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Motor drive MO710AZ(F)(N)ZNBW (6V4)

Drive unit for tubular motor with fail-safe function for fire screen.

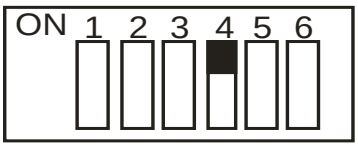
Suitable for connection to a 230 V / 50 Hz tubular motor, permissible maximum power 1.8 kW (8A).

Wiring diagrams and instructions for use

START by adjusting the correct type of limit switch

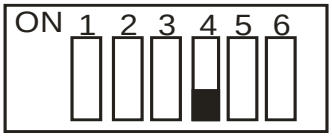
You can change the displaytext in Deutsch, Englisch, Nederlands and Polski
Go to page 12 point 14 off this manual to see how you can do it.

Becker tubular motor type R60 has internally wired limit switches.
If the motor is fitted with **5 wire cores**, limit switches will not be connected to terminals 14, 16 and 18 (see diagram on page 2).
In this situation, the terminals are linked with bridging wires and **DIP switch 4** has to be in the **ON position**.



Becker tubular motors R120 and R200 have externally wired limit switches.
The motor is fitted with **8 wire cores**.

The external limit switches are connected to **terminals 14, 16 and 18** (see diagram on page 3), and **DIP switch 4** has to be in the **OFF position**.



This drive is compliant with the following standards (among others):

EN 61000-6-1:2007-10	*Electromagnetic Compatibility (EMC) - Part 6-1: Generic Standards- Immunity for Residential, Commercial and Light-industrial Environments*
EN 61000-6-2:2006-3	*Electromagnetic compatibility (EMC) -- Part 6-2: Generic standards - Immunity for industrial environments*
EN 61000-6-3:2007-09	*Electromagnetic compatibility (EMC) -- Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments*
EN 61000-6-4:2007-09	*Electromagnetic compatibility (EMC) -- Part 6-4: Generic standards - Emission standard for industrial environments*
DIN EN 60335-1:2010-11	*Household and similar electrical appliances - Safety - Part 1 General requirements*
DIN EN 12445:2001-02	*Industrial, commercial and garage doors and gates - Safety in use of power operated doors - Test methods*
DIN EN 12453:2001-02	*Industrial, commercial and garage doors and gates - Safety in use of power operated doors - Requirements (finalized version)*
EN 12978:2003+A1:2009	*Industrial, commercial and garage doors and gates. Safety devices for power operated doors and gates. Requirements and test methods*
DIN EN ISO 13850:2008	*Safety of machinery. Emergency stop. Principles for design*

- **Installation must be performed by an authorized installer.**
- **Before working on electrical installations, switch off the mains power supply.**

The various connections and operating mechanisms are shown in the following diagrams.

Tedsen drive MO710AZ(F)(N)ZNBW.NDS

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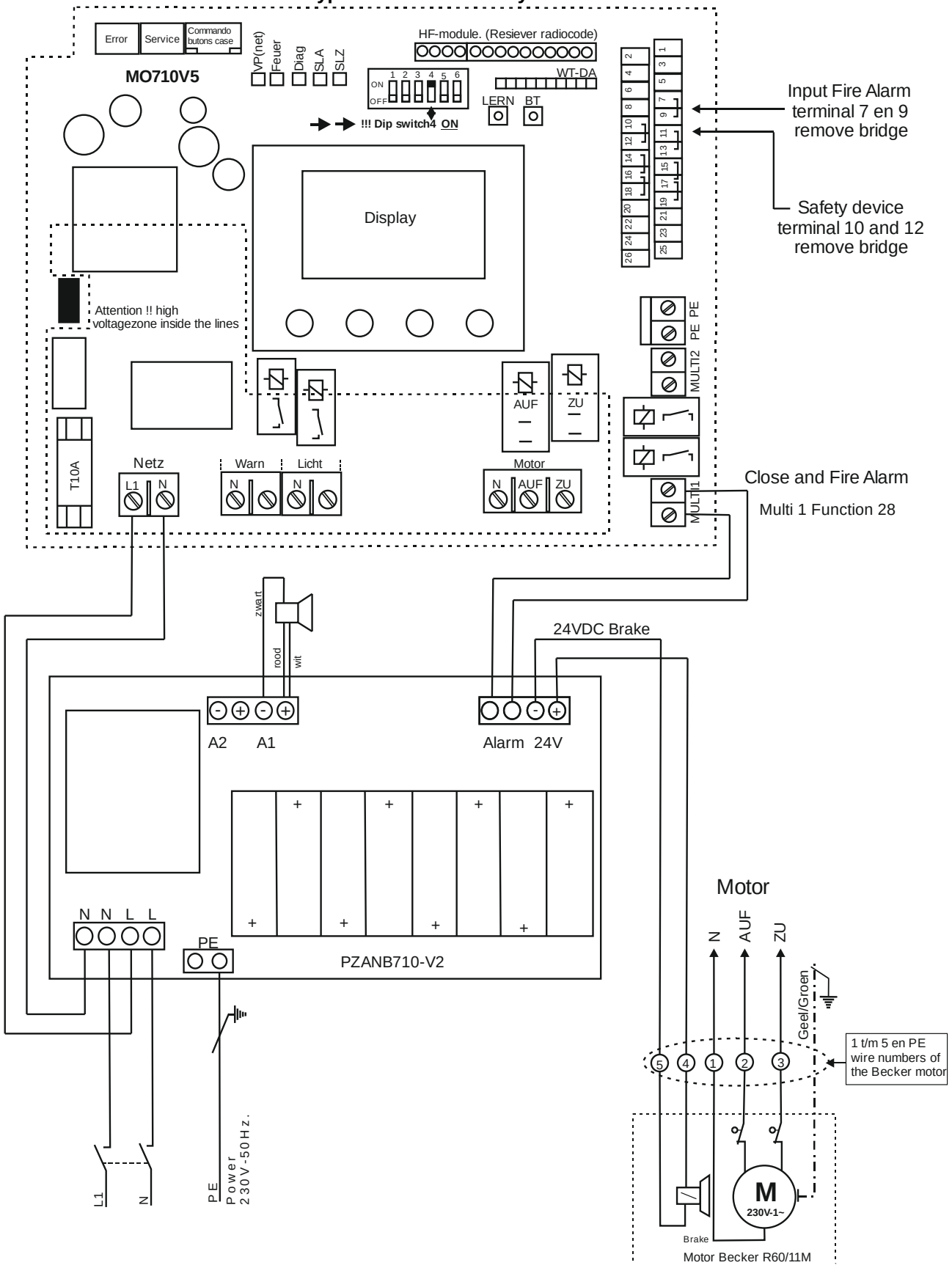
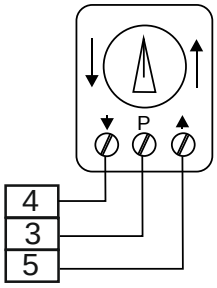
1. Connections for Becker motor type R60 with internally wired limit switches.



