

Roll-up fixture with motor integrated in the shaft

-English-

INSTALLATION GUIDE SWITCH BOX



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Information:

Additional information available from our service department. We reserve the right to make changes or improvements in production without any announcement.

1. Technical data

1.1 Specific use and purpose

This roll-up fixture with motor integrated in the shaft is designed for the use in private as well as in public swimming pools which are operated according to DIN 19643.

This document is valid in combination with the technical informations SB 6A 10/2009, SB 2A 01/2009 and SB 2B 07/2009

It is important to note the details concerning the operation of the roller shutter by key switch.

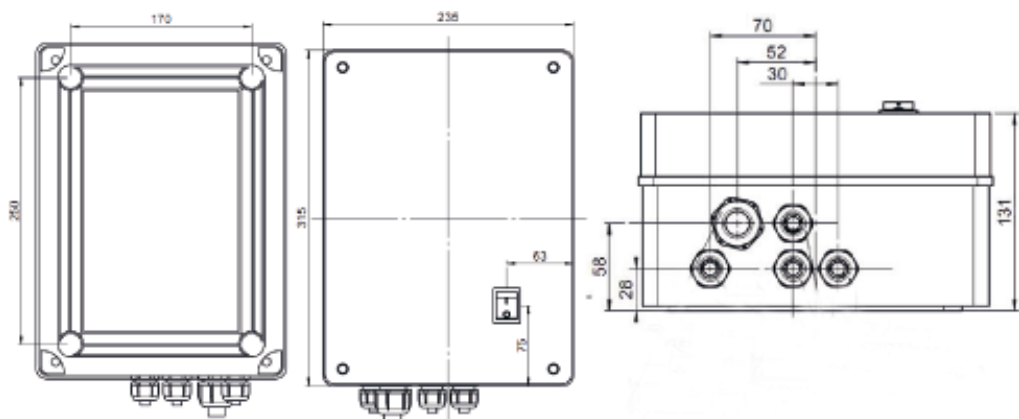
1.2 Electrical features

Inlet voltage	Single phase, 220Vac/240Vac, 50/60Hz
Outlet power voltage	24 Vdc \pm 20% unter 230 V
Outlet order voltage	24 Vd \pm 1%
Maximum motor current	10 A (electronic limitation)
Maximum inlet current	1,5 A
Maximum inlet power (motor at 10A)	290 W (1.5 A, PF=0.85)
Maximum inlet power in sleep mode	6 W (35 mA, PF=0.7)

1.3 Using restriction

Min working temperature	-20°C
Max working temperature	+50°C in intermittant service class 10% of 1 hour)
Min storage temperature	-40°C
Max storage temperature	+70°C
Relative humidity	95% without capacitor
Min tension feeding	220 Vac
Max tension feeding	240 Vac

