle macchine e dalla direttiva relativa alla bassa tensione. In caso di modifica apportata senza nostra autorizzazione, la presente dichiarazione perde la propria validità.

Produkt produkt produkt προϊόν
product producto producto prodotto
produit prodotto Προдукция **产品**

Einschlägige EG-Richtlinien: EG-Richtlinie Elektromagnetische Verträglichkeit (89/336/EWG, 93/68/EWG und 93/44/EWG), Maschinen-Richtlinie (89/392/EWG, 91/368/EWG, 93/68/EWG und 93/44/EWG) und Niederspannungsrichtlinie (73/23/EWG, 93/68/EWG und 93/44/EWG).
Relevant European Council Directives pertaining to electromagnetic compatibility (89/336/EEC, 93/68/EEC and 93/44/EEC), machines (89/392/EEC, 91/368/EEC, 93/68/EEC and 93/44/EEC) and low voltage (73/23/EEC, 93/68/EEC and 93/44/EEC).
Directives CE se rapportant à la: Directive CE sur la compatibilité électromagnétique (89/336/CEE, 93/68/CEE et 93/44/CEE), de la directive concernant les machines (89/392/CEE, 91/368/CEE, 93/68/CEE et 93/44/CEE) et de celle relative à la basse tension (73/23/CEE, 93/68/CEE et 93/44/CEE).
Van toepassing zijnde Europese richtlijnen: EMC-richtlijn (89/336/EEG, 93/68/EEG en 93/44/EEG), Machine richtlijn (89/392/EEG, 91/368/EEG, 93/68/EEG en 93/44/EEG) en Laagspanningsrichtlijn (73/23/EEG, 93/68/EEG en 93/44/EEG).
Directivas de la CE obligatorias: Directiva CE sobre Compatibilidad electromagnética (89/336/MCE, 93/68/MCE y 93/44/MCE), la directiva de Maquinaria (89/392/MCE, 91/368/MCE, 93/68/MCE y 93/44/MCE) y la Directiva de Baja Tensión (73/23/MCE, 93/68/MCE y 93/44/MCE).
Direttive CE applicate: direttiva CE sulla compatibilità elettromagnetica (89/336/CEE, 93/68/CEE e 93/44/CEE), direttiva relativa alle macchine (89/392/CEE, 91/368/CEE, 93/68/CEE e 93/44/CEE) e direttiva relativa alla bassa tensione (73/23/CEE, 93/68/CEE e 93/44/CEE).
Vedkommende EF-direktiver: EF-direktiv Elektromagnetisk kompatibilitet (89/336/EWG, 93/68/EWG og 93/44/EWG), Maskindirektiv (89/392/EWG, 91/368/EWG, 93/68/EWG og 93/44/EWG) og Lavspændingsdirektivet (73/23/EWG, 93/68/EWG og 93/44/EWG).
Relevante EF- direktiver: EF- Direktivet om Elektromagnetisk kompatibilitet (89/336/EØF, 93/68/EØF og 93/44/EØF), Maskindirektiv (89/392/EØF, 91/368/EØF, 93/68/EØF og 93/44/EØF) og Lavspændingsdirektivet (73/23/EØF, 93/68/EØF og 93/44/EØF).
Соответствующие директивы ЕС: директива ЕС по электромагнитной совместимости (89/336/EWG, 93/68/EWG и 93/44/EWG), директива по оборудованию (89/392/EWG, 91/368/EWG, 93/68/EWG и 93/44/EWG) и директива по технике низких напряжений (73/23/EWG, 93/68/EWG и 93/44/EWG).
Σχετικές Οδηγίες ΕΕ: Οδηγία ΕΕ ηλεκτρομαγνητικής συμβατότητας (89/336/ΕΟΚ, 93/68/ΕΟΚ και 93/44/ΕΟΚ), οι Οδηγίες μηχανημάτων (89/392/ΕΟΚ, 91/368/ΕΟΚ, 93/68/ΕΟΚ και 93/44/ΕΟΚ) και οι Οδηγίες χαμηλής τάσης (73/23/ΕΟΚ, 93/68/ΕΟΚ και 93/44/ΕΟΚ).
Directivas CE aplicáveis: Directiva CE relativa a Tolerância Electromagnética (89/336/EWG, 93/68/EWG e 93/44/EWG), Directiva relativa a Maquinaria (89/392/EWG, 91/368/EWG, 93/68/EWG e 93/44/EWG) e Directiva sobre Baixa Tensão (73/23/EWG, 93/68/EWG e 93/44/EWG).
有关欧共体准则: 欧共体电磁兼容性准则 (89/336/EWG, 93/68/EWG 和 93/44/EWG), 机器准则 (89/392/EWG, 91/368/EWG, 93/68/EWG 和 93/44/EWG) 以及低压准则 (73/23/EWG, 93/68/EWG 和 93/44/EWG) 。

