

# Ultra excellent

Torantrieb

Motorisation de porte de garage

Elektrische garagedeuropener

Operatore elettrico apriporta per garage

Napęd do bram garażowych

Kapumeghajtás

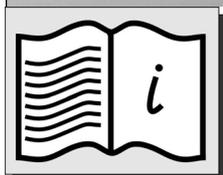
Garage Door Electric Operator

Elektrisk Portåbner

Elektrisk mekanisme for garasjedører

Elektrisk garageöppnare

Autotallin ovikoneisto



Einbau- und Bedienungsanleitung

Instructions de montage et d'utilisation

Handleiding voor montage en bediening

Istruzioni per l'installazione e l'uso

Instrukcja montażu i obsługi

Szerelési és kezelési útmutató

Installation and operating instructions

Installations- og betjeningsvejledning

Monterings- og bruksveiledning

Monterings- och bruksanvisning

Kokoamis- ja käyttöohje

(D)

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(N)

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(FIN)

## Table of contents

Introduction .....	57
EC conformity declaration .....	57
Intended application .....	57
Storage .....	57
Directions, remarks .....	57
Cross-references: .....	58
Safety .....	58
Installation requirements .....	58
Preparations for installation .....	58
Tools .....	58
Delivery .....	58
Drive assembly .....	58
Adjusting tension of drive belt .....	58
Installation .....	58
Door connection .....	59
Putting door drive into operation .....	59
Basic settings (learning of end positions and forces) .....	59
Checking obstruction safeguard .....	60
Operation .....	60
Hand-held transmitter operation .....	60
Additional settings .....	60
Additional safety connections .....	62
Additional illumination .....	62
Terminal configuration .....	62
Installing light disc .....	62
Technical data .....	62
Noise emission level .....	62
Indications of LED bar display .....	63
Self-test .....	63
Search/elimination of malfunctions .....	64
Maintenance .....	64
Repair .....	64
Customer Service .....	64
Accessories .....	64
Spare parts .....	64

## Introduction

This instruction (text part) is to be used together with the installation scheme (image part). Read and observe text and image part carefully before installation and putting into operation.

Depending on which accessories have additionally been ordered, further instructions are to be observed. These are enclosed in the regarding accessory sets.

## EC conformity declaration

According to the EC machine guideline 98/37/EC, we hereby declare, that the subsequently designated product complies with the relevant basic EC guidelines because of its design and construction and in its configuration, as we put it in circulation. This declaration loses its validity in case of changes to the product, which are not agreed by us.

Door drives are components for installation to garage doors, and are considered as machines in the sense of EC machine guideline 98/37/EC because of that.

**The putting into operation is prohibited until the compliance of the final product with this guideline has been certified.**

### Product description

Electromechanical garage door drive

### Manufacturer

ABON  
Antriebe und Sicherheitssysteme GmbH  
Thalbach  
D-85368 Wang  
Germany

### Model

Ultra excellent

### Applied relevant EC guidelines

EC Machine Guideline 98/37/EC  
EC Low Voltage Guideline (72/23/EEC)  
EC Guideline Electromagnetic Compatibility (EMC) (89/336/EEC)  
EC Construction Product Guideline (89/106/EEC)

### Applied harmonised standards

EN 12 453, EN 12 445, EN 12 978,  
EN 55 014-1, EN 55 014-2,  
EN 60 335-1:2001,  
EN 60 335-2-95:2001, EN 60 335-2-103

### Approval

This door drive is approved according to EN 60335-2-95.

**This approval is valid only in case of use according to its intended purpose and for the drive of doors that are inspected according to EN 12453/ EN 12445 and listed in the annex of this installation and instruction manual as well (01.05.2005 →).**

Wang, 30<sup>th</sup> June 2004



(Hermann Leppert, Managing Director)

## Intended application

### Application according to intended purpose

The door drive is intended for opening and closing of single or double garage doors in the private sector only.

This door drive has to be equipped with additional safety equipment (safety strip, etc.) if the manufacturers basic setting for obstruction safeguard (F1 = force down, F2 = force up) is changed or the closing automatic is activated (see page 61).