1.4 Bulk dimension



1.5 Security warning



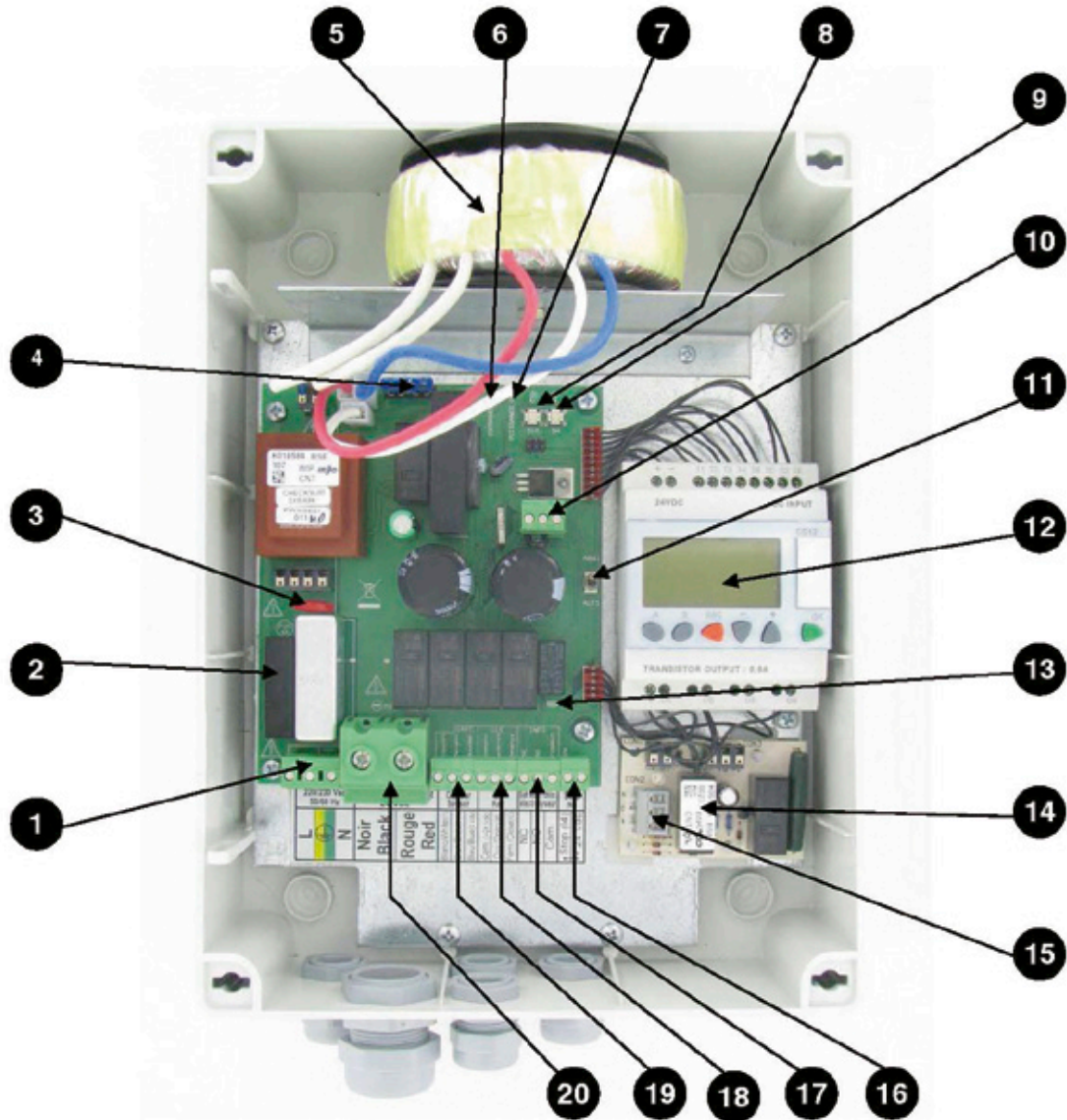
Electrical connection:

Electric connections must be carried out by a qualified electrician. The electrical motor must be wired by a professional according to the Installation instructions of your local electricity company.

The mains connection cable including a yellow-and-green earth wire must be of cross-section 1 mm²