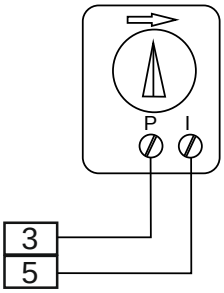
3. Some connections.

* = Attention!! Remove the wirebridge iff you use the entrance gate

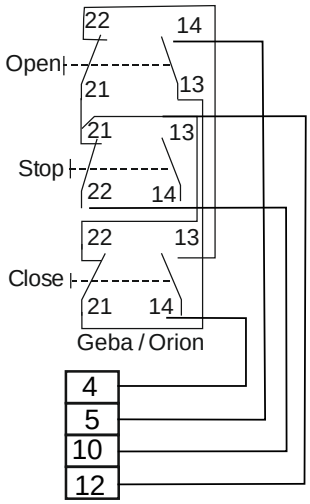
Switch for Command open and close

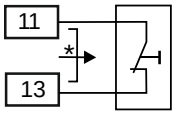


Switch for Sequential command

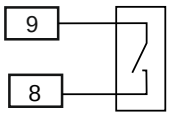


Button for Command open - stop and close

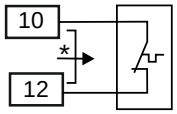




Stopcommand

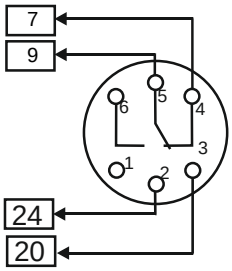


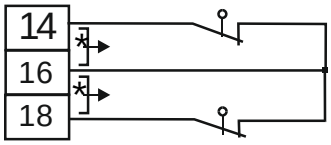
External Clock/Alarm Command



Contact for thermal protection motor

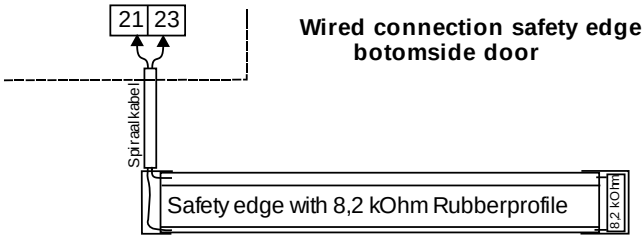
example with 1 firedetector





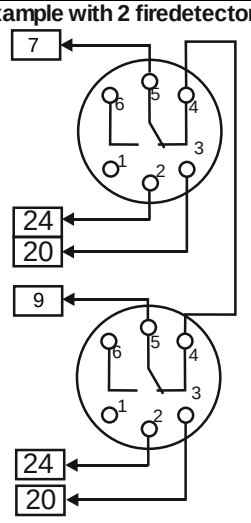
Limitswitch door open

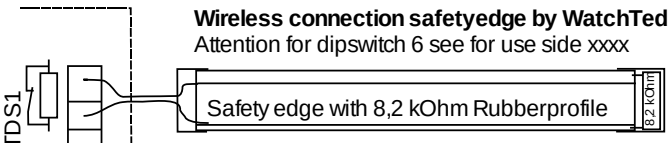
Limitswitch door close



Wired connection safety edge botomside door

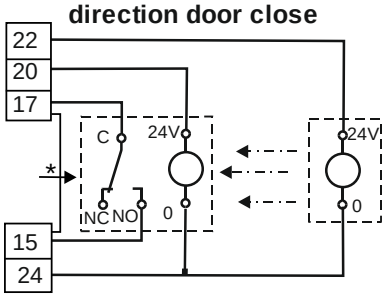
Example with 2 firedetector





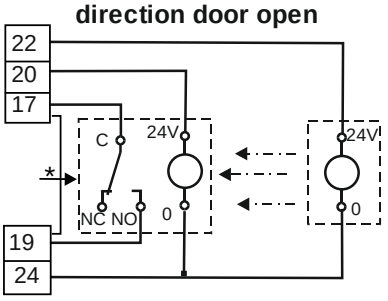
Wireless connection safetyedge by WatchTed
Attention for dipswitch 6 see for use side xxxx

Fotoelectric cell direction door close



Sign without voltageconnextion

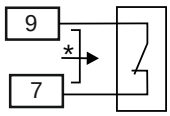
Fotoelectric cell direction door open



Sign without voltageconnextion

Connection Fire-alarm installation

Connection contact close in safe situation (recommended)



Mo710 control is the ex-factory prepared for a brandmeldcontact that is closed in safe condition .
The contact opens at a fire message.
The controller recognizes the contact form in the program "learn motor maturity".
Open or close on fire detection function can be selected in the configuration program with the ZS7.

4a. Overview of the terminal blocks

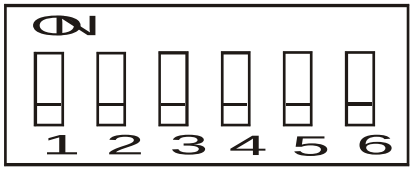
Inputs		Input type	Function of the connection	Brief description
Terminals				
	1	Coaxial cable shielding (earth).		Is used for connecting an external antenna.
2		Coaxial cable core		
	3	P contact for inputs 4, 5 and 6 (earthing contact).		Common contact various inputs
4		'Close door' command		Pulse switch (1 or 2 sided touch key)
	5	'Open door' command		Pulse switch (1 or 2 sided touch key)
6		Command sequence (pulse up-stop-down-stop-etc.)		Pulse switch (1 sided touch key)
	7	Fire alarm contact (make or break contact)		Make/break contact. Fire alarm
8		SU input (door opens when contact is made)		For example, contact alarm system.
	9	P contact for inputs 7 and 8 (earthing contact).		Common for 'Feuer' (fire) and SU inputs
10		Stop command. (1st contact for **stop** switch)		Breaks contact between 10 and 12
	11	Thermal cut-out (1st contact ***thermal cut-out)***		Breaks contact between 11 and 13
12		Stop command (2nd contact for **stop** switch)		Breaks contact between 10 and 12
	13	Thermal cut-out (2nd contact ***thermal cut-out)***		Breaks contact between 11 and 13
14		External limit switch door closed (**down** direction)		Breaks contact when end point is reached
	15	Breaks contact photocell(s) door opening protection		Contact closed in safety mode
16		P contact for both limit switches (earthed)		Common for inputs 14 and 18
	17	P contact for both photocell inputs (earthed)		Common for inputs 15 and 19
18		External limit switch for opening door (earthed)		Breaks contact when end point is reached
	19	Breaks contact with photocell(s) top entry protection		Contact closed in safety mode
20		+ 24V/DC (power supply for ext 24V/DC components)		Max. combined load 200mA 12 + 24V/DC
	21	Input for bottom edge protection 8.2 kΩ and Fraba lighting cove		Guards with rubber profile
22		LS test 24V/DC for photocells with test function		Common for SEA and SEZ
	23	Earth connection for guards with rubber profile.		
24		Earth (-) connection for 12 and 24V/DC		min. load 12 and 24V power
	25	Input for top entry protection 8.2 kΩ and Fraba lighting cove		Guards with rubber profile
26		+ 12V/DC (power supply for ext 12V/DC components.		Max. combined load 200mA 12 + 24V/DC

