REPLACEMENT AND OVERHAUL OF THE DRIVE VO01

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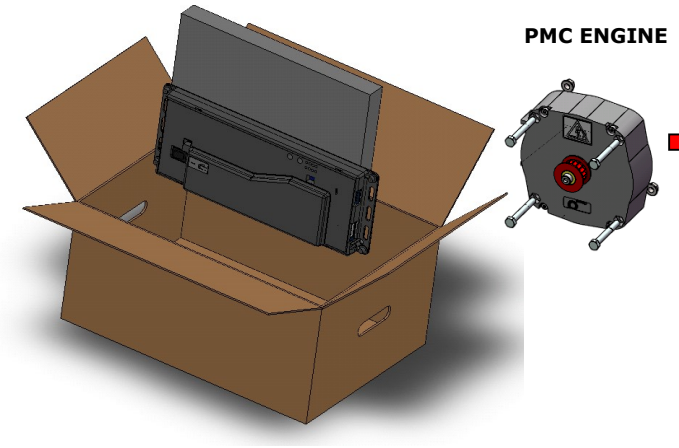
1. INTRODUCTION

Instructions for replacing a door drive with the VO01 drive in ORONA's Arca I, Arca II and Arca III controllers, without the need to use the HC.

2. RISKS

3. MATERIAL

- Door variator VO01
- Door variator sticker set
- VO01 door drive replacement and overhaul instructions
- PMC engine (in case the plant engine is a PMA engine)
- Drill and drill bits for metal
- Set of fixed spanners
- Screwdriver set
- Plastic cable ties
- Scissors



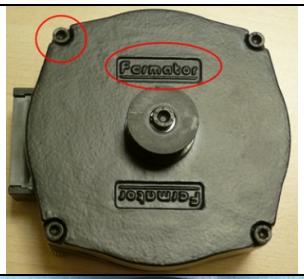
PMC ENGINE

The PMC engine is only shipped if the engine in the installation is a PMA engine.

ATTENTION!
The Orona VO01 door drive is compatible with:
- Orona MP01 Engine
- Orona/Fermator Asynchronous Motors
- Orona PMC engine and Fermator.

NOTE: This drive **does NOT work with the PMA motor**. If the VO01 drive is connected with a PMA motor it will not work (when trying to perform the "Confmotor", it will end with an error and it will not be possible to perform the next "Autotune" step). See pictures to differentiate a PMC motor vs. a PMA motor. If the original installation has a PMA motor, a PMC motor and hardware to replace it will be sent with the material.

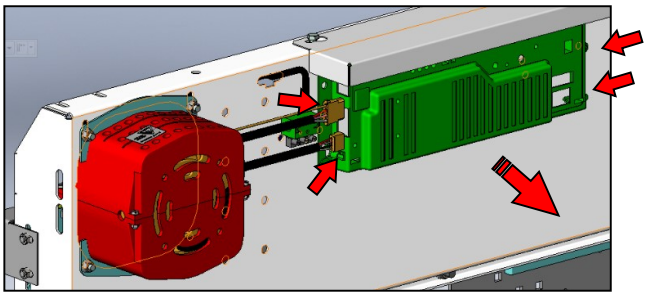
4. Engine types:

IMAGE	CODE	DESCRIPTION
	8263161-01 8263161-02 8263208-01 8263214-01 8263299-01	Orona/ Fermator Asynchronous Motor
	8260119-01	PMA synchronous motor
	8260129-01	PMC synchronous motor
	8260146-01	Synchronous motor MP01

5. PROCESS

5.1. Dismantle old variator

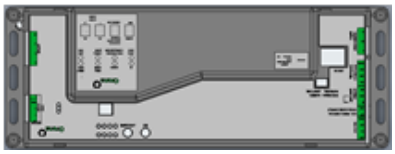
1. De-energise the installation.
2. Disconnect the connectors of the inverter to be replaced.
3. Dismantle and remove the variator to be replaced.