Any use that exceeds the aforementioned is considered as not in accordance with the intended application. The manufacturer should not be held liable for damages resulting from such use.

### Improper application

It is prohibited to use the door drive for:

- Commercial or industrial use
- Atmospheres at risk of explosion
- Garage doors with more than 3.5 m door height
- Automatic operation
- Use for more than one household.

## Storage

The door drive, whether in packaged or loose state, has to be stored in a closed, dry room. The storage temperature must not fall below -20°C and must not exceed 80°C.

## Directions, remarks

Important directions and remarks are highlighted by:



### CAUTION

To be found in connection with working or operating procedures that have to be observed accurately, in order to exclude danger to persons.



### ATTENTION

Includes information that has to be observed in order to prevent damage on the device.



### NOTE

Stands for technical requirements that have to be particularly observed.

## Cross-references:

In the text part cross-references to the installation scheme are represented as follows:

[12] = Image number, e.g. 12.

[21-]= Image number, e.g. 21 and subsequent images.

(21) = Position number, e.g. 21

## Safety

**⚠ For the safety of individuals it is essential to observe any instruction of this instruction manual. Preserve both instructions (text part and image part) as well as the instructions for accessories close at hand for future use.**

The door drive is designed and built according to state of the art technology and approved safety rules. However, during its use, hazards to persons or impairment to properties might occur.

Unplug mains plug before beginning any works at the door drive.

Rebuilding and changes of the door drive are not permitted for safety and warranty reasons.

Before activating control equipment (e.g. transmitter, buttons) make sure that no persons, animals or objects are in the range of movement of the door. Make sure that unintentional or inattentive operation, e.g. by playing children, is excluded.

If a slip-door is built-in in the garage door, a safety device has to be installed, which blocks operation of the door drive as long as the slip-door is open.

Before door drive installation it has to be checked that the door is easily moveable by hand and that the door mechanics are in working order.

The drive must not be used for unadjusted doors, because the drive construction is not designed for this application.

In the case of the door being equipped with weight balancing in form of steel springs, their correct functioning has to be ensured.

Adjustments and repairs must be performed by the responsible customer service of the doors manufacturer only – never try this yourself (danger of injury by springs under tension).

In connection with installing the door drive to the door, the instructions of the door manufacturer have to be observed too.

## Installation requirements

**⚠ Only authorized electricians are allowed to carry out work on the electrical equipment.**

Technical knowledge and craftsmanship are required for installation of this drive.

The installation of door drive must be performed in dry rooms only.

The clearance between the garage ceiling and the highest point of the opened door must be at least 50 mm.

The door must be activated by horizontal pulling force or pressure force. The required pulling/pushing force must not exceed 150 N.

The mounting points on ceiling, wall or lintel and door have to ensure a safe mounting of door drive. If required, additional constructive measures (suspended ceiling, staying, cross supports, reinforcements) have to be carried out.

Have an earthed socket 230 V, 50 Hz installed about 10-50 cm beside the later mounting position of the drive head. For constructive security see technical data.

The mechanical components of the drive should comply with standards EN 12 604 and EN 12 605.

During installation of door drive to the door, compliance with standards EN 12 453, EN 12 445 and EN 12 635, during installation of additional safety equipment (light barrier, optical sensor, safety strip) with the standard EN 12 978 have to be ensured.

In case of garages with no second access, an external emergency button is required. It is, if required, to be ordered separately.

ABON should not be held liable for technical inadequacies of the door concerned, nor for structural deformation during use, as well as in case of inadequate repairing of the door.

## Preparations for installation

**⚠ Wrong installation might cause serious injuries. Observe all installation instructions of this instruction manual.**

**⚠ Check and adjust function and easy operation of door before door drive installation. The spring tension has to be adjusted in a way, that the door can easily be opened and closed by hand and runs continuously and smoothly.**

Take mechanical door locking out of use.

Unpack door drive and accessories; check completeness of delivery. Keep packaging for returning in case of repair.