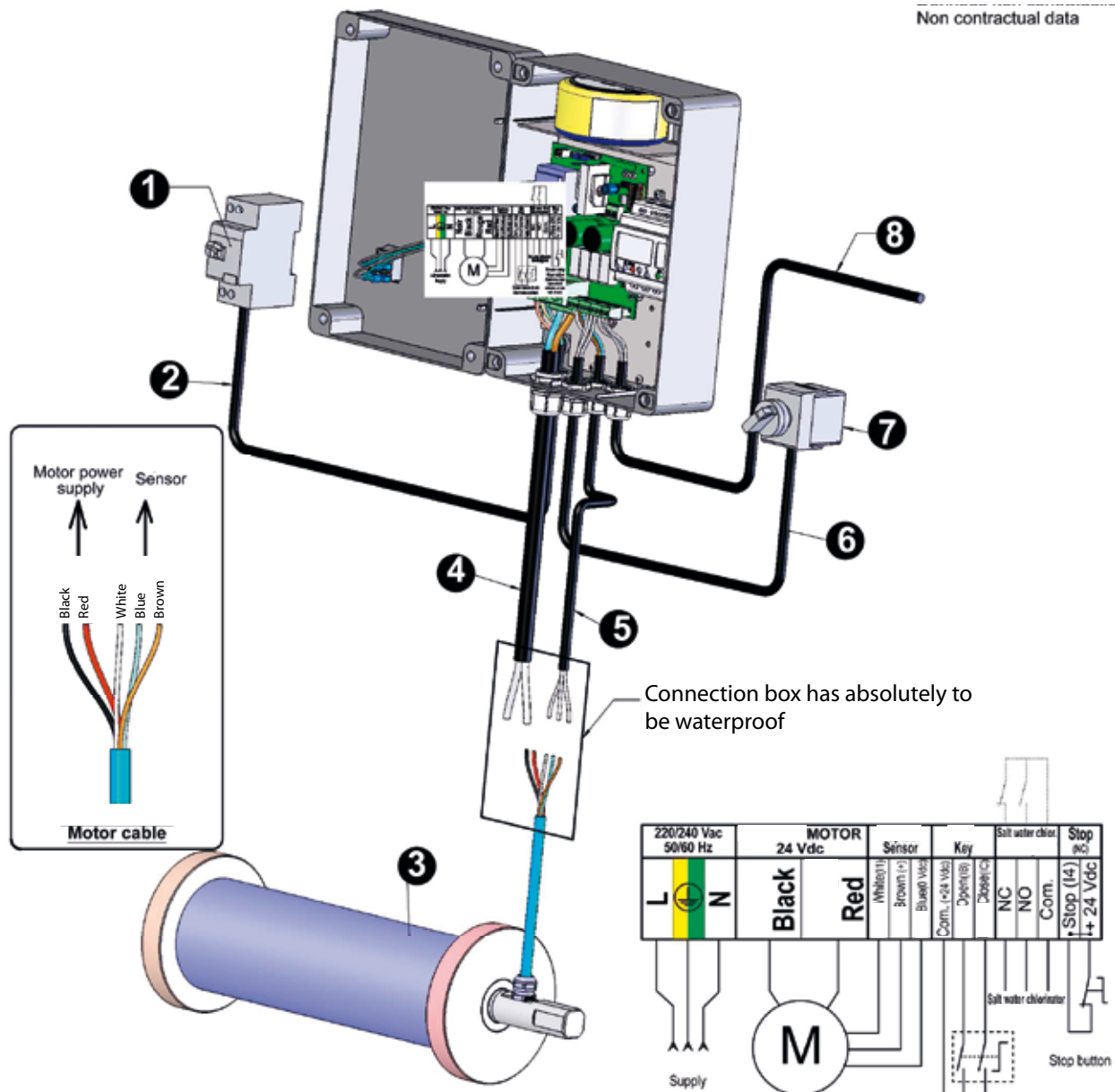
This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

2.1 Layout switch box



1	Supply removable terminals	11	Button automatic/Manual
2	Fuse support for quick fuse 4 A/250 Vac size ø 5 x 20 or ø 6 x 32	12	Automaton
3	Varistor 420 Vac / 90J	13	Led indicator closed pool or closing pending
4	Fuse ATO 15A	14	Brake card - pump drive
5	Power transformer 200 VA	15	Lever terminals - pump drive
6	LED Light order	16	Removable terminals for contact switch NC normally close (Shunt terminals if no NC contact cabled)
7	Led light power	17	Removable terminals for salt water chlorinator drive
8	Motor rotation order sense CW + LED indicator	18	Removable terminals for key remote control
9	Motor rotation order sense CCW + LED indicator	19	Removable terminals for rev.Counter card sensor
10	Brake removable connector	20	Screwed terminals for the motor cable power