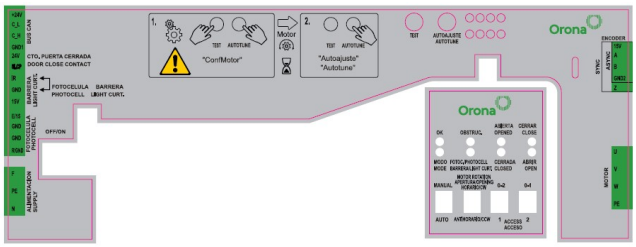
5.2. Affixing stickers

1. Place the stickers on the variator, taking into account the final fixing position of the variator.

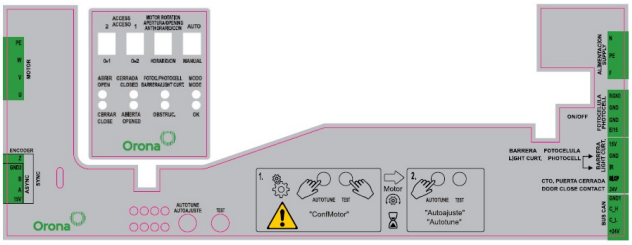
ATTENTION!
The connectors that go to the door motor should be as close as possible to the door motor.



STICKER VARIANT 1



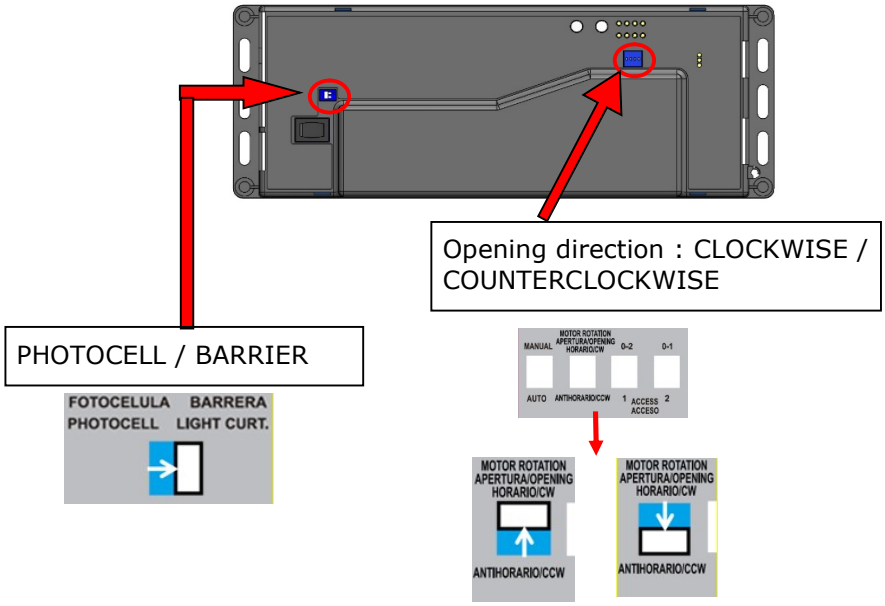
STICKER VARIANT 2



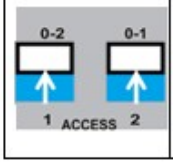
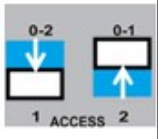
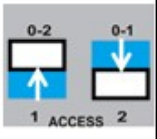
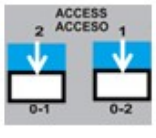
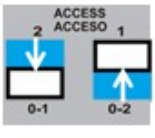
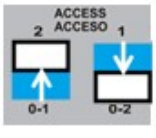
5.3. Switch configuration

ATTENTION!
The position of the switches must be changed when the inverter is switched off for the configuration to be correct.

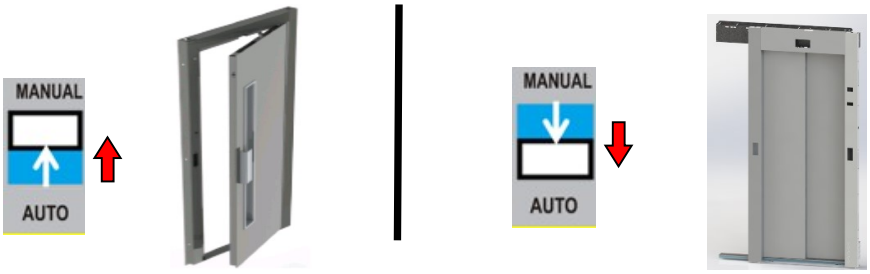
1. Set the number of EMBARKS in the cabin: 1, 2 or 3. (See table of number of accesses).
2. Set the opening direction: clockwise or counterclockwise.
3. Configure the type of floor door:
   - Semi-automatic or manual = "MANUAL".
   - Automatic = "AUTO
4. Configure Barrier or Photocell.