**⚠ Store packaging material (e.g. plastic) out of reach of children.**

**i** For the packaging of door drive, only reusable materials have been used. Please dispose of accumulated packaging material according to the country-specific regulations.

## Tools

[1] Keep displayed tool ready.

## Delivery

[2-3] See installation scheme (image part).

## Drive assembly

[4-14] See installation scheme (image part).

## Adjusting tension of drive belt

[15-] Tighten safety nut (23) until drive belt (5) does not lie tight inside the guide rail (10) and is slightly tightened.

## Installation

[17-29] See installation scheme (image part).

**⚠ Support drive with suitable aids after lifting towards the ceiling and secure against falling down. Inspect mountings at ceiling and lintel again after installation [23,24,29].**

## Door connection

△ Depending on the door type, there are different installation sets available. Connect door and drive according to the instruction, enclosed in the installation set.

ⓘ If the door cannot be coupled with the drive, the sled (4) has to be run in closing direction by means of button 2 of the transmitter or the sled has to be unlocked. Couple door for performing of learning runs [38]. If the end position has been activated unintentionally, the mains plug has to be unplugged for 2 seconds (=reset).

## Putting door drive into operation

### Disassembling light disc

[30-] Snap off light disc (1.2).

[32] Remove box with transmitter (2) and antenna (8). Snap light disc back in after putting into operation only [67-].

### Control and display elements [33]

F1 Rotary potentiometer „Force DOWN“

F2 Rotary potentiometer „Force UP“

- 1 LED (red)
- 2 „Program“ button
- 3 „Impulse“ button
- 4 LED „Power“ (green)
- 5 LED row display
- P DIP switch

### External connections [34]

- 1 Impulse
- 2 Partial opening
- 3 Safety strip/light barrier
- 4 Emergency stop
- 5 Antenna A = Antenna  
E = Earthing

### Connect antenna

[35] Connect antenna (8) to the external connection (5, left screw terminal A).

### Connect to mains power

[36] Plug in mains plug. The green LED „Ready“ (4) must light, the drive lamp flashes 4 times.

⚠ **Make sure that no persons, animals or objects are in the range of movement of the door before activating the drive.**

## Basic settings (learning of end positions and forces)

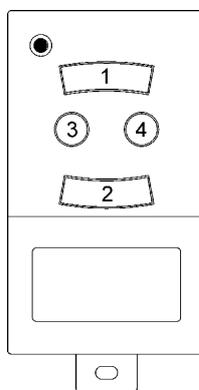
⚠ **For performing basic settings the door drive must be coupled with the door. During learning there is still no protection by the safety switch-off due to excess force.**

ⓘ There are two learning possibilities:

- With transmitter [38]
- Without transmitter [39-42]

[37] Check with screwdriver by turning anti-clockwise, if both potentiometers (F1 and F2) are in minimal end position.

### Learning with transmitter



U\_401

Button 1: Dead man operation and fine-tuning up

Button 2: Dead man operation and fine-tuning down

Button 3: Confirmation (save)

Button 4: Confirmation (save)

### End position „UP“

[38] Activate button 1 and keep it pushed, the door moves to open. At the moment, where the desired end position „UP“ is reached, release button 1.

ⓘ A correction of end position „UP“ is possible by pushing button 2.

Confirm reached end position „UP“ by short pushing of button 3 or 4, the drive lamp flashes 3 times. After learning end position „UP“, the door is run automatically in closing direction. The drive stops automatically, once the right closed position is reached.

### End position „DOWN“

[38] There are two possibilities for confirming end position „DOWN“:

- 10 seconds after reaching the closed position automatically or
- by pushing of button 3 or 4.

Once the end position „DOWN“ is learned, the drive lamp flashes twice, subsequently the door is run automatically into opened position again.

### Force in „UP“-direction

[38] During run into end position „UP“ the control learns the force automatically. The drive stops automatically, once the end position „UP“ is reached. For confirming the learned force, there are two possibilities:

- 10 seconds after reaching the opened position automatically or
- by pushing button 3 or 4.