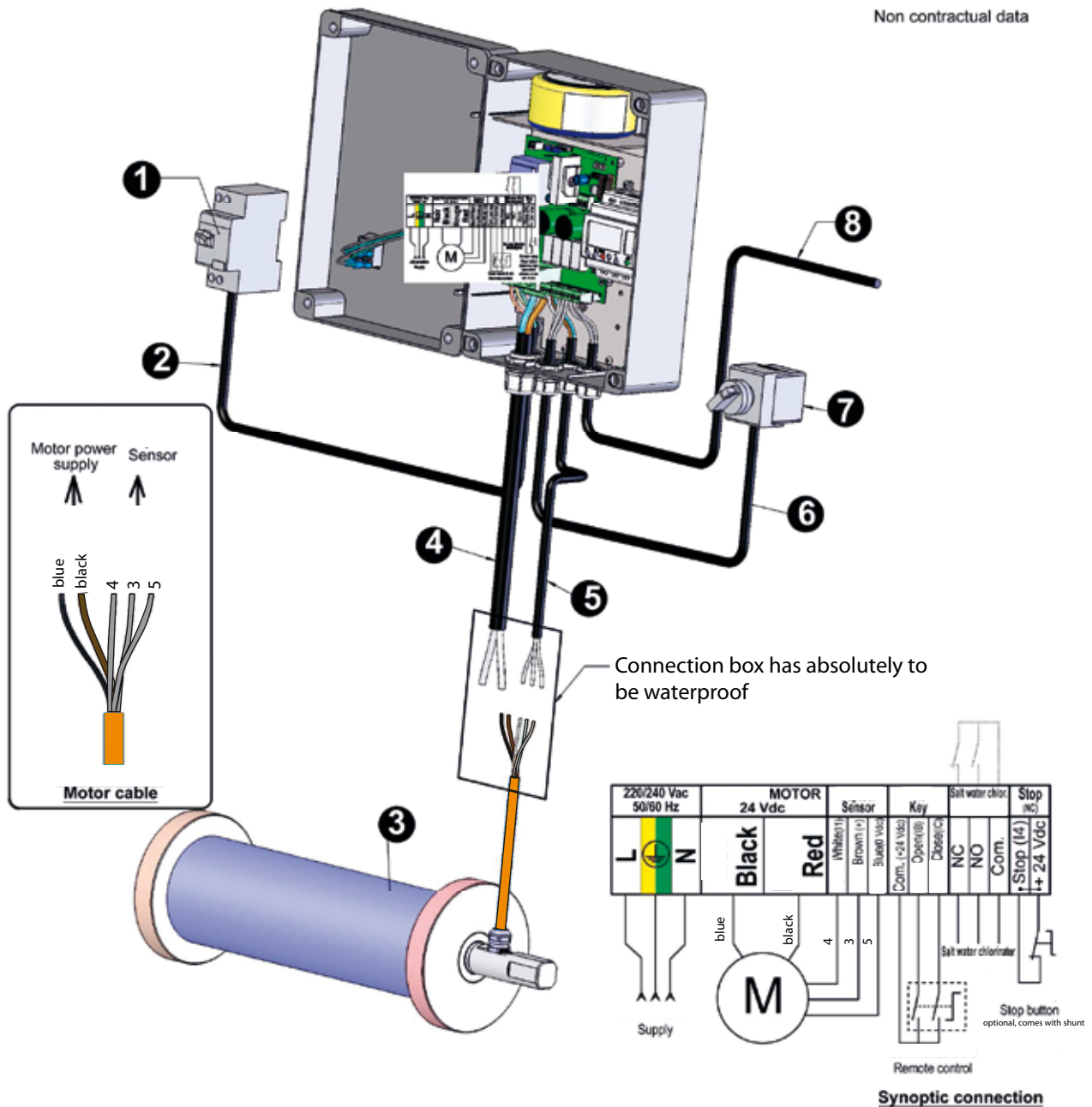
2.2 Connection diagram: Integrated motor with blue motor cable



Installation description:

1. RCD (GFCI) 30 mA. Residual current device (not included in supply) + surge protector if necessary
2. RCD circuit breaker - box connecting cable (not included in supply)
3. Motor drive embedded in the spindle
4. Motor power cable
5. Sensor connecting cable
6. Remote control cable
7. Remote control box open / close by key with recall to centre (not include in supply)
8. Information cable (optional)