4b. Description of connectors on the PCB:		
HF Module	Connector	Connector for receiver PCB EKXR710
WTDA	Connector	Connector for WatchTed® module (wireless door protection unit)
3Kn-DS	Connector	Connector for operating switch on cover
RELAY	Connector	For connecting to an ARP24 PCB, used auxiliary PCB with a 3-phase motor

4c. Description of the 230V connections:			
NETZ	Mains power	Mains power connections L1 and N	
PE (2x)	Mains earth	Connection point for mains power earth	
WARN	230V max. 60W	For connection warning light	Red indicator light
LIGHT	230V max. 60W	Connecting point for lamp (DIP5 OF)(1-180 sec. or green indicator (DIP5 ON)	
MULTI 1	Voltage free	Multifunctional NO output contact.	Functions adjustable on display
MULTI 2	Voltage free	Multifunctional NO output contact.	Functions adjustable on display

4d. Description of additional connections:			
SERVICE	2 terminals	Connection for optional LED	Service indicator
STÖRUNG (malfunction)	2 terminals	Connection for optional LED	Malfunction indicator

5. Modifying the MO710 to suit your requirements and then using the unit.



With the 6-section DIP switch, various functions can be modified to suit your requirements.
The DIP switch is located on the PCB above the display.

(Text follow on next side)

DIP	Function	OFF position -	ON position
1	Drive operation for **opening**	Impulse (short press)	Dead man's operation
2	Drive operation for **closing**	Impulse (short press)	Dead man's operation
3	Automatic close	**NO** automatic close	Automatic close active
4	**Limit switch type**	**See page 1 (settings for different types of limit switch)**	
5	Optional 'LIGHT' connection	Object illumination	Green indicator light when door is open
6	**WatchTed protection**	No function in case using a firescreen	

! → ATTENTION: after changing a DIP switch position, the LERN (learn) key MUST be pressed and briefly held down to confirm the new function (TÜV requirement).
The 4 red LEDs (above the display) **will briefly light up in sequence in confirmation.**
If a DIP switch position is changed without giving confirmation by pressing the LERN key, the DIAG LED will continue to flash 2x on, 1x off, 2x on, etc. This will obviously only happen if the mains power is switched on.

6. Recommended work method

For your and other people's protection: WORK SAFELY!
Make sure that the door opening is and remains free of obstacles; mark off your work area.

6.1 Connections:

- With Becker motors **with a 5-core connecting cable**:
  - Connect motor wires 1, 2 and 3.
  - Connect the wires for the coupling (4 and 5) to the 24V power supply unit (small PCB).
- With Becker motors **with a 8-core connecting cable**:
  - Connect motor wires 1, 2 and 3.
  - Connect the brake wires 4 and 5 to the 24V power supply unit. (small PCB).
  - Connect the limit switch wires 6 (to terminal 16), 7 (to terminal 14) and 8 (to terminal 8).
- **Do not** connect any photocells, the bottom edge and top entry protection or the control unit(s) for opening and closing the door yet.

6.2 Check DIP switch 4, ← ← ! very important

- **Indirect limit switches** (tubular motors with **5 connecting wires**) are located together with their limit-switch wiring **inside** the motor housing.
  - ✓ Bridging wires have to be connected to terminals 16-14 and 16-18.
  - ✓ → → ! **DIP switch 4 must be ON.**
- **Direct limit switches** (tubular motors with **8 connecting wires**) have the limit-switch wires **outside** the motor housing and are connected to **terminals 16-14** (door closed) **and 16-18 (**door open)
  - ✓ **→ → ! DIP switch 4 must be OFF.**

6.3 Adjust the motor limit switches correctly using a motor test cable.

- Connect motor wires 1 (zero), 2 and 3 (up and down) preferably with a **motor test cable.**
- **Leave the brake wires 4 and 5 connected to the power supply PCB and make sure that the MO710 is also connected to the mains in order to power the 24V PCB.**
- Set the up and down positions on the motor limit switches correctly.
- **Additional help:** with **motors with an 8-core connecting cable**, use the green LEDs, SEA (limit switch up) and SEZ (limit switch down) to assist you in making the settings.
  - To do this, the MO710 PCB must also be connected to mains.
- **Setting the limit switches with a motor test cable is the easiest method.**

- **With the MO710AZ, if you do not have a motor test cable on hand:**
  - **Create a provisionally operating system as follows:**
    Connect a pulse switch for the up and down operations to 3 (P), 4 (down) and 5 (up)
  - Or if there is an operating switch on the cover, connect it.
  - **Set DIP switches 1 and 2 to the ON position** (dead man operating) press short the LERN key.
- ✓ **Now set the motor limit-switches up and down correctly according the motor manual.**

7. Making the final connections

- **7.1 Connecting the motor** (this only applies if the motor has not yet been connected)
  - Connect the motor following the instructions (see the respective wiring diagram on page 2 or 3, depending on the type of motor)
  - Use threaded bushes to prevent loose core wires from causing a short circuit.
  - **Attention:** the correct connections of the motor wires are: **PE** (earth) (green/yellow), **up** (open) (wire 2), **down** (closed) (wire 3) **and zero** (N) (wire 1).
    The up and down directions (wires 1 and 2) depend on the way in which the motor is installed and may have to be adjusted later on if the motor's direction of rotation is incorrect.

- **7.2 Connecting the signal generators**
  (See the appropriate wiring diagrams on pages 3, 4 and 5)
  - Connect the required operating switches.
  - Connect the **contacts of stand-alone fire detectors or the fire alarm system** (if used) when running the 'motor-run-time' learning program; the MO710 can detect the type of contact (NO or NC).

  !!!! → → **The fire alarm contact must be in 'condition safe'** (no fire)
  - **Connect the mains power** (if you have not already done so)
  - The yellow LED above the display will go on; the display will light up and show initial information about possible malfunctions or connection errors.
    The 4 red LEDs above the display will quickly switch on and off in sequence (and should then remain off).
  - **Press short the LERN key** (the left red key above the display).
    The 4 red LEDs will confirm that the LERN key has been pressed by switching on and off in sequence and then switching off.

Display
If the display does not show anything (blank screen) or does not respond, you can activate it by pressing any of the keys located under it.

Insert, if applicable, the receiver PCB for hand-held or other transmitters in the appropriate connector slot (connector 'HF Module'). Push the antenna onto its base.
Insert, if applicable, the receiver PCB for the wireless transmission of commands to the bottom edge and top entry protection systems in the appropriate connector slot (connector 'WTDA').

8. Final checks

8.1 Checking the motor's direction of rotation

With the operating switch on the cover or with an operating switch connected to terminals 3 – 5 (up) and 3 - 4 (down), the motor's direction of rotation in **dead man's operation** can be checked.
Give an **up command**. (Keep the switch pressed down). The drive must raise the door **up**.
Give a **down command**. (Keep the switch pressed). The drive must lower the door **down**.