Once the force values in „UP“-direction have been saved, the drive lamp flashes once, subsequently the door is run into closed position automatically.

### Force in „DOWN“-direction

[38] During run into end position „DOWN“, the control is learning the force automatically. The drive stops automatically, once the end position „DOWN“ is reached. At the same time the force values in „DOWN“-direction are saved. 2 seconds after reaching the end position „DOWN“, the door is automatically run into opened position in order to avoid locking out the fitter from the garage.

ⓘ After finishing the above-described learning runs, only the learned button is active, see paragraph „Hand-held transmitter operation“.

## Learning without transmitter

### End position „UP“

- [39] Unlock western plug with yellow bridge (3) and pull out.
- [40] Activate „Impulse“ button (3) and keep it pushed. The door moves to open. Release the „Impulse“ button as soon as the desired end position „UP“ is reached.
- [41] Plug western plug (3) back in.

**i** A correction of end position „UP“ in closing direction is possible now by means of the „Impulse“ button.

- [42] Confirm reached end position „UP“ by pushing the „Program“ button (2), the drive lamp flashes 3 times. Once the end position „UP“ is learned, the door is run automatically in closing direction. The door drive stops automatically, if the right closed position is reached.

### End position „DOWN“

There are two possibilities for confirming end position „DOWN“:

- 10 seconds after reaching the opened position automatically or
- [42] • by pushing the „Program“ button (2). Once the end position „DOWN“ is learned, the drive lamp flashes twice, subsequently the door is run automatically back into opened position.

### Force in „UP“-direction

During run into end position „UP“ the control learns the force automatically. The drive stops automatically, once the end position „UP“ is reached. For confirming the learned force, there are two possibilities:

- 10 seconds after reaching the opened position automatically or
- [42] • by pushing the „Program“ button (2). Once the force values in „UP“-direction have been saved, the drive lamp flashes once, subsequently the door is run into closed position automatically.

### Force in „DOWN“-direction

During run into end position „DOWN“, the control is learning the force automatically. The drive stops automatically, once the end position „DOWN“ is reached. At the same time the force values in „DOWN“-direction are saved. 2 seconds after reaching the end position „DOWN“, the door is automatically run into opened position in order to avoid locking out the filter from the garage.

## Checking obstruction safeguard

The obstruction safeguard is safety equipment that protects against crushing, and should prevent injuries caused by the closing door (static switching-off force: 150 N).

- [43] Perform test run: Stop door from outside with both hands in hip height. During closing procedure, the door has to stop automatically and run back about 30 cm, if it meets resistance. During opening procedure it has to stop automatically, if it is held back.

**i** After a switching off due to excess in force, the drive lamp flashes until the next impulse or radio command arrives.

## Operation

**!** **Instruct all persons, who are involved in using the door equipment, with respect to safe and proper operation of it.**

**There is a risk of injury due to crushing or cutting at the closing edges and with the mechanical device. Open and close the door only when you can see the area of movement of the door and when no people are in the immediate vicinity!**

## Hand-held transmitter operation

**!** **Keep transmitters away from children. Activate the hand-held transmitter only, if you can see the door area well. Watch the moving door and keep persons away, until the door is completely closed or opened.**

## Learn transmitter

The topmost button of the hand-held transmitter is learned for the radio remote control by the manufacturer already. If you want to learn a further button of the transmitter or a second transmitter, proceed as follows (for learning, hold transmitter as close as possible to the drive head):

- [44] Push „Program“ button (2) briefly – the red LED (1) flashes once: Activate within 20 seconds a not-learned transmitter button – the red LED lights continuously (learning is finished).

**i** In case of wrong learning, the radio commands can be reset again, see [49]. For putting further hand-held transmitters into operation, repeat the entire learning procedure and proceed as aforesaid.

### 1-channel operation

- [45] First button is learned.

