

General safety instructions **42**

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1 SYMBOLS USED IN THIS MANUAL

This manual uses symbols to highlight specific texts. The functions of each symbol are explained below:

▲ Failure to respect the safety warnings could lead to accident or injury.

ⓘ Instructions which must be followed to prevent deterioration.

⌚ Work sequences or procedures.

👉 Important details which must be respected for correct assembly and operation.

ⓘ Additional information to help the installer.

♻️ Information on care for the environment.

2 IMPORTANCE OF THIS MANUAL

▲ Read this manual in its entirety before carrying out the installation, and obey all instructions. Failure to do so may result in a defective installation, leading to accidents and failures.

ⓘ Moreover, this manual provides valuable information which will help you to carry out installation more efficiently.

👉 This manual is an integral part of the product. Keep for future reference.

3 ENVISAGED USE

This device has been designed for installation as part of an automatic opening and closing system for sliding doors and gates.

▲ This device is not suitable for installation in inflammable or explosive environments.

▲ Failure to install or use as indicated in this manual is inappropriate and hazardous, and could lead to accidents or failures.

▲ The installer shall be responsible for ensuring the installation is set up for its envisaged use.

4 INSTALLER'S QUALIFICATIONS

▲ The installation should be completed by a professional installer, complying with the following requirements:

- He/she must be capable of carrying out mechanical assemblies in doors and gates, choosing and implementing attachment systems in line with the assembly surface (metal, wood, brick, etc) and the weight and effort of the mechanism.

- He/she must be capable of carrying out simple electrical installations in line with the low voltage regulations and applicable standards.

▲ The installation should be carried out bearing in mind standards EN 13241-1 and EN 12453.

5 AUTOMATIC OPERATION SAFETY ELEMENTS

This device complies with all current safety regulations. However, the complete system comprises, apart from the actuator referred to in these instructions, other elements which should be acquired separately.

👉 The safety of the complete installation depends on all the elements installed. Install only Erreka components in order to guarantee proper operation.

▲ Respect the instructions for all the elements positioned in the installation.

▲ We recommend installing safety elements.

ⓘ For further details, see "Fig. 1 Elements of the complete installation" on page 43.

1 ELEMENTS OF THE COMPLETE INSTALLATION

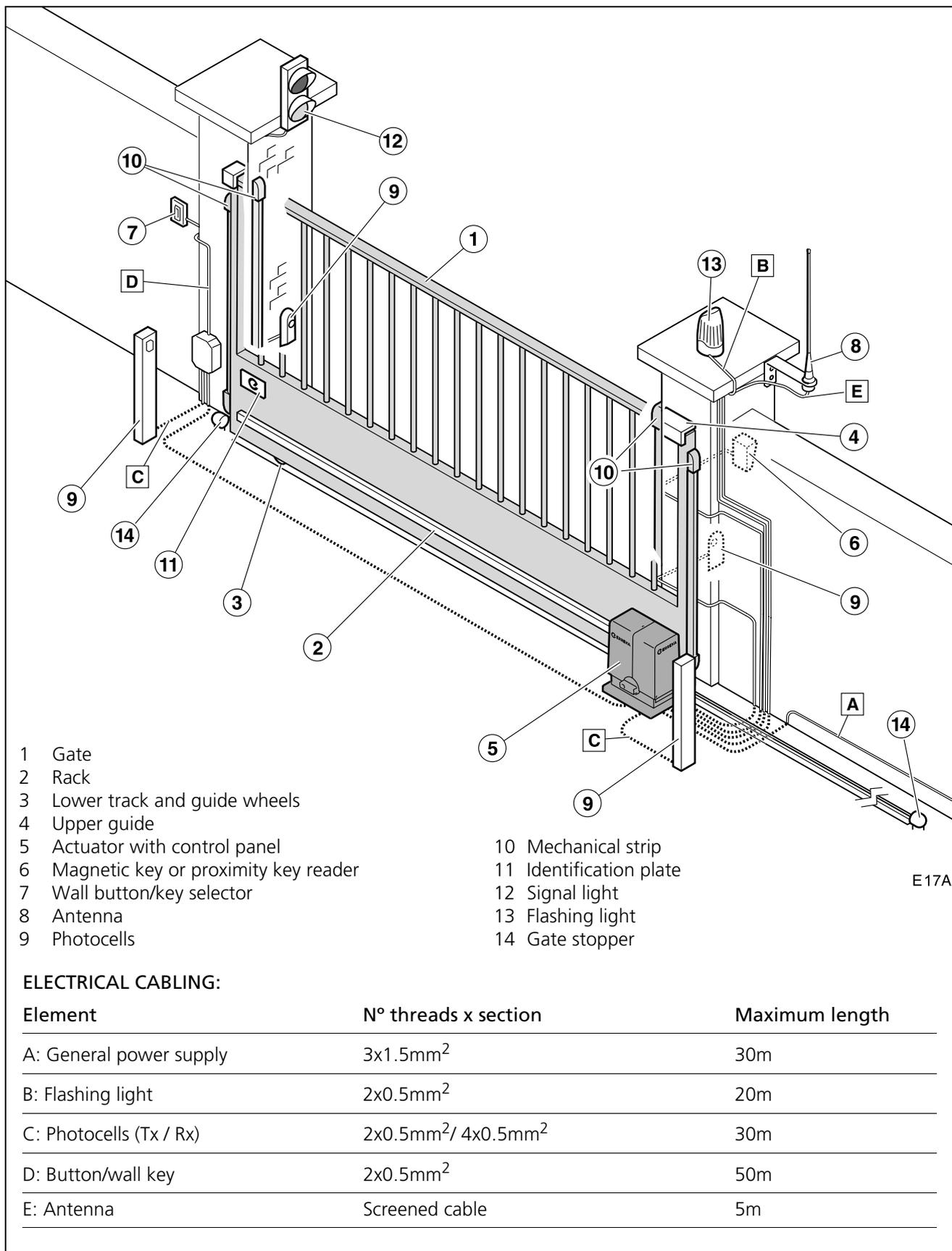


Fig. 1 Elements of the complete installation

▲ The safe and correct operation of the installation is the responsibility of the installer.