TIP! If the motor only rotates in one direction when using the operating switch on the cover, the cable connecting the switch to the PCB may be twisted.
Rotate the plug attached to the flat connecting cable **on the <u>side of the cover</u>** 180°.

8.1.1 If the direction of rotation is incorrect, **<u>switch off the mains power</u>** and switch **wires 2 and 3** attached to the motor's connections for **up (open) and down (closed).**
After doing this, reconnect the mains power and recheck the motor's direction of rotation by raising and lowering the door.
Make sure that the motor does not continue to run if the limit switches have not yet been set.

8.2 Setting the limit switches.

If the limit switches have already been set with, for example, a motor test cable, you can skip this point and continue under **7.3.**

If this is not the case, set the limit switches with a provisional operating system or with the operating switch on the cover (if present) connected to the MO710AZ.

ATTENTION! With motors that are connected with an 8-core cable, the 2 green LEDs on the PCB can assist you in setting the limit switches.
When the limit switch for open reaches the maximum **open** position, the green SE**A** LED will extinguish; when the limit switch for close reaches the maximum **closed** position, the green SE**Z** LED will extinguish.
If this is not the case, swap wires 7 and 8 attached to the SEA and SEZ terminals.
As an additional aid, you can set the limit switches on a motor with an 8-wire connecting cable by running the motor with the switches correctly wired up and down so that the green SEA LED extinguishes at the maximum open position and the green SEZ LED extinguishes at the maximum closed position.

If necessary, you can also set the limit switches with the MO710 drive.
In this case, you use the MO710 drive in the same way as a motor test cable. The difference is that the motor can be rotated in both directions in **dead man's operation** (DIP switches 1 and 2 in the ON position) with one up/down operating switch or with the switch on the cover.
! → We <u>strongly advise against</u> impulse operation (DIP 1 and 2 OFF) **for safety reasons.**

8.3 Setting up the complete drive

After disconnecting the mains power for safety reasons, we advise you to secure the fire screen in position to prevent it closing under its own weight when the brake system is not under current.If you want to connect peripheral equipment such as operating switches, etc. with the mains power switched on, **be extra careful not to touch any parts of the PCB that are under current.** (a market frame on the PCB)

8.4 Connecting the signal generators

Using the wiring diagrams on pages 1, 2 and 3, connect the required signal generators, such as operating switches, photocells, bottom edge and top entry protection, and, if necessary, the contacts for fire detectors or the fire alarm system. (**ATTENTION!** after connecting a fire detector or fire alarm system, run the 'motor run-times' learning program).

If necessary, read the instructions belonging to all peripheral equipment you wish to connect.

8.5 Check whether the mains power is switched on.

The 4 red LEDs above the display will go on one by one and then extinguish after switching on the mains power.

After the start-up sequence is complete, only the **yellow LED** will remain on to indicate that the unit is powered up.

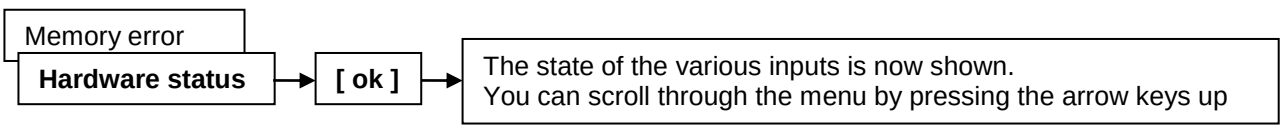
After a few seconds, the display will show the function of the BA, BZ, BT and BS keys.

9. Checking the most important functions using the display

How to open the learning and configuration menu.

a. *Press the right black key **[ ]** (list symbol) on the display*
   The initial PIN code 0 0 0 0 will be shown. (You can change the code later if you want it).
b. *Press the right arrow key **[►]** briefly 4 times → → The menu will appear.*

Use the <u>up and down arrow keys</u> [▲] [▼] to scroll through the menu; the following items will appear: *(N.B. press the **home** key* **[ ]** to return to the start screen*)*



The following circles have to be filled:

- Fire alarm **green,** Contact fire alarm **green.**
- If the door is open: internal limit switch open **green**
- If the door is closed: internal limit switch closed **green**
- Photocell mounted on door opening, photo cell for top entry protection, photocell for bottom edge protection,
  12V power supply, 24V power supply, Radio - SLA0, SLZ1, TS0, TS1, **all green.**
  BATT0 and BATT1 are discussed below.

If necessary, various functions can now be checked, for example, interrupt the photocell beam in the door opening and the **green circle** after 'photocell door opening' should turn **red.**

10. Learning the motor run-time. → → ! Running this program is <u>compulsory</u>!

! → → Attention: the motor's limit switches <u>must</u> be set correctly.

While the 'motor run-time' program is in operation, the door opens and closes automatically. **Make sure the door opening is clear and free of obstacles.** The door will stop moving following a stop command or after pressing the button, for example, for the bottom edge protection or a photocell in the opening.

After a stop/emergency stop, the learning program has to be restarted.

It is advisable to put the drive in the down position (door closed).
This is not compulsory, but it does improve safety.
Bear in mind that the door will always try to shut first when learning the motor run-times. The drive will automatically detect whether the door is already closed.

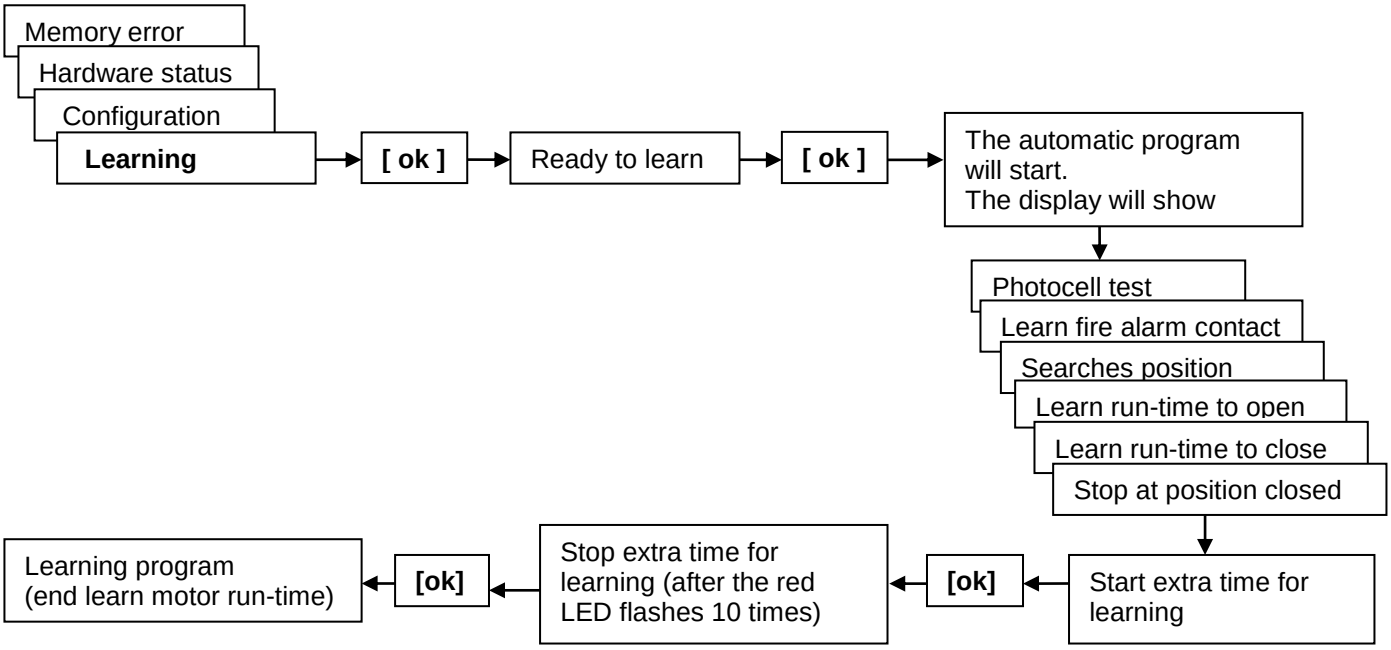
Motor run-times learning program (largely a fully automatic program)