Angewandte harmonisierte Normen, insbesondere:
To agreed standards:

Normes harmonisées appliquées, tout spécialement:
Toegepaste geharmoniseerde normen, met name:

Normas armonizadas aplicadas, en especial:
Norme armonizzate applicate:

Benyttede harmoniserede normer, specielt:

Anvendte harmoniserede standarder, især:

Соответствие единым стандартам, в частности:

Εφαρμοσθείσες εναρμονισμένες προδιαγραφές, ειδικότερα:

Normas harmonizadas aplicadas, sobretudo:

使用的统一标准, 尤其包括:

EN 292-1
EN 50081-1
EN 50082-1
EN 55014
EN 61000-3-2
EN 61000-3-3
EN 60335-1
EN 12445
EN 12453
EN 300220-1
EN 301489-3
ETS 300683
I-ETS 300200

Produsenterklæring
Fabrikaenterklaering
Декларация производителя
Δήλωση του κατασκευαστή
Declaração do Fabricante
制造商申明

(N)

Herved erklærer vi at det i det følgende betegnede produktet på grunn av dets konsepsjon og konstruksjon i den versjonen som vi har brakt i handelen er i samsvar med de vedkommende grunnleggende krav til sikkerhet og helse i EF-direktivet Elektromagnetisk kompatibilitet, i Maskindirektivet og i Lavspenningsdirektivet.

Ved en endring av produktet som ikke er avstemt med oss, mister denne erklæringen sin gyldighet.

(DK)

Hermed erklærer vi, at efterfølgende opførte produkt på grund af dets koncipering og konstruktion og i den udførelse, som vi har bragt i handelen, opfylder de vedtagne grundlæggende sikkerheds- og sundhedskrav ifølge EF-Direktivet om Elektromagnetisk kompatibilitet, Maskindirektivet og Lavspændingsdirektivet. Såfremt der foretages ændringer af produktet, der ikke er godkendt af os, bliver nærvæbde erklæring ugyldig.

(RUS)

настоящим объявляем, что указанная ниже продукция по своему проектированию и конструкции, а так же по используемому нами типу изготовления соответствует действующим основополагающим требованиям по безопасности и охране здоровья директив ЕС по электромагнитной совместимости, оборудованию и технике низких напряжений. В случае произведения несанкционированных производителем изменений в продукции, данная декларация считается недействительной.

(GR)

Με την παρούσα δηλώνουμε ότι το προϊόν που περιγράφεται παρακάτω, σύμφωνα με το σχεδιασμό και τον τύπο κατασκευής του, στο μοντέλο που κυκλοφορεί στο εμπόριο, πληρεί όλες τις βασικές απαιτήσεις ασφαλείας και υγιεινής που προβλέπουν η Οδηγία ΕΕ σχετικά με την ηλεκτρομαγνητική συμβατότητα, η αντίστοιχη Οδηγία μηχανημάτων και η Οδηγία χαμηλής τάσης. Σε περίπτωση τροποποίησης χωρίς την έγκρισή μας, η παρούσα δήλωση παύει να ισχύει.

(P)

Declaramos por este meio que o produto abaixo descrito corresponde, pela sua concepção e modelo, tal como no modelo por nós comercializado, às respectivas exigências básicas de segurança e de saúde da Directiva CE relativa a Tolerância Electromagnética, da Directiva relativa a Maquinaria e da Directiva sobre Baixa Tensão.

Em caso de qualquer tipo de alteração não previamente acordada com a nossa Empresa, a presente declaração perderá a sua validade.

(RC)

我们在此申明, 依据产品的设计、结构以及由我们投放市场的款式, 以下产品符合欧共体有关基本安全和健康的准则要求, 包括电磁相容性准则、机器准则和低压准则。如未经我们许可而对产品进行更改, 则此申明失效。

Comfort 820

Angewandte nationale Normen und technische Spezifikationen, insbesondere: ZH 494 April 89
To National standard and technical specification:
Normes nationales appliquées, et spécifications techniques, tout spécialement: VDE 0700-238
Toegepaste nationale normen en technische specificaties, met name:
Normas nacionales y especificaciones técnicas aplicadas, en especial:
Specificazioni tecniche a carattere nazionale applicate, in particolare:
Benyttede nasjonale normer og tekniske spesifikasjoner spesielt:
Anvendte nationale standarder og tekniske spesifikationer, især:
Соответствие национальным стандартам и техническим спецификациям, в частности:
Εφαρμοσθείσες εθνικές νόρμες και τεχνικές προδιαγραφές ειδικότερα:
Normas nacionais e especificações técnicas aplicadas, sobretudo:
使用的国家标准和技术规格, 尤其包括:

28.10.2002

ppa. Molterer

Datum / Unterschrift

EG-Konformitätserklärung
EC Conformity Declaration
Déclaration CE de conformité
EG-conformiteitsverklaring
Declaración CE de conformidad
Dichiarazione CE di conformità

(D)

Hiermit erklären wir, daß das nachfolgend bezeichnete Produkt aufgrund seiner Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Richtlinie Elektromagnetische Verträglichkeit, der Maschinen-Richtlinie und der Niederspannungsrichtlinie entspricht.
Bei einer nicht mit uns abgestimmten Änderung der Produkte verliert diese Erklärung ihre Gültigkeit.