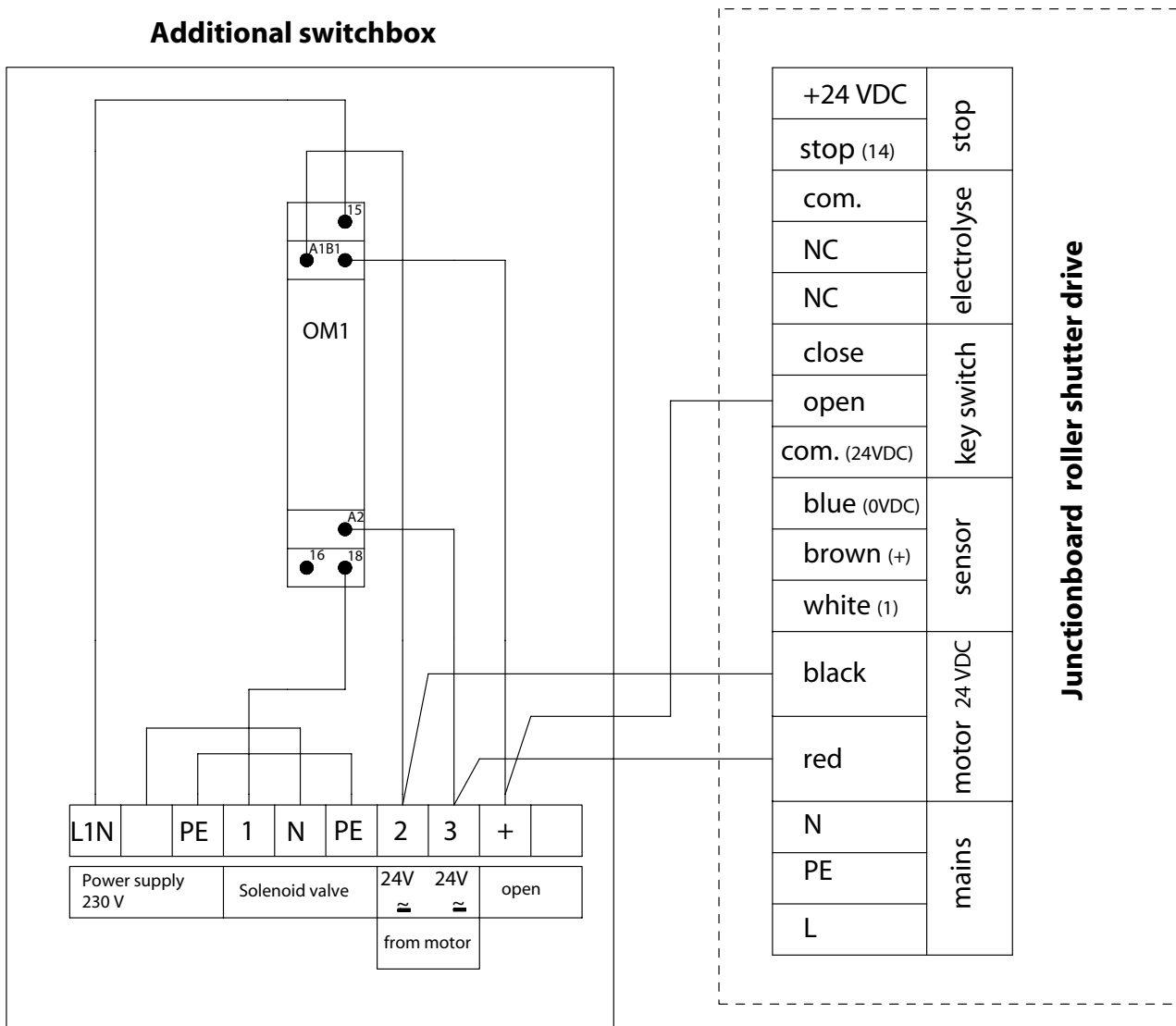
2.3 Connection diagram: Integrated motor with orange motor cable and number specification



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8. Information cable (optional)

2.4 Connection diagram: Additional circuit spray unit



- 2.5 Control box fixing** The control box is intended to be installed in a place away from bad weather (neither exposed to the sun, nor to the rain). It will be fixed on a vertical wall, at 1.5m above ground minimum, cables will be ground oriented. 4 screws and 4 plugs are delivered with the control box for fixing.

- 2.6 Cables rooting** All the cables connected to the control box will go through cable glands:
- The motor cable will go through a PG21 plastic cable gland. Its section will be comprised between 12 and 18 mm
 - The other cables will go through PG13 cable glands. Their section will be comprised between 6 and 12 mm
 - According to the installed options (stop button, salt water chlorinator drive, pumps shut down) others cable glands could be installed.

- 2.7 Connection to the terminals** The cables will be connected to the terminals according to the instructions hereunder.

Rep	Designation	Type	Unsheathed length	Max section
1	Sector connector	Removable, 0.6 Nm max, screwdriver 3.5 x 0.5	7 mm	2,5 mm ²
20	Motor connector	1.5 Nm, screwdriver 5x125	10 mm	16 mm ²
16 bis 19	Order connector	Removable, 0.6 Nm max, screwdriver 3.5 x 0.5	7 mm	2,5 mm ²
14	Pump control connector (card in option)	Lever connector, screwdriver 3.5x0.5	6 mm	2,5 mm ²

- 2.8 Salt water chlorinator contacts** (rep 17)
- Salt water chlorinator shut down when the pool is closed or when the closing is pending. The LED rep12 indicates that the pool cover is closed.
 - 2 contacts NC NO available to drive the shut down relay of the salt water chlorinator. Dry contacts, free from any potential.
 - Max shut down power: 0.2A under 125Vac and 0.5A under 30Vdc.