### Multi-channel operation

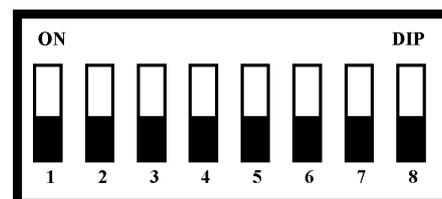
- [46] 2-channel operation: learn first, second or arbitrary button.
- [47] 3-channel operation: learn first, second, third or arbitrary button.
- [48] 4-channel operation: learn first, second, third and fourth button.

### Reset of all learned radio commands (if needed only)

- [49] Activate „Program“ button (2) at least 5 seconds long. The red LED (1) flashes then for 2 seconds quickly and goes out – now the reset procedure (duration about 5 seconds) is finished. Any learned hand-held transmitters are reset.

## Additional settings

The door drive is delivered with a manufacturer basic setting, where all switches of the DIP-switch block (P) are in OFF-position.



If needed, the following additional settings can be performed by means of the rotary potentiometers (F1, F2) and of the DIP-switch (P):

- [50] Obstruction safeguard (F1, F2)
  - Pre-warning time (P, switch 3)
  - Partial opening time (P, switch 4)
  - Automatic closure (P, switch 5)
  - Lighting time (P, switch 6)
  - Soft run in closing direction (P, switch 7 and 8)
  - Function of input safety strip/light barrier/optical sensor (P, switch 1 and 2).

### Adjusting obstruction safeguard

The force for opening and closing the door can be adjusted by means of the rotary potentiometers „Force down“ (F1) and „Force up“ (F2). In the manufacturers setting the force is set to minimal value and has normally not to be changed. With this setting a normal, smoothly moving door should run accurately; unless there is an obstacle it should not stop or change its running direction.

Before a setting is changed, the door has to be checked for smooth run and function and to be better adjusted.

If required, the obstruction safeguard can subsequently be adjusted higher, as follows:

- [51] Check with screwdriver in anti-clockwise direction, if both rotary potentiometers (F1 and F2) are in minimal end position.
- [52] Increase the adjustment values with rotary potentiometers F1 and F2, until the door runs accurately into both end positions. The maximal permissible values have to be measured according to standards EN 12 453 and EN 12 445 by means of a suitable measuring device and must not be exceeded.

**!** If the manufacturers basic setting of rotary potentiometers F1 and F2 is changed, occurring forces of the doors closing edge have to be measured, see working step [52]. If the permissible values of the norm are exceeded, additional safety equipment (e.g. light barrier, optical sensor, safety strip) has to be installed and used.

### Adjusting pre-warning time

**i** With switched on pre-warning time first only the drive lamp is lighting with each control-device impulse, only four seconds later the motor run is started (manufacturers setting: 0 seconds).

- [53] Adjusting pre-warning time by switch 3:
  - ON-position: 4 s
  - OFF-position: 0 s.

### Adjusting partial opening

The partial opening is the stretch of run, after which the door stops after starting from closed position in a partially open position.

**i** The partial opening does not work in connection with automatic closure.

In order to carry out a partial opening of the door, either a control element (e.g. wall-fitted button) has to be connected to the external terminal „Partial opening“ (2) or the second channel of the hand-held transmitter has to be learned. In order to do that, press „Program“ button (2), then the „Impulse“ button (3) – LED 2 of the LED row display flashes: Activate a non-used button of the transmitter (2,3, or 4) – the LED row display lights (depending on reception level up to 7 LED's). Now the hand-held transmitter is learned correctly.

- [54] Adjusting partial opening time by switch 4:
  - Open door starting from closed position and with OFF-position of switch 4 by impulse (hand-held transmitter/control element).
  - Stop the door drive with reaching of desired partial opening level and set switch into ON-position.

**i** In order to change an adjusted partial opening time, run door into closed position and set switch 4 into OFF-position. Readjust the partial opening time as aforesaid.

### Setting automatic closure

The automatic closure is a control function, which runs the door automatically from opened position back into closed position. The closing time is freely adjustable by switch 5 (from 2 s to maximal 8 minutes). The automatic closure is switched off in the default setting; switch 5 is in OFF-position.

**!** The operation with automatic closure is permitted only if additional safety equipment (light barrier/optical sensor/safety strip) is installed [58-].