(GB)

We hereby declare that the product referred to below, with reference to its design, construction and to the version as marketed by us, conforms to the relevant safety and health requirements contained in the European Council Directives pertaining to electromagnetic compatibility, machines and low voltage.
This declaration becomes null and void in the event of modification or changes to the product not expressly agreed with us.

(F)

Par la présente, nous déclarons que le produit sous-mentionné correspond, de par sa conception et son type de construction, tout comme la version commercialisée, aux conditions fondamentales exigées pour la sécurité et la santé de la directive CE relative à la compatibilité électromagnétique, de la directive concernant les machines et de celle relative à la basse tension.
Cette déclaration perd toute validité en cas de modification des produits, effectuée sans notre accord.

(NL)

Hierbij verklaren wij dat het hierna genoemde product qua ontwerp en constructie alsmede de door ons op de markt gebrachte uitvoering voldoet aan de hiervoor geldende veiligheids- en gezondheidseisen conform de Europese richtlijnen t.w: EMC-richtlijn, Machinerichtlijn en Laagspanningsrichtlijn.
Ingeval van wijzigingen aan onze producten die niet met ons afgestemd zijn, verliest deze verklaring haar geldigheid.

(E)

Por la presente declaramos que el producto indicado a continuación, en base a su concepción y tipo constructivo, así como en el acabado comercializado por nosotros, cumple con los requisitos básicos obligatorios sanitarios y de seguridad de la directiva de la CE sobre compatibilidad electromagnética, la Directiva de Maquinaria y la Directiva de Baja Tensión.
En caso de una modificación del producto no acordada con nosotros, esta declaración perderá su validez.

(I)

Con la presente dichiariamo che il prodotto di seguito descritto, in base alla sua progettazione e tipo e nella versione da noi messa in commercio, rispetta tutti i requisiti essenziali di sicurezza e sanitari che lo concernono previsti dalla direttiva CE sulla compatibilità elettromagnetica, dalla direttiva relativa alle macchine e dalla direttiva relativa alla bassa tensione. In caso di modifica apportata senza nostra autorizzazione, la presente dichiarazione perde la propria validità.

Produkt produkt produkt προϊόν
product producto product produto
produit prodotto Producción 產品