☞ For greater safety, Erreka recommends installing photocells (9) and safety strips (10).

2 ACTUATOR CHARACTERISTICS

The LINCE actuators are constructed to form part of a sliding gate automation system.

This control panel, with built in control panel, is equipped with a soft stop system which reduces speed at the end of the opening and closing operations, in order to prevent impacts and bangs to the gate.

General characteristics

- LIS424 - LIS624: Power supply 230Vac, 50Hz, earthed
- LIS424M - LIS624M: Power supply 125Vac, 60Hz, earthed
- Control of the travel by way of encoder
- Adjustable speed
- Adjustable maximum force
- Adjustable standby time in automatic cycle
- Opening and closing safety device terminals (safety strips or photocells)
- Connector for plug-in receiver
- Connector for light signal card (AEPS1-001)
- 24Vdc terminal for peripheral connection
- Emergency battery input

Notable characteristics

Self-testing of photocells (programmable)

The panel tests the photocells before starting each operation. Should a failure be detected, the operation is not carried out.

Garage light (programmable)

The garage light time can be programmed between 3 and 240 seconds. Time begins to count when operation starts.

Flashing light

The light remains on during the opening and closing operations.

The light goes off when the operation concludes. The light goes off whenever operation is interrupted at a specific point.

Operation warning function (programmable)

This function delays the start of operation by three seconds, during which time the flashing light comes on to warn us that operation is about to begin.

Signal light

A signal light can be connected if the AEPS1-001 card is installed. Using colour lights, these will indicate the suitability or otherwise of crossing the gate.

- Off: gate closed
- Green light: gate open, free passage
- Red light: gate in movement, passage forbidden
- Intermittent green light: open gate about to close (in automatic mode)

This actuator allows us to fulfil the requirements of standard EN 12453 without the use of peripheral elements.

SCA Light

A 24V SCA light can be connected.

- The light remains off when the gate is closed.
- The SCA light remains on statically when the gate is open.
- During opening, the SCA light flashes every second.
- During closing, the SCA light flashes every half a second.

Soft stop function (programmable)

Function which reduces the speed of the motor at the end of the opening and closing operation.

24Vdc battery (bR)

It is possible to connect a battery in order for the actuator to continue working in the event of a drop in power. The battery will be recharged when the electricity supply is restored.

Reset (r5)

Reset is the closed gate position search at slow speed. The display shows r5.

The actuator carries out a reset in the following cases:

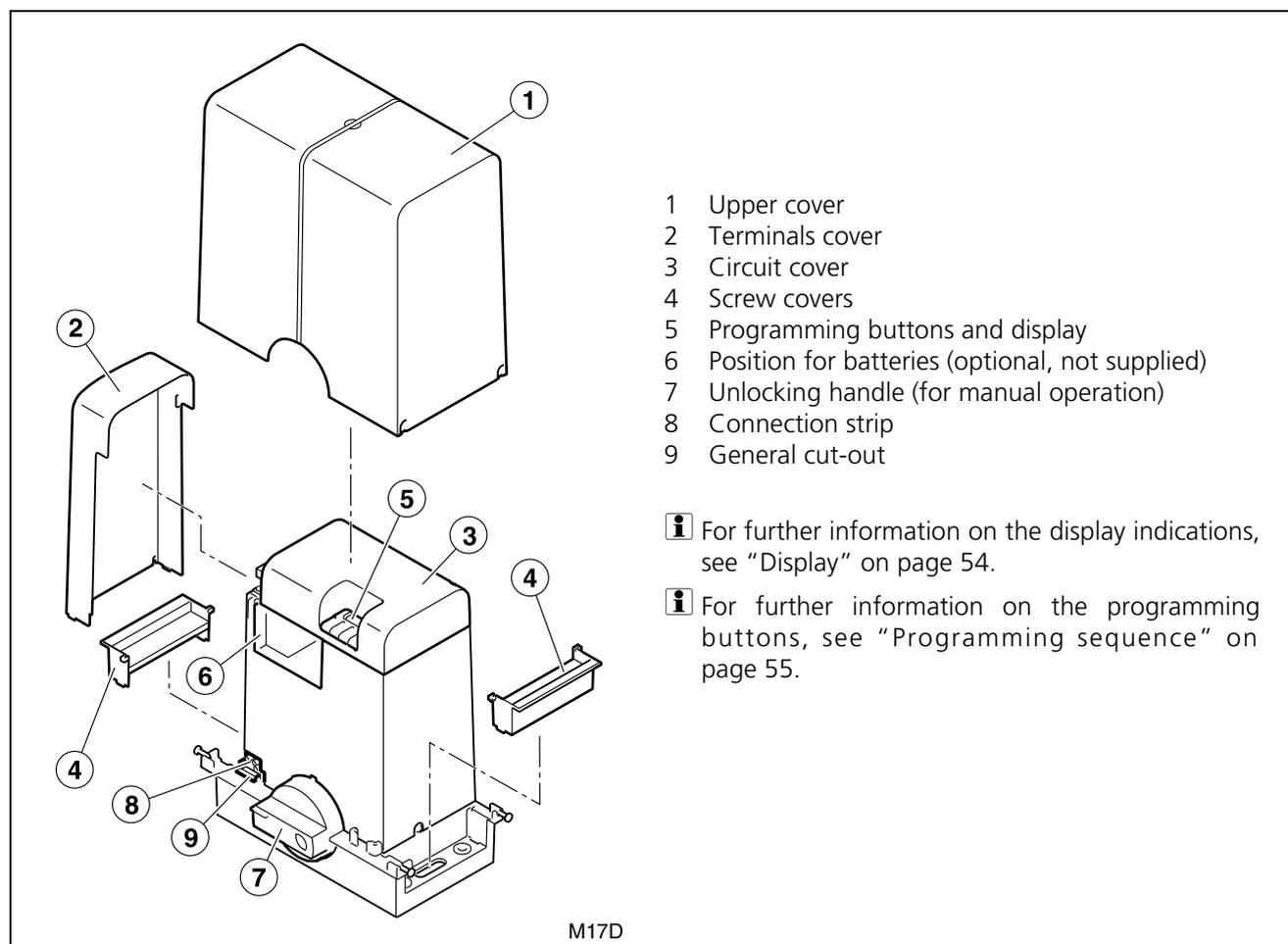
- When the electricity supply is restored following interruption, and an operation device is activated
- When the actuator for manual operation is unlocked and locked again
- When the gate collides with an obstacle three consecutive times