NUMBER OF ACCESSES

Sticker Variant 1			Sticker Variant 2		
Main access (EXT 3.0)	Second access (EXT 3.1)	Third access (EXT 3.2)	Main access (EXT 3.0)	Second access (EXT 3.1)	Third access (EXT 3.2)
					

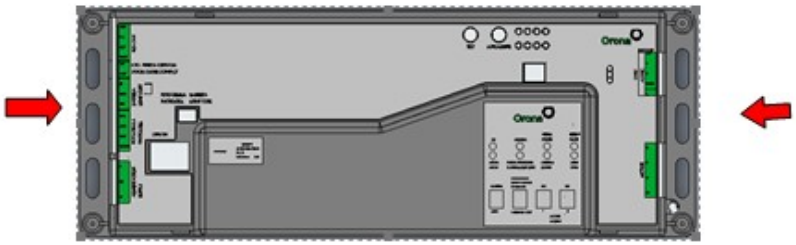
MANUAL / AUTO



5.4. Mounting the VO01 variator

1. Attach the new VO01 to the door operator tray.

ATTENTION!
It is likely that some of the fastening holes of the variator do not match and that a new hole will have to be drilled to fix it.

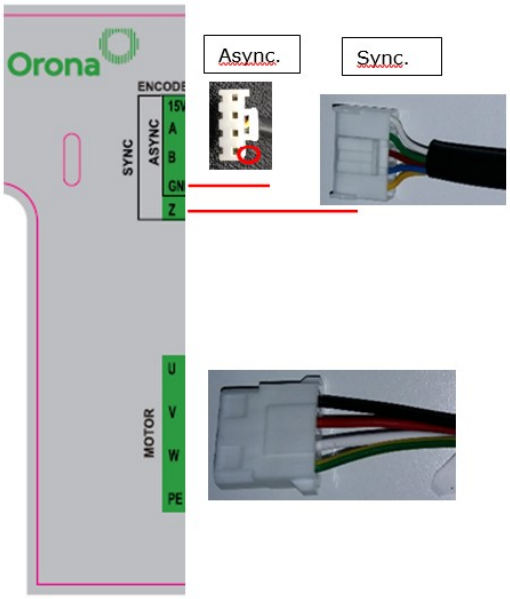


5.5. Motor and encoder wiring

1. Connect the encoder cable.

- Asynchronous motor: 4-wire encoder. It will be necessary to cut one edge of the connector to be able to plug it in.
- Synchronous motor: 5-wire encoder. Direct connector.