You can activate the display from sleep mode (dark screen) by pressing any of the 4 black keys.

If the start screen is shown on the display, start from here.

a. *Press the right black key **[ ]** (list symbol) on the display*
   The initial PIN code 0 0 0 0 will be shown. (You can change the code later if you so choose).
b *Press the right arrow key **[►]** briefly 4 times, → → The menu will appear.*
   Use the <u>up and down arrow keys</u> [▲] [▼] to scroll through the menu; the following items will appear:
   (*N.B. By pressing the **home*** key **[⌂]** you can return to the start screen)

→ → If the **main menu** is shown on the display, go further below.



11. Configuring the controls

In the main menu, various control functions can be changed and modified.
A list of read-out and adjustment possibilities is given below.
Use the arrow keys to scroll through the menu.
When you reach a menu item you want to change, press [o.k.] and the respective submenu with the adjustment possibilities will be shown.
The displayed text indicates the possibilities that can be selected by pressing keys **[▲] [▼]**.

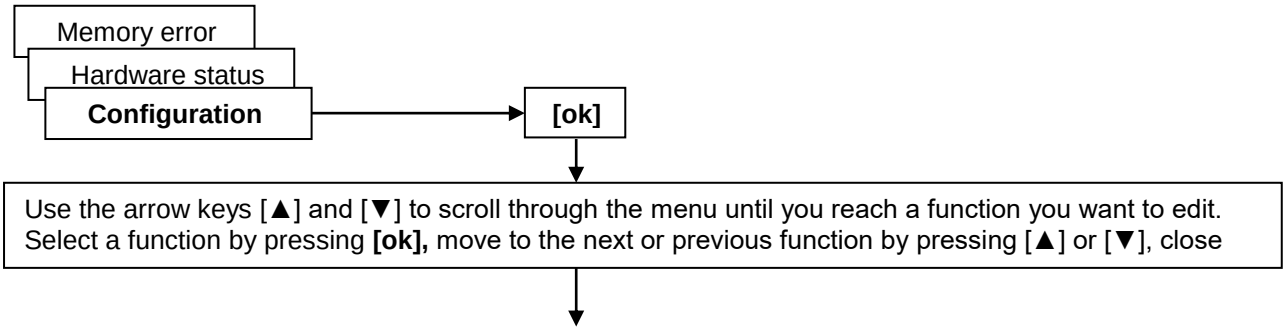
You can activate the display from sleep mode (dark screen) by pressing any of the 4 black keys.

If the start screen is shown on the display, start from here.

a. *Press the right black key **[ ]** (list symbol) on the display*
   The initial PIN code 0 0 0 0 will be shown. (You can change the code later).
b. *Press the right arrow key **[►]** briefly 4 times, → → The menu will appear.*
   Use the up and down arrow keys **[▲] [▼]** to scroll through the menu; the following items will appear:

(*N.B. By press the **home*** key **[ ]** you can go return to the start screen menu)

→ → If the **main menu** is shown on the display, you can continue below.



The display shows:	Possible action:	Option key	Information or action
Program version			Only information
Series number			Only information
Service counter	Shows the total number of movements		Only information
Operating hours counter	Shows total operating time		Only information
Maintenance counter	Maintenance interval reset	[▲] or [▼]	Delete yes/no
Maintenance interval	Maintenance interval setting	-1 or +1	Numerical adjustment
Keep open time 1	'Keep open time' setting (auto. close)	-1 or +1	0-300 sec.
Time to move out of the way 1	Sets the amount of time to move out of the way (after passing through door opening)	-1 or +1	0-300 sec.
Illumination time	Length of time lights are on (DIP 5 off)	-1 or +1	0-300 sec.
Repeat fire command	Closing after opening on receiving a fire command	-1 or +1	0-300 sec.
User setting			
User setting save			
Load standard settings			
Indicator for opening	4 sec. warning before opening	[▲] or [▼]	Of or off→ o.k.
Response to fire detection	Motor control after fire alarm has been given	[▲] or [▼]	Open or close→
Closing after photocell beam interruption	Activate quick close after passing through door opening	[▲] or [▼]	Switch on or switch off
Indicator for opening	Warning for opening	[▲] or [▼]	Flashing or continuous
Door in motion signal	Warning when door is in motion	[▲] or [▼]	Flashing or continuous
Signal to move out of the way	Warning before the door closes	[▲] or [▼]	Flashing or continuous
Signal when door is closed	Warning that the door is closed	[▲] or [▼]	On or off
Signal that the door has stopped moving in mid cycle	Warning that the door has stopped moving in mid cycle	[▲] or [▼]	On or off