Technical characteristics of the actuator

| Model | LIS424 | LIS424M | LIS624 | LIS624M |
|--------------------------|--------|-----------|--------|-----------|
| Power supply (V/Hz) | 230/50 | 125/60 | 230/50 | 125/60 |
| Power consumed (W) | | 110 | | 110 |
| Motor voltage (Vdc) | | 24 | | 24 |
| Protection grade (IP) | | 45 | | 45 |
| Maximum torque (Nm) | | 10 | | 15 |
| Service temperature (°C) | | -20/ +55 | | -20/ +55 |
| Weight (Kg) | | 9 | | 9 |
| Max gate weight | | 400 | | 650 |
| Use | | Intensive | | Intensive |
| Maximum speed (m/min) | | 15 | | 11,5 |



3 ACTUATOR PARTS



4 OPERATION MODES

Automatic mode (F 101)

Opening: this begins by activating the operation device (emitter, magnetic key, key selector, etc).

- **Community Opening:** during opening, the control panel does not obey the operation device commands (configurable in the advanced options menu, see "Advanced Functions Programming (D1= "R")" on page 57).

Standby: the gate remains open during the programmed time.

- If the control device or the photocells are operated during standby, standby time restarts (configurable in the advanced options menu, see "Advanced Functions Programming (D1= "R")" on page 57).

Close: the closing operation starts automatically once standby time is finished.

- If, during closing, the operation device is activated, the gate inverts operation direction and opens completely.

Semi-automatic mode (F 102)

Opening: this begins by activating the operation device (emitter, magnetic key, key selector, etc).

- **Step-by-step opening:** if the control device is operated during opening, the gate halts (programmable in the advanced options menu, see "Advanced Functions Programming (D1= "R")" on page 57).

• The display shows pause situation **PR**.

The gate closes when the operation device is activated again.

Standby: the gate remains open indefinitely until the control device is operated.

Close: the closing process starts up by using the operation device.

- If, during closing, the operation device is activated, the actuator inverts the movement and the gate opens.

5 BEHAVIOUR IN THE FACE OF AN OBSTACLE

The gate can detect an obstacle in two ways:

A- Detection by photocell or safety strip

Opening safety device (SG.A)

During opening: if, during opening, the opening safety device (SG.A) is activated, the gate inverts operation direction and slightly closes. The gate remains on standby until an operation command is received and the display shows **PRC4**.

During closing: if, during closing, the opening safety device (SG.A) is activated, the gate continues to close.

Closing safety device (SG.C)

During opening: if, during opening, the closing safety device (SG.C) is activated, the gate continues to open.

During closing: if, during closing, the closing safety device (SG.C) is activated, the gate inverts operation direction and opens completely. The display shows **OPC5**.

B- Direct detection (built-in safety)

During opening

If, during opening, the gate collides with an obstacle, it inverts operation direction and slightly closes. The gate remains on standby until an operation command is received and the display shows **PRF1** or **PRE1**. The gate closes when the operation device is used.

During closing

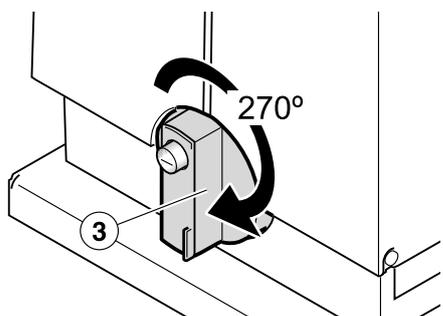
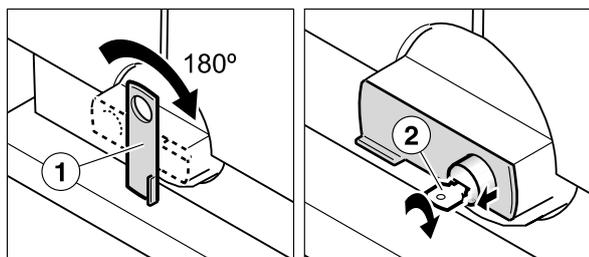
If, during closing, the gate collides with an obstacle, it inverts operation direction and opens completely. The display shows **OPF1** or **OPE1**.