2. Connect the motor cable.

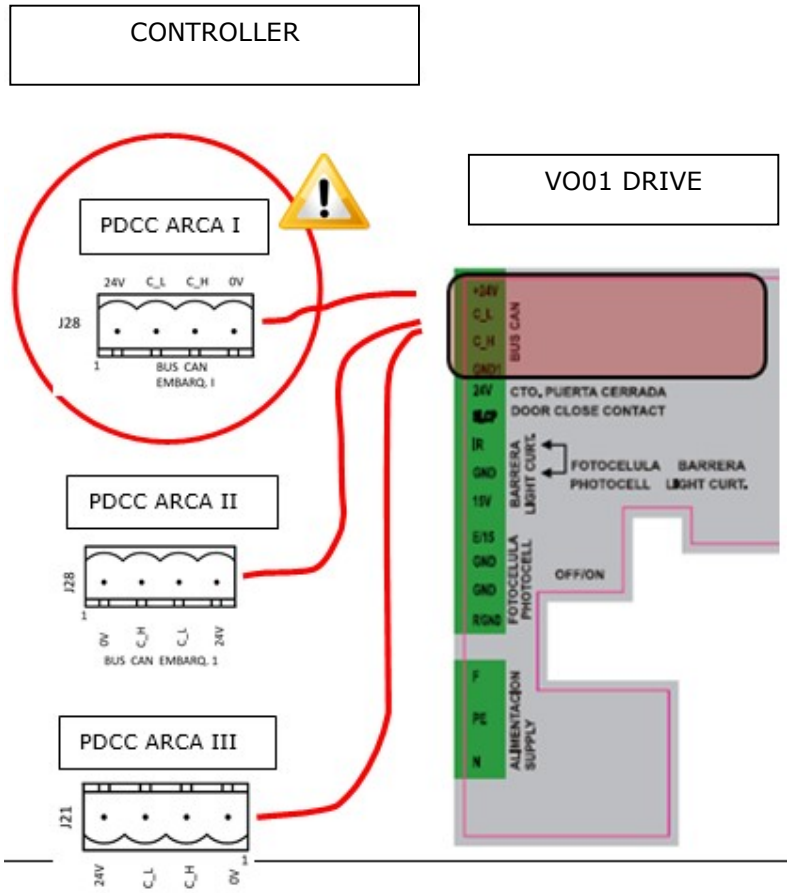


5.6. Other connections

5.6.1. BUS CAN

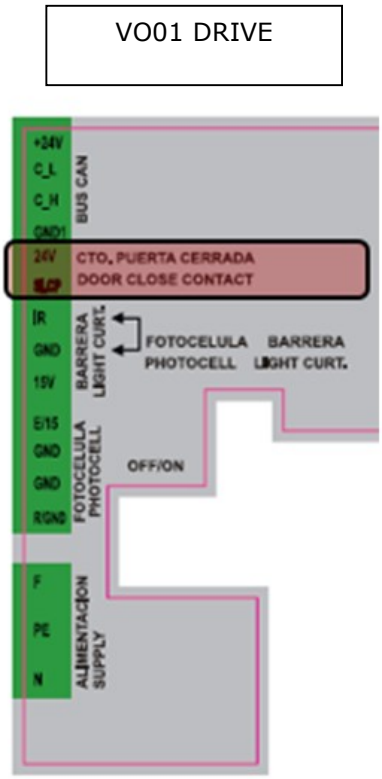
1. If the existing inverter does not have CAN BUS, a CAN communication must be wired between the new VO01 and the PDCC of the Cockpit Panel. Also, Ext. 3 of the Cockpit Panel and the digital signals between the Cockpit Panel and the old Inverter must be overridden.

ATTENTION!
With ARCA I control, the CAN BUS pin-out on connector J28 is different. IT MUST BE ADAPTED.



5.6.2. Closed door contact (EN 81-20):

1. 2-pole connector (24V - SLCP). Indicates that the door is closed. This is a requirement of the EN81-20 standard only and ONLY needs to be connected in this type of installation.

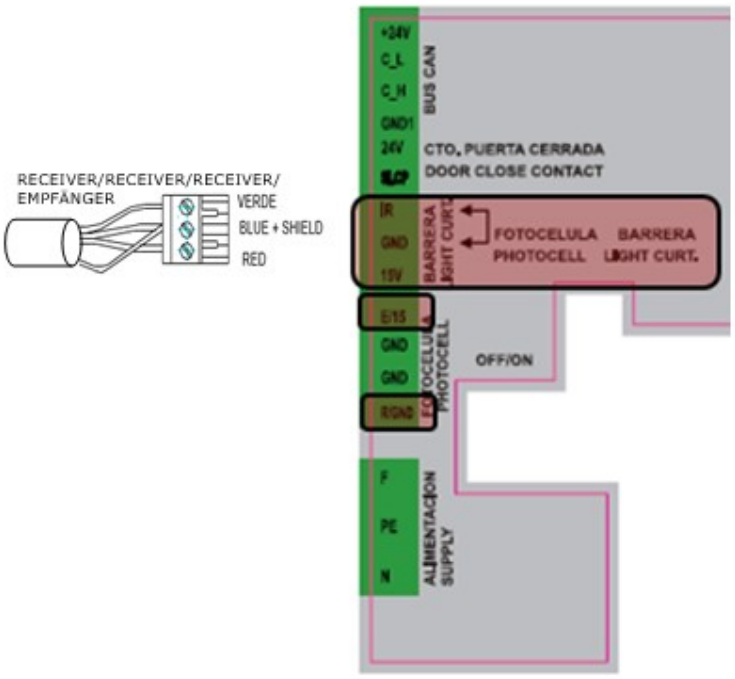


5.6.3. Barrier 2 connectors

- Receiver : 3-pin connector on the Barrier connection. Power supply between 15V and GND. IR is the input signal or detection signal of the Barrier.