- [55] Setting automatic closure by switch 5:
  - Run door in opened position and wait as long as the door should remain open. After reaching the desired open time, put switch 5 into ON-position, the drive lamp starts flashing. After 4 seconds the door runs into closed position. The set time remains saved.

**i** In order to change a set open time, switch 5 has to be put into OFF-position first, and then, as described before, set back to ON-position. This is also required after a reset switching. The automatic closure does not react in connection with a partial opening.

### Set lighting time

The lighting time is the length of time during that the drive light is illuminated after the motor has been running. The lighting time is freely adjustable by switch 6 (from 2 s to maximal 8 minutes). The lighting time is 2 minutes in default setting; switch 6 is in OFF-position.

- [56] Set lighting time by switch 6: Start motor run and move door into an end position („DOWN“ or „UP“). After reaching the desired lighting time, put switch 6 in ON-position and the set time remains saved.

**i** In order to change a set lighting time, switch 6 has to be in OFF-position first, and then, as described before, has to be put back into ON-position. This is also required after a reset switching.

### Set the soft run

The soft run is a control function, by means of which the door is run into closed position with reduced motor RPM. The duration of soft run is adjustable by switches 7 and 8. The default setting is 3 seconds; both switches are in OFF-position.

- [57] Set Soft run duration by switch 7 and 8:

Switch 7	Switch 8	Time
OFF	OFF	Ca. 3 s
OFF	ON	Ca. 6 s
ON	OFF	Ca. 1.5 s
ON	ON	0 s

After setting the soft run duration reset the control, see [76]. Carry out basic setting (learning runs) subsequently; see [38].

## Additional safety connections

[58] In delivery state, there are bridged western plugs (4=green, 3=yellow) plugged into the external terminals „Emergency stop“ (4) and „Safety strip/optical sensor/light barrier“ (3).

### Terminal „Safety strip/optical sensor/light barrier“ (3)

A safety device (safety strip, optical sensor or light barrier) can be connected to this input terminal:

[59] Unlock western plug with yellow bridge (3), pull out and store. Install safety device and connect by means of western plug.

[60] Select function of safety device by switch 1 and 2:

Safety device	Switch 1	Switch 2
Light barrier input	OFF	OFF
Safety strip with 8.2 kOhm-resistor	ON	OFF
Optical safety strip (optical sensor)	ON	ON
(Not permissible setting)	(OFF)	(ON)

Check the function: If the installed safety device is activated during door closure, the door has to stop and run back completely.

### Terminal „Emergency stop“ (4)

An emergency stop device (slip-door safety device or emergency pushbutton) can be connected to this input:

[61] Unlock western plug with green bridge (4), pull off and store.

[62] Install emergency device and connect by means of western plug. Checking function: If the emergency-stop device is activated during door run, the motor has to stop immediately.

## Change drive direction

 Changing the drive direction is required for double-doors and, if necessary, for lateral-sliding doors.

[63] Unlock western plug with green bridge and pull off.

[64] Activate the „Program“ button (2) once. Push „Impulse“ button (3) six times; the red LED 7 of the LED row display flashes. Activate „Program“ button (2) once again, the drive direction is changed and the control is reset.

[65] Plug western plug with green bridge (4) back in again.

Carry out basic settings (perform learning runs); see [38].

 The set change in drive direction remains active after a control reset too.

## Additional illumination

 **Only a qualified electrician may perform the connection of an additional illumination.**

In addition to the drive light (40 W) an additional illumination of max. 60 W (no fluorescent tube or energy saving lamp) might be connected.

[66] Connect additional lamp parallel to drive light at terminals 1 and 2 (light).

## [66] Terminal configuration

Terminals 1-6 and 10-18 of the controls terminal strip are connected by default (=standard connection).

Terminal	Add. Connection
8	Warning light 230V, AC, L-switched, fused
9	Warning light 230V, AC, N
19	Zero potential
20	Antenna

## Installing light disc

[67-] Snap in light disc (1.2) [67-70].