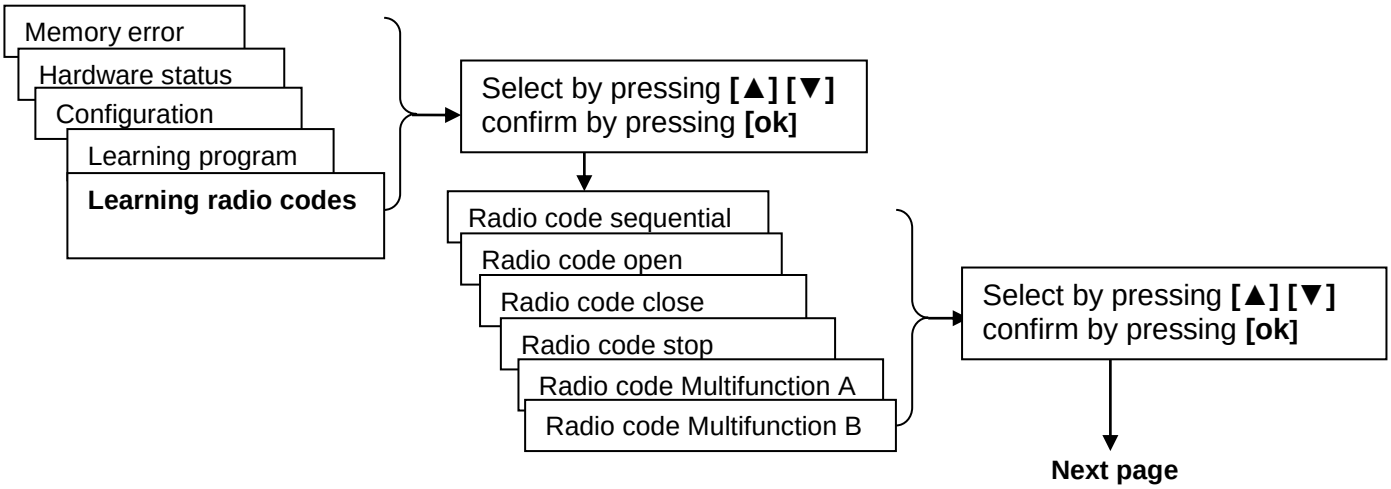
Bottom edge protection function	Response to activation of alarm on bottom edge rubber profile		[▲] or [▼]	Select function
Photocell beam interruptions counter	Only with barrier gate operation		[▲] or [▼]	On or off
Lock over run-time	Monitors whether motor run-time is exceeded		[▲] or [▼]	On or off
Multifunctional relay 1 and Multifunctional relay 2	1	Service relay Contact closes after set interval for number movements		
	2	Error message Contact closes after error message.		
	3	Hand-held transmitter operation	Multi 1 pulse contact	
	4		Multi 1 on/off contact	
	5		Multi 2 pulse contact	
	6		Multi 2 on/off contact	
	7		Make-and-break contact Multi1/2	
	8	For operating controller ASU1	Switches simultaneously with controller ASU1	
	9	For operating controller ASU2	Switches simultaneously with controller ASU2	
	10			
	11	Message door open, voltage-free contact closes when door is open.		
	12	Message door closed, voltage-free contact closes when door is closed.		
	13	Operating current brake (Magnetic brake is activated if current is on).		
	14	Closed-circuit current brake (Spring brake is activated if current is switched off)		
	15	Indicator that battery for wireless bottom edge protection is empty.		
	16	Error message relay. Contact pulses error message shown in table.		
	17	Fire alarm N.O. contact for redirecting fire alarms		
	18	Slow speeds relays (Frequency converter)		
	19	Hydraulic retain valve		
	20	Delayed opening with 2 pcs MO710AZ hinged door		
	21	Delayed closing 2 pcs MO710AZ hinged door		
	22	Obstruction during opening hinged door		
	23	Pulse after power on		
	24	Relay high speed		
	25	Door not open		
	26	Traffic control		
	27	No fire alarm		
	28	Close with fire alarm		
	29	Rem Fire door actuator 2 (contact breaks as long as there is a fire alarm)		
	30	Pulse when door is opened (pulse duration approx. 1 sec.)		
Door closes after mains power failure	Door response to mains power failure		[▲] or [▼]	On or off
WatchTed radio channel	Selects channel for the WatchTed system		-1 or +1	Description on page 10

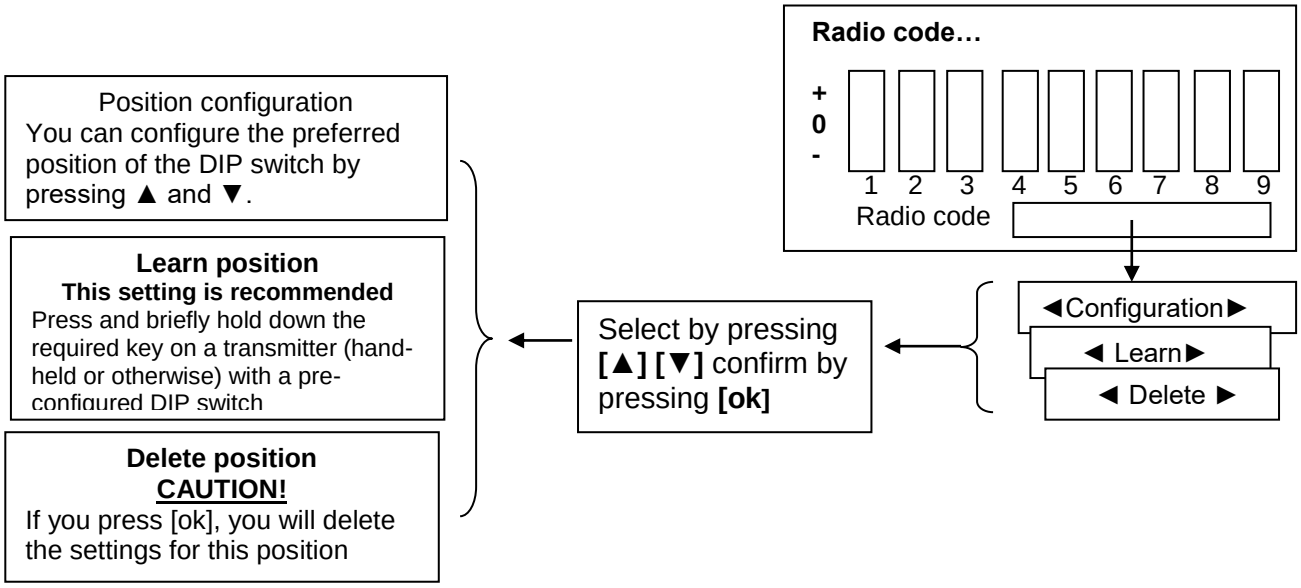
12. Learning radio codes (transmitters, including hand-held)

If the start screen is shown on the display, start from here.

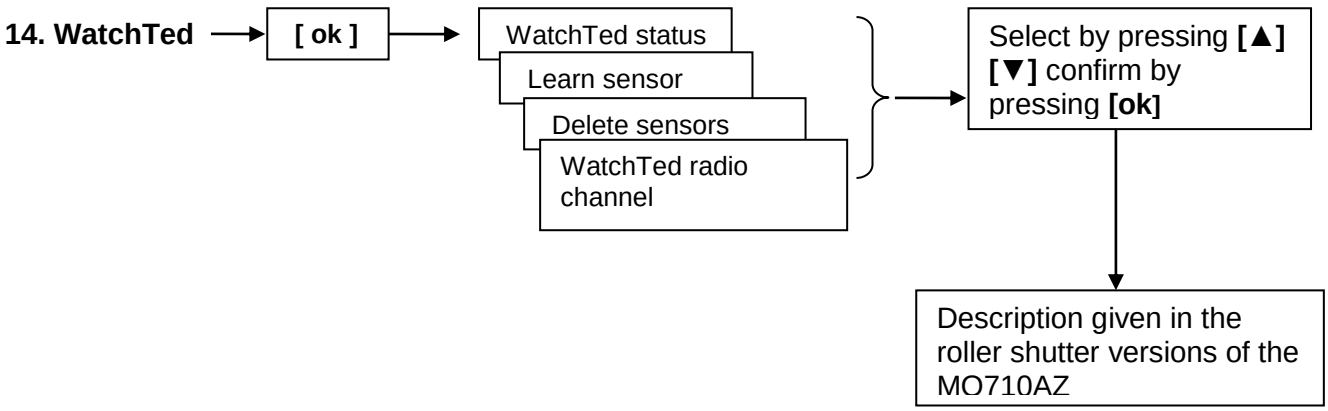
a. *Press the right black key **[ ]** (list symbol) on the display*
   The initial PIN code 0 0 0 0 will be shown. (You can change the code later if you so choose).
b. *Press the right arrow key **[►]** briefly 4 times → → The menu will appear.*
   Use the up and down arrow keys **[▲] [▼]** to scroll through the menu; the following items will appear:
   (*N.B. press the **home*** key **[ ]** to return to the start screen menu)