6 MANUAL OPERATION

In the event of need, the gate may be operated manually:

Unlocking for manual operation

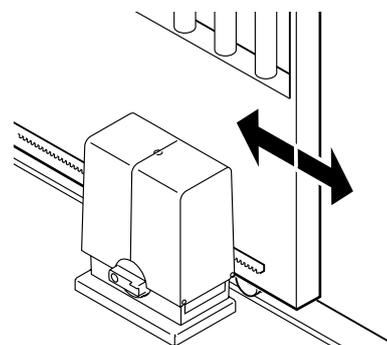
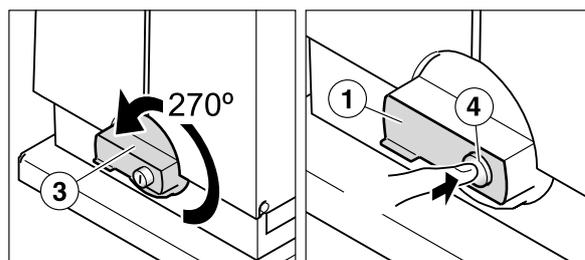
- 1 Turn the cover (1) 180° to reveal the cylinder.
- 2 Introduce the key (2) and turn 90° clockwise.
 - ☞ The cylinder will protrude a few millimetres.
- 3 Turn the key 90° anti-clockwise and remove.
- 4 Turn the handle (3) clockwise 270° until it reaches the stopper.
 - ☞ The gate can now be operated manually.
 - 📱 The display will show **STOP**.



D17A

Motorised operation locking

- 1 Turn the handle (3) anti-clockwise 270° until it reaches the stopper.
- 2 Push the cylinder (4) inwards and turn the cover (1) to cover it.
- 3 Move the gate manually until interlocked in the actuator.
- 4 Activate an operation device: the gate will carry out a reset (the display shows **r5**) and remains ready for motorised operation.



D17B

7 DECLARATION OF CONFORMITY

Erreka Automatismos declares that the LINCE actuator has been designed for use in a machine or for assembly along with other elements in order to form a machine in line with Directive 89/392 EEC and successive modifications.

The LINCE actuator allows us to carry out installations in line with the standards EN 13241-1 and EN 12453.

The LINCE actuator complies with safety legislation in line with the following directives and standards:

- 73/23 EEC and successive modification 93/68 EEC
- 89/366 EEC and successive modifications 92/31 EEC and 93/68 EEC
- UNE-EN 60335-1

1 UNPACKING

- 1 Open the package and remove the contents from within.
 - ♻️ Discard the packaging in an environmentally friendly manner, using recycling containers.
 - ⚠️ **Do not leave the packaging within the reach of children or handicapped people, as it may cause injury.**
- 2 Check the content of the package (see figure below).
 - 🔍 Should it be noticed that a piece is missing or deteriorated, contact the nearest technical service.

2 CONTENT

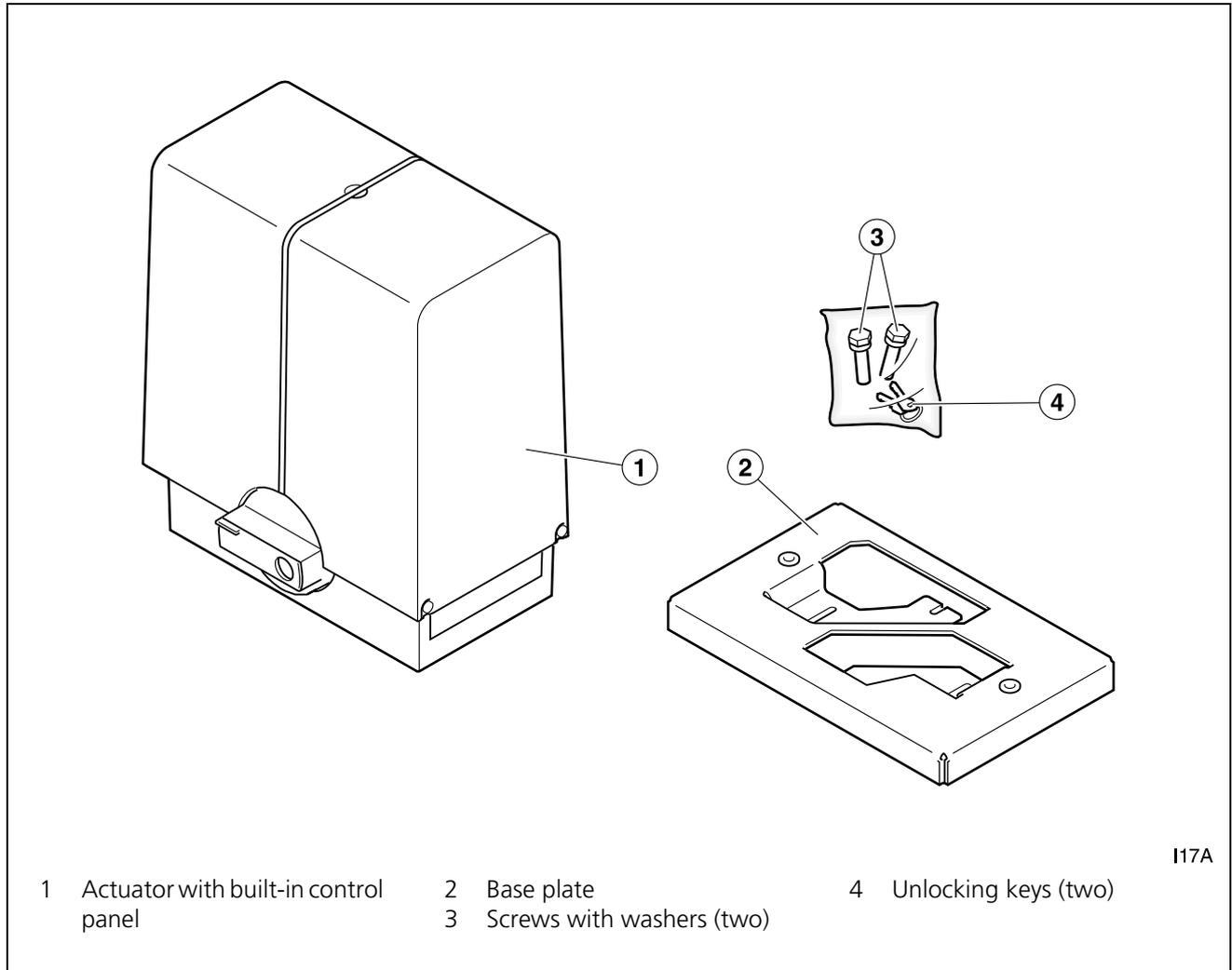
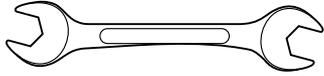