## Technical data

Mains supply .....	230 V~, 50 Hz
Device fuse, internal .....	1,6 A, T (slow)
Operational force .....	800 N
Nominal load .....	240 N
Power consumption with nominal load .....	170 W
Idle current (Stand-by) .....	4 W
Protection class .....	For dry rooms only
Speed with nominal load .....	> 100 mm/s
Run time limit .....	80 s
Max. stroke .....	2540 mm
Flush height .....	35 mm
Radio control .....	433 MHz
Permissible ambient temperature .....	-20 °C bis + 50 °C
Hand-held transmitter range* ...	15 - 50 m
Illumination .....	max. 40 W
Transmitter battery .....	12 V, Typ 23 A
Obstruction safety device setting ..	150 N
Max. number of cycles per hour (with nom. load) .....	20
Max. number of cycles per hour without interrupt (with nom. load) .....	8

\* The hand-held transmitter range might be significantly reduced by external disturbances under certain circumstances.

## Noise emission level

Topmost noise pressure level: <70db (A)

## Indications of LED bar display

[71] On the control a LED row display is arranged that consists of the light emitting diodes 1 to 8. The LED row display is used for indication of

- The radio signal level
- Interfering frequencies
- Motor current measurement
- Programming and
- Error analysis.

### Radio signal level indication, interfering frequencies

In idle state the LED row display shows the radio signal level. Interfering frequencies, which can affect the radio reception and reduce the range of the hand-held transmitter, are displayed by lighting up of one or more (maximal 7) LED's, beginning each time with LED 1.

### Motor current measurement

The force that is required during motor run is displayed by the LED row display. If all light emitting diodes light, the motor current and the used force are at its maximum.

### Programming

By pushing the „Program“ button, the programming mode is initiated. Depending on whether and how often the „Impulse“ button is pressed subsequently, different functions are achievable. The light emitting diodes of the LED row display indicate in this case, which functions are executed:

Press „Program“ button	Press „Impulse“ button	Flashing of LED nr.	Function	Press transmitter button
1x	-	1	Learning transmitter	1x
1x	1x	2	Partial opening	1x
1x	2x	3	Only upwards run	1x
1x	3x	4	Only downwards run	1x
1x	4x	5	Light ON/OFF	1x
1x	6x	7	Change of drive direction	-

 The function „Change of drive direction“ is possible only with disconnected western plug (4, green) [72] and has to be confirmed by pressing the „Program“ button once more. If during the programming phase no button is pressed within 15 seconds, the menu is left automatically. The hand-held transmitter buttons, which have to be learned, are freely selectable.

## Self-test

A control self-test is performed

- After switching on (switching-on test)
- After each motor run
- Every 2.25 hours in idle state.

If all 8 LED's of the LED row display light during self-test, then there is no malfunction.

Malfunctions, which have been detected during self-test, are indicated by going out of individual light emitting diodes or the entire LED row display or in case of switching off due to excess force by flashing of the drive lamp; see the following tables.

A control blocking (no command acknowledgment) is initiated only, if 2 subsequent tests have detected the same malfunction.

In case of a blockage the entire self-test is performed again after about 1 minute. If then no malfunction is detected, the blocking is released automatically.

### Drive-monitoring and indication of malfunctions by LED row display

Indication	Cause of malfunction
LED 2 OFF	Malfunction in main memory
LED 3 OFF	Motor current exceeded permissible values
LED 4 OFF	Safety output of control defective
LED 5 OFF	Thyristor measurement values not permissible
LED 6 OFF	Motor-relays measurement values impermissible.
LED 7 OFF	Failure in program run
LED 8 OFF	Malfunction in memory for learned values

### Troubleshooting

Reset electronic control and subsequently perform basic settings again. If the malfunction reoccurs, call customer service.

## Search/elimination of malfunctions

 **Only qualified electricians may carry out work on the electrical equipment. Disconnect mains plug before removing drive cover.**

### Drive does not run at all:

1. Check fuses of the building
2. Check fuse of motor control
3. Are the bridged western plugs correctly plugged in at the external terminals [73] (4=green, 3=yellow)?
4. Have mains supply checked by qualified electrician.