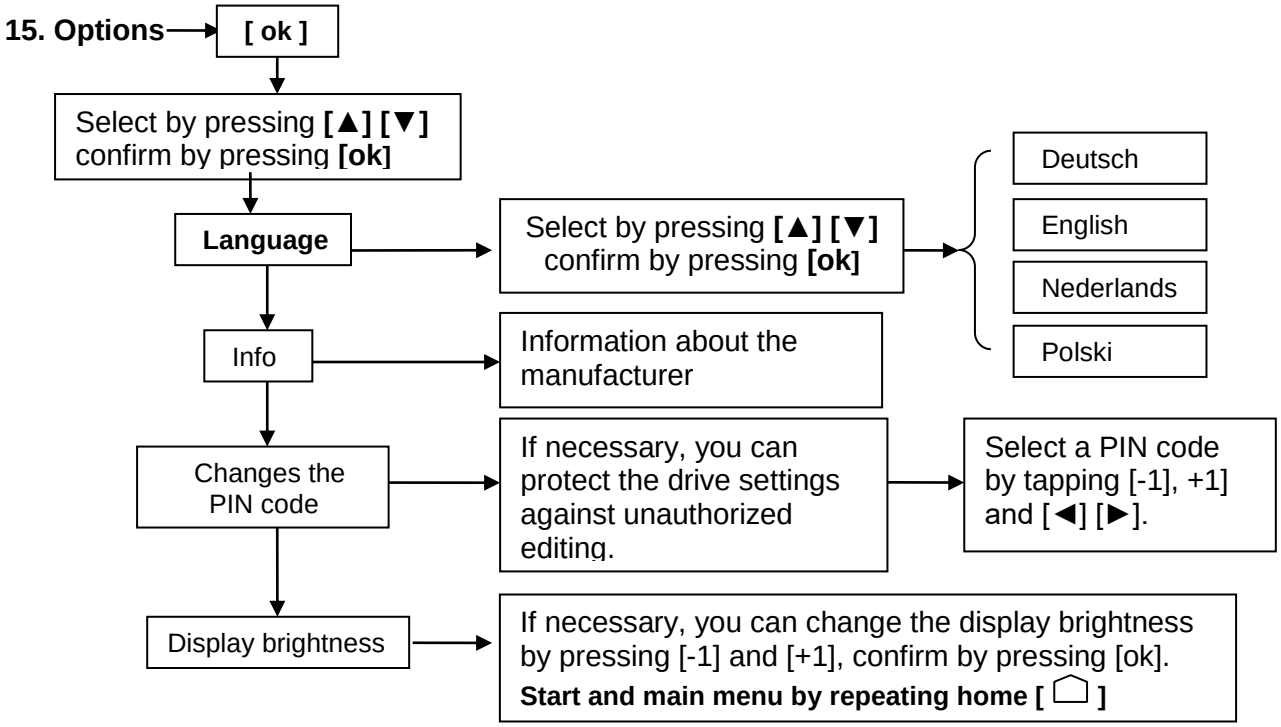
→ → If the **main menu** is shown on the display, continue below