Fig. 2 Content

1 TOOLS AND MATERIALS



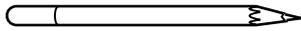
Set of screwdrivers



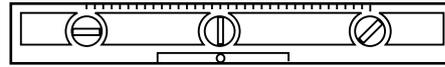
Spanner 17mm



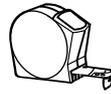
Allen key 4mm



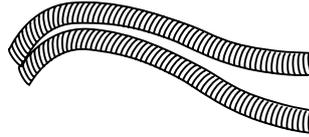
Marker pencil



Level



Tape measure



Underground electrical cable ducts

2 INITIAL CONDITIONS AND CHECKS

Initial conditions of the gate

▲ Check that the size of the gate is within the admissible range of the actuator (see the technical characteristics of the actuator).

▲ If the gate to be automated has a passage gate, use a safety device to prevent the actuator from operating with the passage gate open.

☞ The gate must have a closing stopper and an opening stopper.

☞ The gate must be easy to manipulate manually, namely:

- It must be balanced, in order to ensure the effort made by the motor is minimum.
- There should be no stiffness throughout its travel.

▲ Do not install the actuator in a gate which does not work correctly in manual operation, as this may lead to accidents. Repair the gate before installing.

Environmental conditions

▲ This device is not suitable for installation in inflammable or explosive environments.

▲ Check that the admissible environmental temperature range for the actuator is suitable for the location.

Electrical power supply installation

▲ Ensure the power supply installation fulfils the following requirements:

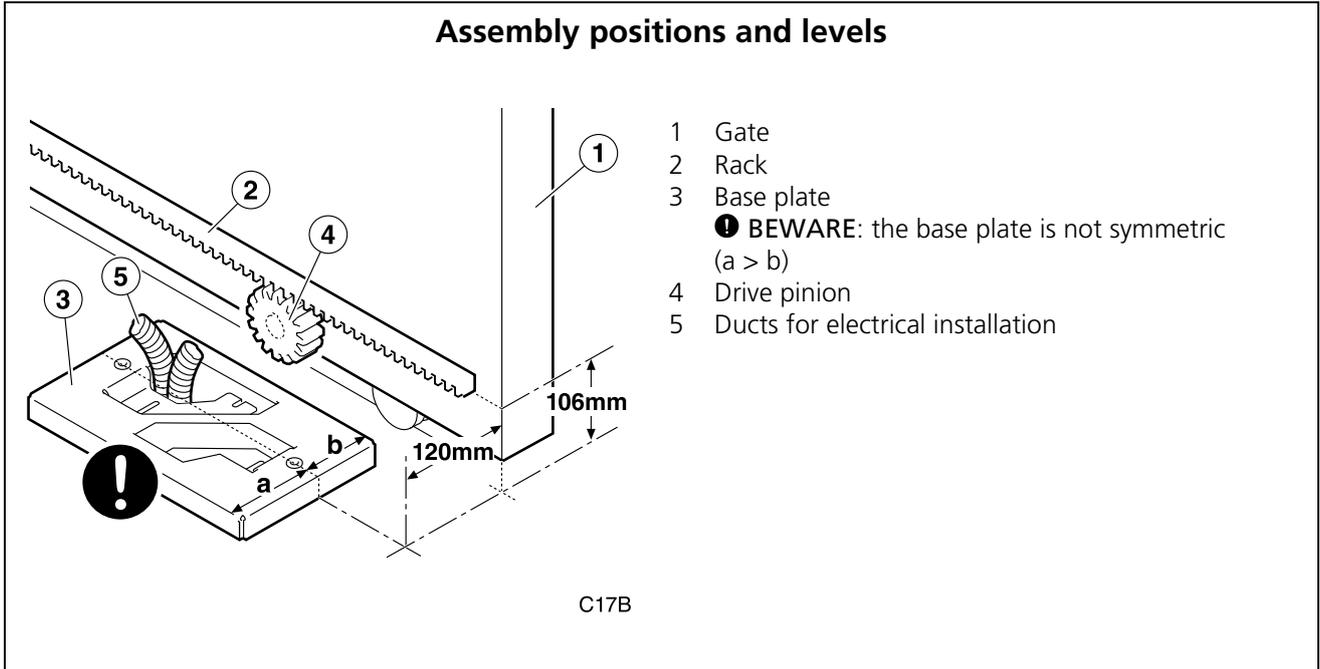
- The nominal voltage of the installation must coincide with that of the control panel.
- The installation must be able to support the power consumed by all the automatic operation devices.
- The installation must be earthed.

- The electrical installation must comply with low voltage regulations.
- The installation elements must be properly secured and in a good state of conservation.

▲ If the electrical installation does not comply with the foregoing requirements, repair before installing the automatic operation device.