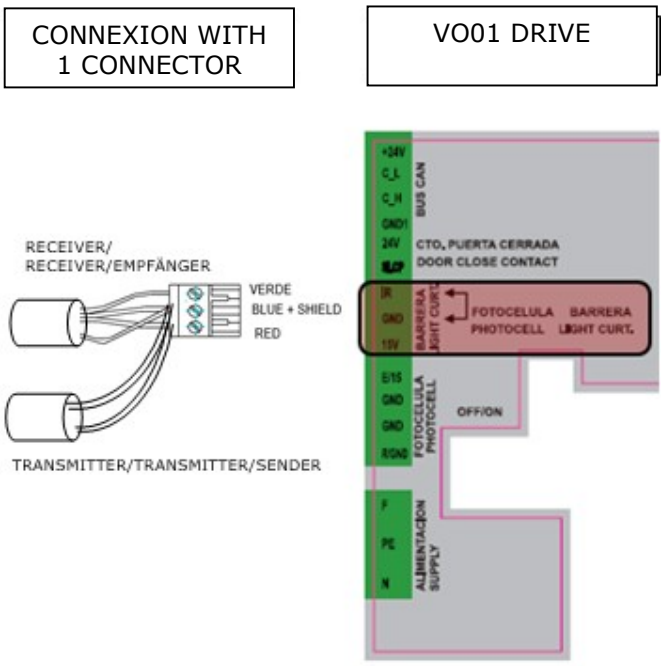
- Transmitter: 4-pin connector on the photocell connection (only power supply between pins 1 and 4).

CONNEXION WITH 2 CONNECTORS	VO01 DRIVE



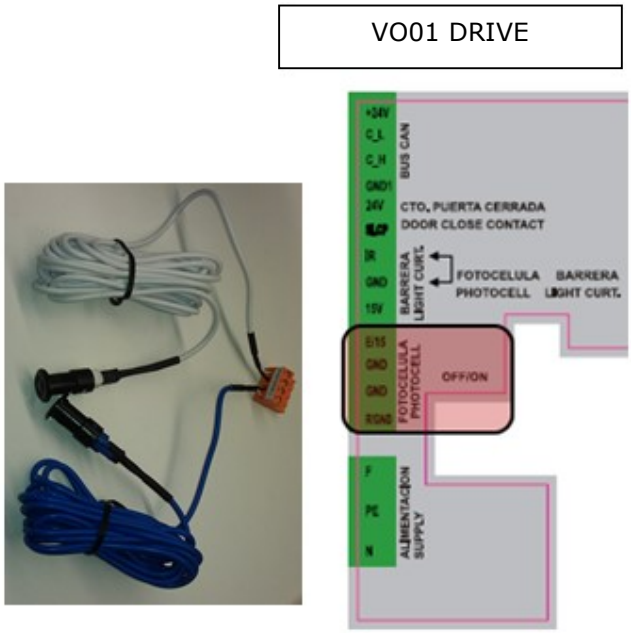
5.6.4. Barrier 1 connector

1. BARRIER connector (3 pins). Transmitter and receiver are powered between 15V and GND. IR is the input signal or detection signal of the Barrier.