13. Software reset → **DO NOT USE**
Skip this point



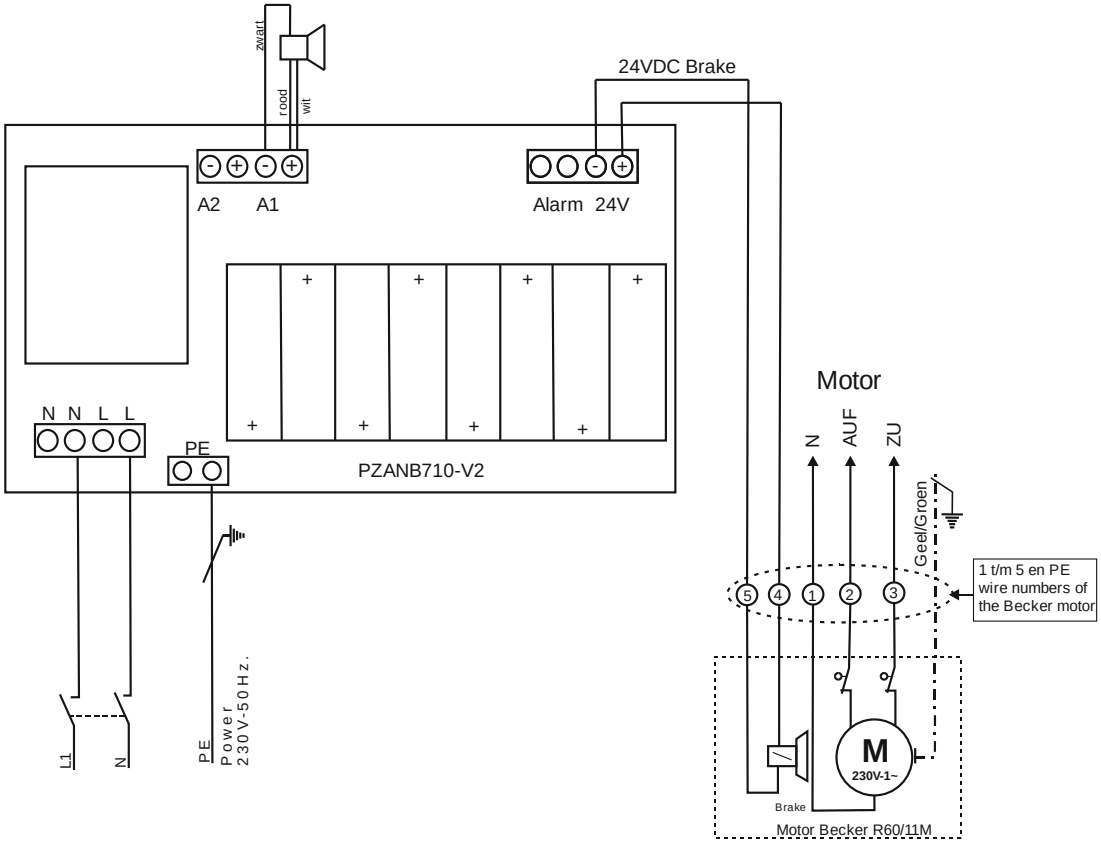


16. Mechanical and electrical specifications.

Dimensions of the housing	L x B x H = 250 x 175 x 100 mm
Dimensions of the PCB	L X B = 144.5 x 133 mm
Power consumption in stand-by at 230V/50Hz	Approx. 1 Watt calculated with receiver and display ZS7, but without any externally connected power consumers.
Mains power	230V/AC ± 10%, 50Hz.
Weight of PCB without housing	250 g.
Storage temperature	-20 °C to + 70 °C
Operating temperature	-10 °C to + 50 °C
Relative humidity	Max. 95% non-condensing
Connected load of motor	One 230V alternating current motor max. 10A, a 230V motor reverse relay for three-phase current motor or a relay box with 230V coils.
Protection class	With G503 clamp fittings IP67, with PG sockets IP65.
Available power outlets for external equipment	12Vdc - 100 mA and 24Vdc - 200 mA
Measured motor output power	< 3 mA not detected, > 6mA detected. Max. permissible motor current 10A at 230V.
Noise level in free air	< 70dB(A)
Terminating resistance of guards	8.2 kΩ ± 5% for guards with resistance measurement
Voltage measurement of the transmitter and receiver signals from a Fraba guard with slight transfer in the rubber profile.	5V ± 10%, 500Hz. to 2000Hz., 40% to 60% if no object is detected.

17. Alarm acoustic light signal unit ZA710

The alarm unit ZA710 gives an acoustic/light signal when the mains voltage and or 24VDC brake voltage is lost, this closes the curtain and or fire door by gravitational force, during this movement an acoustic and light signal must be given at a speed of more than 0.3m/s and a weight of more than 200N according to EN 12604. The signal time is adjustable between 30 and 180 sec. this can prevent an unnecessary acoustic and light signal and does not put unnecessary strain on the batteries.

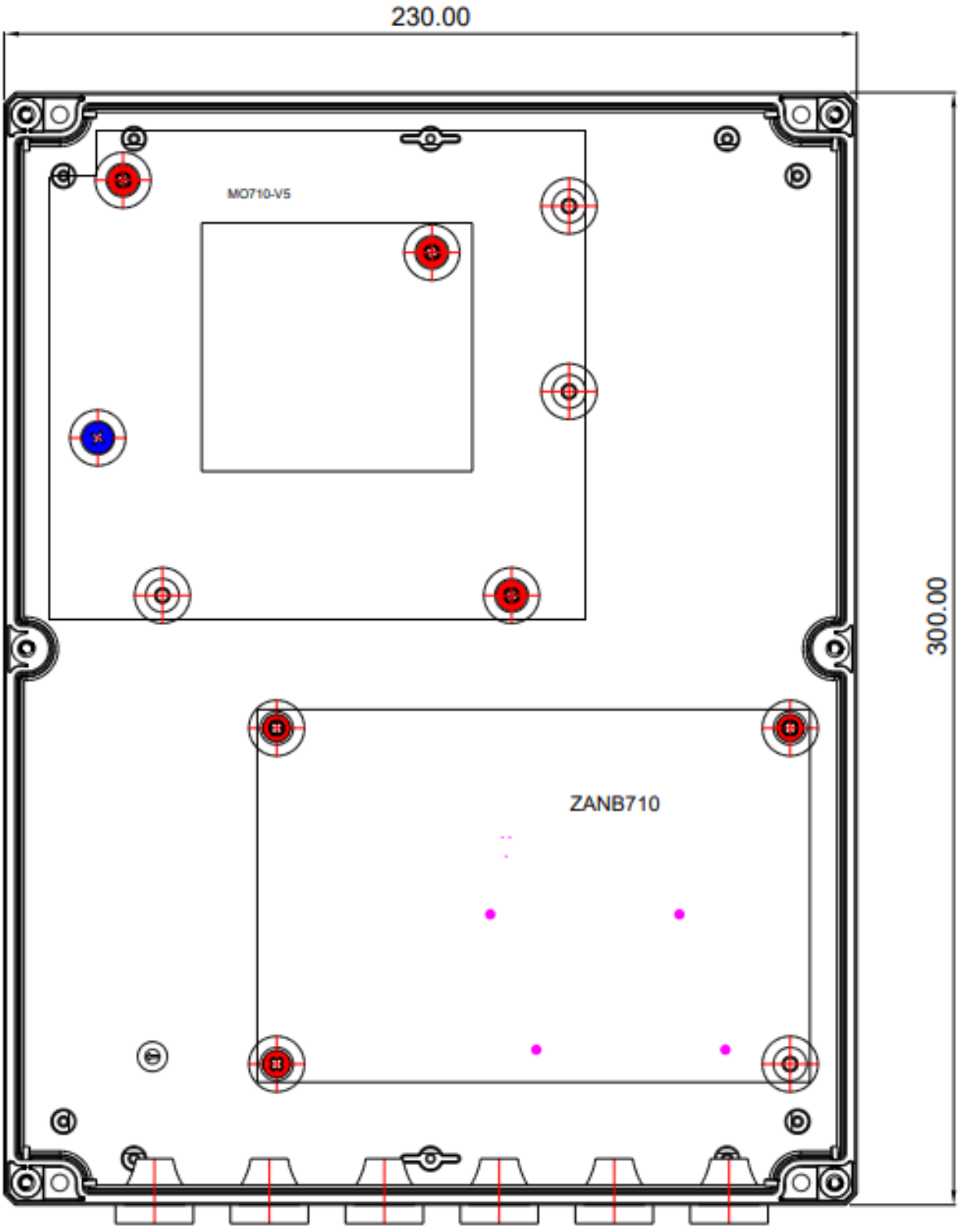


The AAA batteries used here have a total operating time of approx. 7 hours for the alarm siren used, for 2 alarm sirens this is half of approx. 3.5 hours, with a total current absorption of (2 x 200mA/alarm detector =) 400mA, so if the alarm duration is 30 sec. then approx. (60x60x3.5=12.600sec/30sec.=) 420 door movements can be carried out with signaling, i.e. in case of power failure or fire alarm if selected before the batteries fall below 9.5 VDC and need to be replaced. The acoustic light signal transmitters are connected to the terminals set A1 and A2, if required the BMI (fire alarm contact) can also be connected to S1 and S2 as well as the safety circuit of the entire motor control, i.e. the thermo/stop function, etc.

18. Alarm siren

Operating voltage	$9V_{DC}..12V_{DC}$
Sound pressure signal at 1m	100dBA
Power absorbed in operation	Max. 200mA
Power consumption	90mA bij 9V, 180m bij 12V
Black	GND
Wihte	Signal light +12VDC
Red	Signal sound +12VDC

19 Flush-mounting overview in housing MO710AZFNZNBW



We can be reached by phone for technical support, please contact our office in the Netherlands also after closing hours, after approx. 10 sec. you will be transferred to one of our technical staff.

Your helpline phone +31433263684

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