### Drive runs faulty:

1. Is the sled snapped in [74]?
2. Is the drive belt properly adjusted [75]?
3. Is the door step/way frozen?
4. Does the drive switch or switch off during run? Obstruction safeguard is activated. Check and adjust door. Carry out basic setting [38].
5. Does the program run not work? Reset electronic control into default setting [76] and learn newly [38].

### Drive cannot be operated by hand-held transmitter:

1. Does the LED on the hand-held transmitter flash? Renew battery [77].
2. Does the red LED (1) on the drive head not light during activation of hand-held transmitter? Reset learned radio commands [49] and newly learn hand-held transmitter [44] once more.
3. Reception level too low: Check antenna connection, if necessary, install external antenna [86].

### Drive cannot be operated by the wall-fitted button:

Check wall-fitted button and control lead.

### Obstruction safeguard does not work:

Reset electronic control and subsequently carry out basic settings (learning runs) [38].

### Malfunction during self-test:

If a malfunction occurs during self-test, the control blocks and after 60 seconds another self-test is performed. If a malfunction is also detected during repeated test, the control is reset and remains blocked.

If the control is blocked during self-test due to a detected malfunction, the electronic control has to be reset and the basic settings have to be performed once again. If the malfunction occurs again, the control has to be exchanged by qualified specialists.

## Maintenance

### Monthly:

- Check obstruction safeguard: The drive direction must change if the door closing edge meets a 50mm high obstacle that stands on the ground.
- Check mountings of the door drive at ceiling and wall.
- Check emergency stop for function.
- Check functioning of escape door safeguard (if present).

### Yearly:

- Maintain door according to manufacturer data.
- Grease or oil joints of pushing bar.
- Check tension of drive belt, if required tighten it [75].

## Repair

### [76] Reset electronic control

If the electronic control has to be reset, proceed as follows:

- Snap off light disc (1.2) and remove it [30-32].
- First press „Program“ button (2), then „Impulse“ button (1) simultaneously for longer than 5 seconds. The red LED (3) flashes first and goes out afterwards – the reset is finished.

 The learnt stretches for the soft run and the current value that initiates the switch-off due to excess in force are deleted by reset. The learned radio commands remain saved.

- Carry out basic settings (learning runs).
- Snap in light disc [67-70].

### [77] Replace battery of hand-held transmitter

- Take off case lid (2).
- Remove battery (1) and replace it.

 Use leak proof batteries only. Make sure that the polarity is correct while inserting. Dispose of old battery environmental-friendly.

- Push case lid back in place.

### [78] Replace light bulb

 **Disconnect mains plug.**

### [79] Replace fuse

 **Disconnect mains plug.**

- Snap off light disc (1.2) and remove [30-32].
- Unscrew screw (4) and pull out insertion module (5).
- Snap off lid (7) sideways and remove it.
- Pull defective fuse (1) out of fuse holder (2) and replace it. Observe the fuse value!
- Snap lid back in.
- Fix insertion module.
- Snap in light disc [67-70].

## Customer Service

If you ask for help at any of the company addresses on the back, please indicate manufacturing number and model designation. You will find these data on the type plate on the drive head.

## Accessories

 Western plugs are required for external connections on the drive head. Accessories that can separately be ordered are listed as follows:

- [80] 4-command hand-held transmitter for multiple uses
- [81] 1-command hand-held transmitter
- [82] Wall mounting for hand-held transmitter
- [83] Wall-fit button
- [84] Key turn button
- [85] Code button
- [86] External antenna
- [87] Light barrier
- [88] Optical sensor
- [89] External emergency unlocking device
- [90] Internal emergency unlocking device
- [91] Safety strip

## Spare parts

- [92] See list of spare parts in installation scheme (image part).

Spare parts have to comply with technical requirements, which are defined by the manufacturer. Only with original spare parts this is always ensured.

In case of purchase orders the item number has to be indicated.

 **Spare parts, which are marked with „\*\*“, may be replaced by authorized specialists only.**