Einschlägige EG-Richtlinien: EG-Richtlinie Elektromagnetische Verträglichkeit (89/336/EWG, 93/68/EWG und 93/44/EWG), Maschinen-Richtlinie (89/392/EWG, 91/368/EWG, 93/68/EWG und 93/44/EWG) und Niederspannungsrichtlinie (73/23/EWG, 93/68/EWG und 93/44/EWG).
Relevant European Council Directives pertaining to electromagnetic compatibility (89/336/EEC, 93/68/EEC and 93/44/EEC), machines (89/392/EEC, 91/368/EEC, 93/68/EEC and 93/44/EEC) and low voltage (73/23/EEC, 93/68/EEC and 93/44/EEC).
Directives CE se rapportant à la: Directive CE sur la compatibilité électromagnétique (89/336/CEE, 93/68/CEE et 93/44/CEE), de la directive concernant les machines (89/392/CEE, 91/368/CEE, 93/68/CEE et 93/44/CEE) et de celle relative à la basse tension (73/23/CEE, 93/68/CEE et 93/44/CEE).
Van toepassing zijnde Europese richtlijnen: EMC-richtlijn (89/336/EEG, 93/68/EEG en 93/44/EEG), Machine richtlijn (89/392/EEG, 91/368/EEG, 93/68/EEG en 93/44/EEG) en Laagspanningsrichtlijn (73/23/EEG, 93/68/EEG en 93/44/EEG).
Directivas de la CE obligatorias: Directiva CE sobre Compatibilidad electromagnética (89/336/MCE, 93/68/MCE y 93/44/MCE), la directiva de Maquinaria (89/392/MCE, 91/368/MCE, 93/68/MCE y 93/44/MCE) y la Directiva de Baja Tensión (73/23/MCE, 93/68/MCE y 93/44/MCE).
Direttive CE applicate: direttiva CE sulla compatibilità elettromagnetica (89/336/CEE, 93/68/CEE e 93/44/CEE), direttiva relativa alle macchine (89/392/CEE, 91/368/CEE, 93/68/CEE e 93/44/CEE) e direttiva relativa alla bassa tensione (73/23/CEE, 93/68/CEE e 93/44/CEE).
Vedkommende EF-direktiver: EF-direktiv Elektromagnetisk kompatibilitet (89/336/EWG, 93/68/EWG og 93/44/EWG), Maskindirektiv (89/392/EWG, 91/368/EWG, 93/68/EWG og 93/44/EWG) og Lavspændingsdirektivet (73/23/EWG, 93/68/EWG og 93/44/EWG).
Relevante EF- direktiver: EF- Direktivet om Elektromagnetisk kompatibilitet (89/336/EØF, 93/68/EØF og 93/44/EØF), Maskindirektiv (89/392/EØF, 91/368/EØF, 93/68/EØF og 93/44/EØF) og Lavspændingsdirektivet (73/23/EØF, 93/68/EØF og 93/44/EØF).
Соответствующие директивы ЕС: директива ЕС по электромагнитной совместимости (89/336/EWG, 93/68/EWG и 93/44/EWG), директива по оборудованию (89/392/EWG, 91/368/EWG, 93/68/EWG и 93/44/EWG) и директива по технике низких напряжений (73/23/EWG, 93/68/EWG и 93/44/EWG).
Σχετικές Οδηγίες ΕΕ: Οδηγία ΕΕ ηλεκτρομαγνητικής συμβατότητας (89/336/ΕΟΚ, 93/68/ΕΟΚ και 93/44/ΕΟΚ), οι Οδηγίες μηχανημάτων (89/392/ΕΟΚ, 91/368/ΕΟΚ, 93/68/ΕΟΚ και 93/44/ΕΟΚ) και οι Οδηγίες χαμηλής τάσης (73/23/ΕΟΚ, 93/68/ΕΟΚ και 93/44/ΕΟΚ).
Directivas CE aplicáveis: Directiva CE relativa a Tolerância Electromagnética (89/336/EWG, 93/68/EWG e 93/44/EWG), Directiva relativa a Maquinaria (89/392/EWG, 91/368/EWG, 93/68/EWG e 93/44/EWG) e Directiva sobre Baixa Tensão (73/23/EWG, 93/68/EWG e 93/44/EWG).
有关欧共体准则：欧共体电磁兼容性准则（89/336/EWG, 93/68/EWG 和 93/44/EWG），机器准则（89/392/EWG, 91/368/EWG, 93/68/EWG 和 93/44/EWG）以及低压准则（73/23/EWG, 93/68/EWG 和 93/44/EWG）。

Angewandte harmonisierte Normen, insbesondere:
To agreed standards:

Normes harmonisées appliquées, tout spécialement:
Toegepaste geharmoniseerde normen, met name:

Normas armonizadas aplicadas, en especial:
Norme armonizzate applicate:

Benyttede harmoniserede normer, specielt:
Anvendte harmoniserede standarder, især:

Соответствие единым стандартам, в частности:
Εφαρμοσθείσες ενωμένες πρόδιαγραφές, ειδικότερα:

Normas harmonizadas aplicadas, sobretudo:
使用的统一标准，尤其包括：

EN 292-1

EN 50081-1

EN 50082-1

EN 55014

EN 61000-3-2

EN 61000-3-3

EN 60335-1

EN 12445

EN 12453

EN 300220-1

EN 301489-3

ETS 300683

I-ETS 300200

EF-konformitetserklæring
EU-overensstemmelseserklæring
Заявление о соответствии директивам ЕС
ΕΟΚική δήλωση εναρμόνισης
Declaração CE de Conformidade
欧共体符合标志申明



(N)

Herved erklærer vi at det i det følgende betegnede produktet på grunn av dets konsepsjon og konstruksjon i den versjonen som vi har brakt i handelen er i samsvar med de vedkommende grunnleggende krav til sikkerhet og helse i EF-direktivet Elektromagnetisk kompatibilitet, i Maskindirektiv og i Lavspenningsdirektivet.
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(P)

Declaramos por este meio que o produto abaixo descrito corresponde, pela sua concepção e modelo, tal como no modelo por nós comercializado, às respectivas exigências básicas de segurança e de saúde da Directiva CE relativa a Tolerância Electromagnética, da Directiva relativa a Maquinaria e da Directiva sobre Baixa Tensão.
Em caso de qualquer tipo de alteração não previamente acordada com a nossa Empresa, a presente declaração perderá a sua validade.

(RC)

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使用的国家标准和技术规格，尤其包括：

Datum / Unterschrift



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