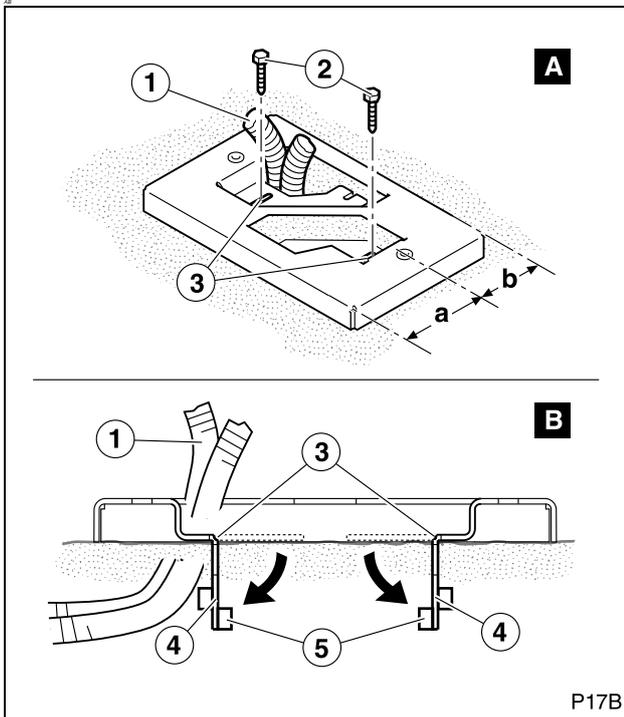


3 ACTUATOR INSTALLATION



⚠ Procedure

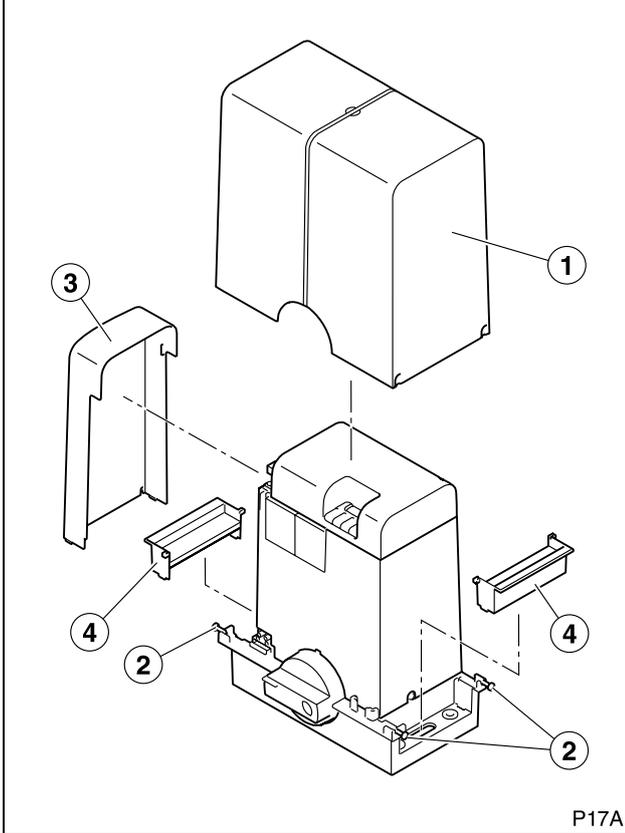
Secure the base plate to the floor



- 1 Position the ducts (1) for electrical installation.
- 2 Secure the base plate to the floor, taking into account the assembly levels.
 - ⚠ **BEWARE:** the base plate is not symmetric (a > b)
 - ➡ In order to secure the plate to the floor, use one of the two methods described below:
 - A- Using screws or lag screws**
 - Introduce the screws or lag screws (2) through the grooves (3) of the plate.
 - B- Using the tabs**
 - Fold the tabs (4) of the plate at the height of the groove (3).
 - Fold the base (5) of the tab (fold each part in one direction in order to ensure attachment to the base plate).
 - Introduce the tabs on the base plate, which is still wet, until the edge of the base plate is supported on the floor.

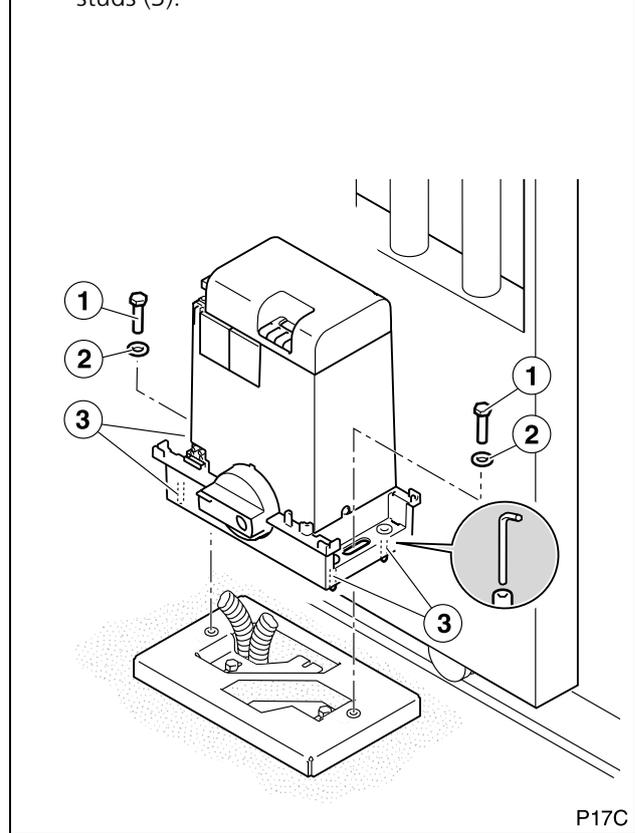
Remove the motor covers

- 1 Loosen the screws (2) without releasing them and lift off the upper cover (1).
- 2 Remove the terminal cover (3).
- 3 Lift off the screw covers (4).