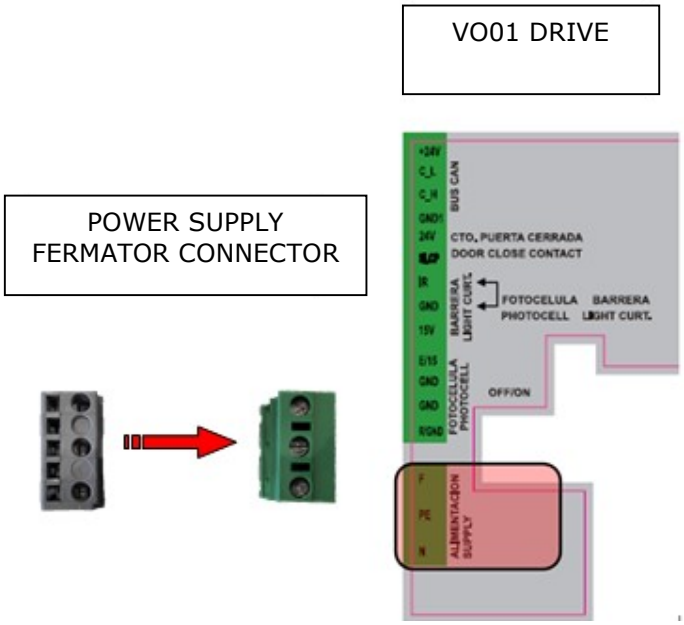
5.6.5. PHOTOCELL

1. Transmitter: Between E/15 and GND
2. Receiver: Between R/GND and GND.



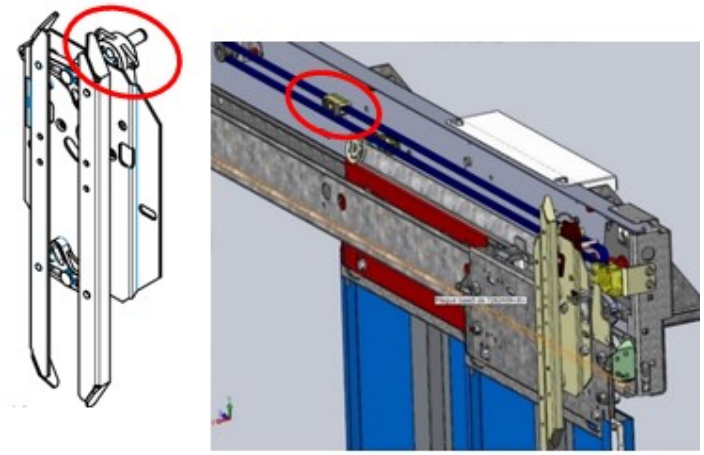
5.6.6. OWER SUPPLY

1. 220 Vac. In some cases the connector of the old inverter is not the same as the new one. The connection must be adapted (e.g. Fermator operators).



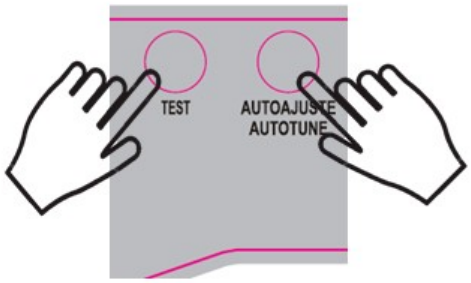
5.7. IMPLEMENTATION

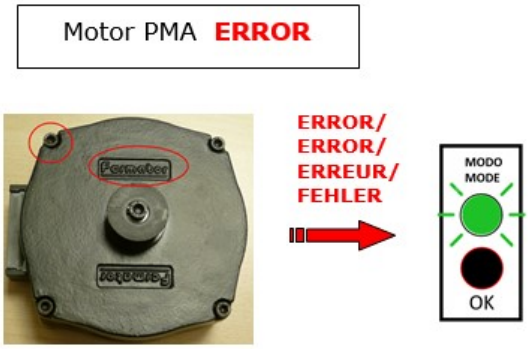
1. Uncouple the strap from the runner and leave the "strap clamp" in the middle of the door travel, so that it rubs as little as possible (see red circle).
2. Switch the door monitor on again by means of its switch.



3. Execute a "CONFMOTOR" by pressing both the "TEST" and "AUTO ADJUST" buttons of the VO01 at the same time.

ATTENTION!
In case PMA engine is detected, an ERROR is generated and Autotune will not work.

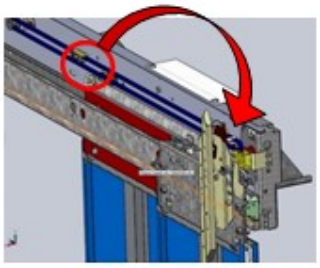


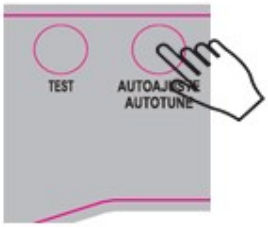


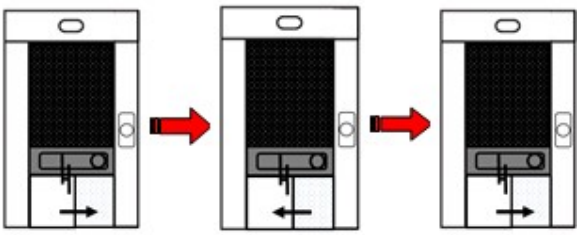
4. Couple the belt with the runner and carry out an AUTO ADJUSTMENT with the cabin door outside the door area. At this point, the type of runner and door light is recognised. During the AUTO ADJUST, the door closes, opens and closes again.

ATTENTION!
If the installation has an interlocking slide (CDL), **outside door areas**, it must be helped to unlock by lifting the locking bolt of the slide interlock by hand before the start of the opening operation.
The movement you should make is: Close, open fully and close fully.
If it is the other way round, change the opening direction switch, switch off/on and start the whole adjustment process again.

5. Carry out a TEST with the car door outside the door area.
6. Check that it closes and opens correctly in both cases.







CDL