- 2.9 Brake card and pump drive** (rep 14, according to option):
- Brake reinforcing of deeply immersed axes (H>0.8m).
 - Pump shut down when the cover is moving. The Lit up LED indicates that the pumps are off.
 - 2 contacts NC NO available to drive the pump shut down relay. Dry contacts free from any potential.



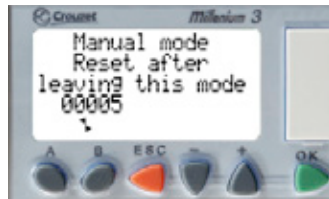
- Do not drive the pump directly through these contacts (3A max under 24Vdc max).

2.10 Programmation

Manual mode (button automatic/manual rep11)

- Allows to rotate the motor without programming the limit switch sensors
- Allows to check the working of the motor rev.counter card
- Allows to check the cabling

Choosing the automatic mode obliges to program the limit switch sensors.

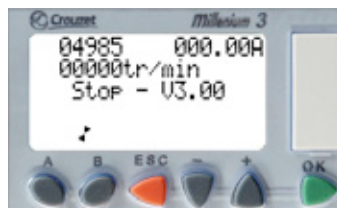
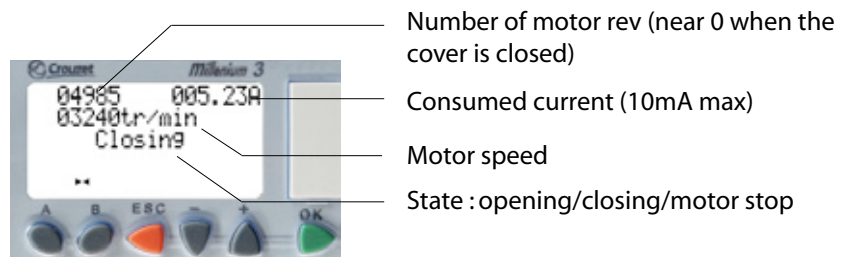


By-pass mode (button CW and CCW rep 8 and 9):

These buttons allow to move the cover without going through the automaton. Be careful, using this mode, will erase the limit switch sensors programming. You will need to do it again.

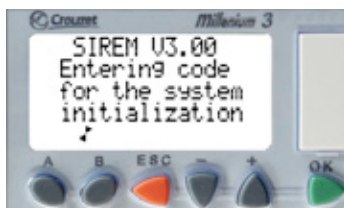
Standard mode:

after the limit switch sensor programming (see next page), the following screens appear.



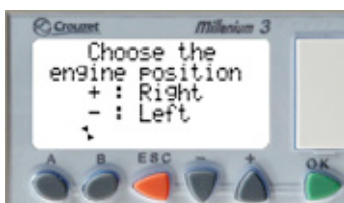
When stopped, indicating the software version

3. Limit switch sensor programming



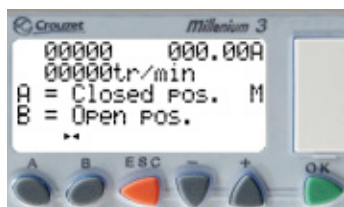
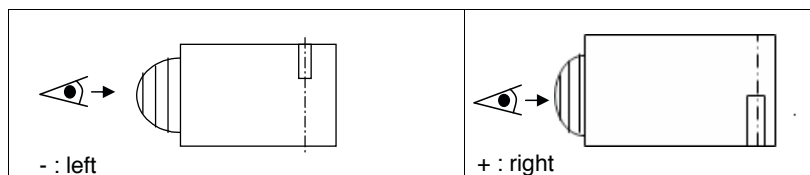
Welcome screen when first powered on

After the first activation of the initialization code, this message will not appear anymore.



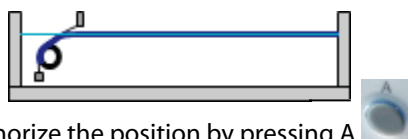
Initialisation


1. Activate the code : Press the +  three times and then press OK  ..
2. Indicate the motor position



Programming the limit positions „open“ and closed“.

1. Bring the cover to the closed position in activating the key on „close“:

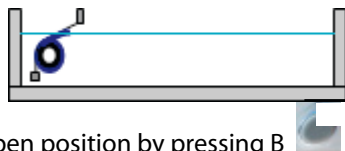


Memorize the position by pressing A .