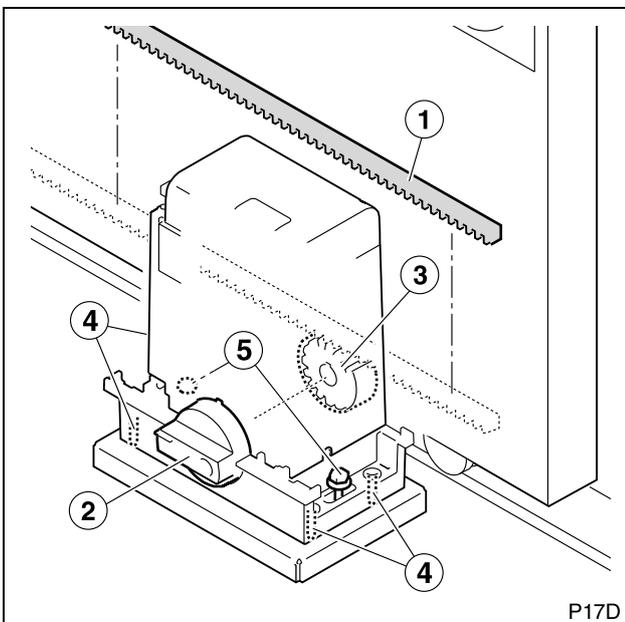


Position the actuator

- 1 Position the actuator on the base plate and secure it with the supplied screws (1) and washers (2).
 - ⚠ Do not tighten the screws.
- 2 Level the actuator using the four threaded studs (3).



Position the rack and secure the actuator



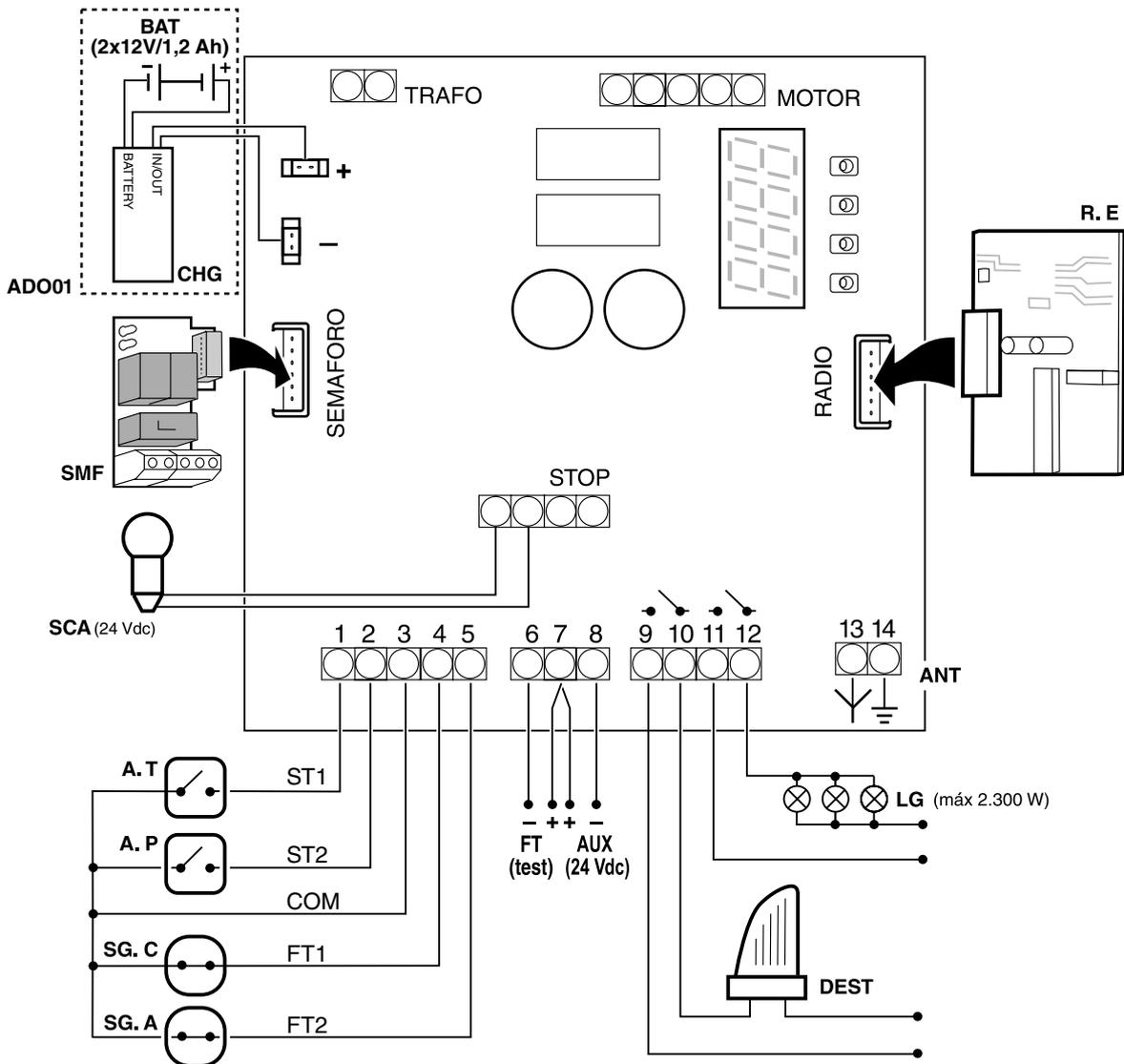
- 1 Position the rack (1) on the gate and secure it provisionally.
 - ⚠ Check the rack instructions.
- 2 Unlock the actuator using the handle (2).
- 3 Manually move the gate throughout the travel to check that the pinion (3) moves correctly on the rack.
- ⚠ There should be a slight gap (approximately 1-2 mm) between the teeth of the pinion and the rack.
- 4 Definitively secure the rack. If necessary, adjust the height of the actuator with the threaded studs (4).
- 5 Secure the actuator by turning the screws (5).