⇒ **Counter set to zero.**

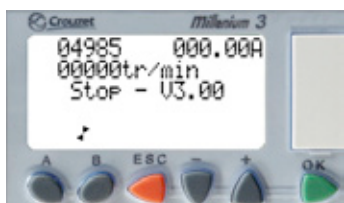
Confirm memorization: An M appears adjacent to the „closed position“.

2. Put the cover in the open position, by turning the key to „open“:



Memorize the open position by pressing B .

Learning complete.



According to the program version, the closing is achieved by a maintained contact or impulse. The opening is always by impulse.

Stopping the automatic movement is achieved by switching the key on the opposite movement.

4. Error messages



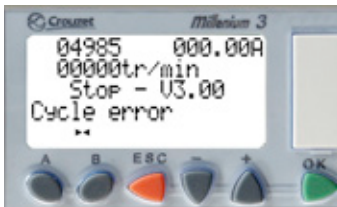
Sensor error

The signal of the rev. Counter card sensor does not change of state.



The system squeezes itself. Only a new initialisation (see 1st control box programming) can allow the system to restart.

- Check the connections
- Change to manual mode, and check if the cover moves
- In manual mode, check that there is tension between the blue (0V) and the brown (+24Vdc) wires
- Test the sensor signal with the SIREM sensor signal test box



Cycle error

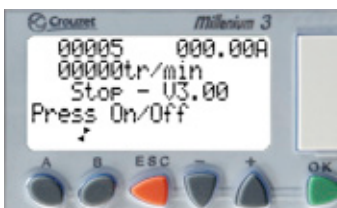
The motor is supplied without interruption during 5 minutes. The manoeuvre is interrupted and the motor is stopped during 20 seconds. No manoeuvre can be done during that period.



Overcurrent

The electronic circuit breaker has stopped the motor: current consumed more than 10 A.

It indicates that the motor is overcharged ($I > 10A$), contact your retailer.



If this error occurs three times on the same open or close cycle, the display shown on the adjacent figure will blink.

Press the On-Off switch on the box to reinitialise the system



Stop button availability

No shunt on the terminal rep16

5.3 Troubleshooting

Problems	Solutions
During the initialisation phase, after pushing the A button, it is impossible for you to bring the cover in the closed position.	<ul style="list-style-type: none"> - Contacts for opening and closing might be inverted: check the connections - Bad connection of the contacts opening and closing: check the connection. - Position of the motor in the swimming pool badly registered: finish the initialisation while pushing successively on A and B, then push +++OK and bring the motor in position.
Switched off order LED	<ul style="list-style-type: none"> - Unplug the sensor connector, the remote key connector switch off the control box and switch it on again in order to reinitialise it. Shortcircuit on the order circuit leads to a disjunction of it. Check the cables.
Lit off power LED	<ul style="list-style-type: none"> - Check the fuse 15 A - If necessary change it by a same intensity fuse. Replacing it by a stronger fuse could damage the card.
Empty automaton screen	<ul style="list-style-type: none"> - If the other LED is lit on, check the connection from the automaton to the card. - Check the supply tension to the terminals + and - of the automaton (24 Vdc).
Indications appear at the bottom of the screen	<ul style="list-style-type: none"> - The small key at the bottom of the screen is normal: means automaton locked. In no way, this key indicates a dysfunction of the appareil. The other turning symbol indicates that the automaton is working.
The red pastille has become black and the fuse 4 A is out of use	<ul style="list-style-type: none"> - The control box was shot by the storm: contact your retailer. - Plan to install a lightening arrester.
Overload message appears without interruption	<ul style="list-style-type: none"> - The motor is overload ($I > 10$ A), check the installation again, and the size of the swimming-pool (6 x 12 max) - Check if a large quantity of blades might be filled up with water.
1234 BCDE appears on the screen	<ul style="list-style-type: none"> - No programme loaded in the automaton. Contact your retailer.
The 4A fuse breaks continually	<ul style="list-style-type: none"> - Contact your retailer
The screen of the automaton is not lit continually	<ul style="list-style-type: none"> - The LCD screen switches on during 30 seconds each time that one of the buttons of the front face is pushed.
In manual mode, the cover opens itself instead of closing itself	<ul style="list-style-type: none"> - In manual mode, the motor position in the swimming-pool is not declared, if it is on the left side and that the cabling is OK, so there is an inversion of the open and close signals.