4 ELECTRICAL CONNECTIONS

- ⚠ Complete the installation in line with low voltage regulations and applicable rules.
- ⚠ Use cables with sufficient section, and always earthed.
- ⚠ Check the manufacturer's instructions for all the elements installed.

! General connections

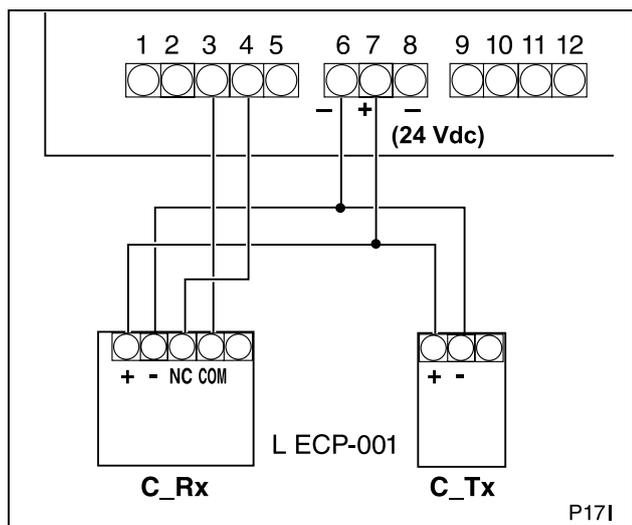
! When installing batteries, ensure they are connected through an external charger (CHG). Do not connect them directly to the control board.
 The ADO01 kit is recommended, consisting of a charger and two 12V / 1.2Ah batteries, as it has been designed for use in this operator.



P70F

| | |
|---|---|
| ADO01 Charger kit (CHG) + batteries (2x 12V / 1.2Ah) | FT Output 24Vdc for photocells (terminals 6 and 7) |
| BAT Batteries | AUX Output 24Vdc (terminals 7 and 8) |
| SMF Signal light card AEPS1-001 | DEST Flashing light (max. 60W) LIS424 - LIS624: 230Vac; LIS424M - LIS624M: 125Vac |
| SCA SCA light (24Vdc) | LG Garage light (max. 2,300W resistive) LIS424 - LIS624: 230Vac; LIS424M - LIS624M: 125Vac |
| A.T Total opening operation device | ANT Antenna connection |
| A.P Pedestrian opening operation device | R.E Plug-in receiver |
| SG.C Closing safety device (mechanical strip or photocell) | |
| SG.A Opening safety device (mechanical strip or photocell) | |

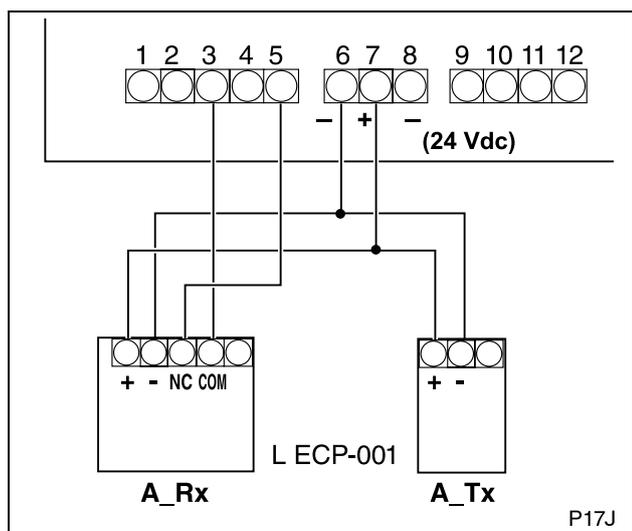
Connection of safety emitter-receiver photocells in closing (SG.C)



▲ We recommend installing opening and closing safety photocells.

- 1 Complete the connections as shown in the figure.
 - 2 Duly programme the actuator:
 - ☞ Closing photocells with testing: [5 1 1
 - ☞ Closing photocells without testing: [5 1 0
 - ☞ Without closing photocells: [5 0 0
- i** For further details on programming, see “Start up and programming” on page 54.

Connection of safety emitter-receiver photocells in opening (SG.A)

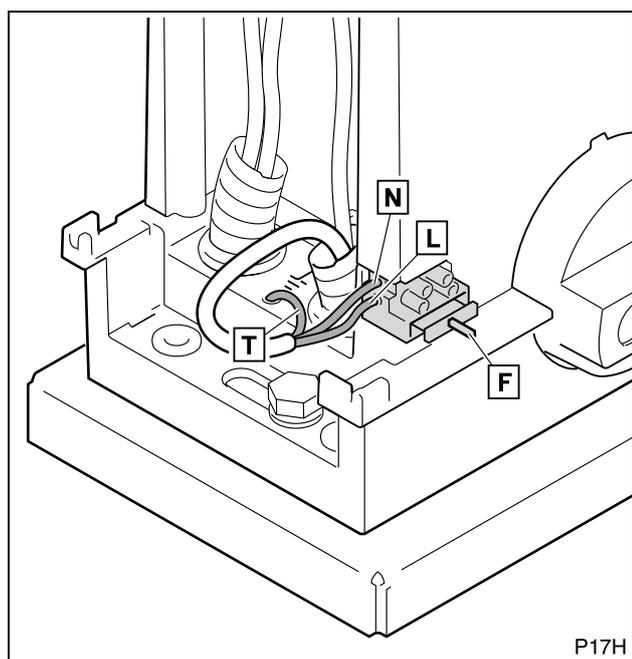


▲ We recommend installing opening and closing safety photocells.

- 1 Complete the connections as shown in the figure.
 - 2 Duly programme the actuator:
 - ☞ Opening photocells with testing: [4 1 1
 - ☞ Opening photocells without testing: [4 1 0
 - ☞ Without opening photocells: [4 0 0
- i** For further details on programming, see “Start up and programming” on page 54.



Connection to the grid



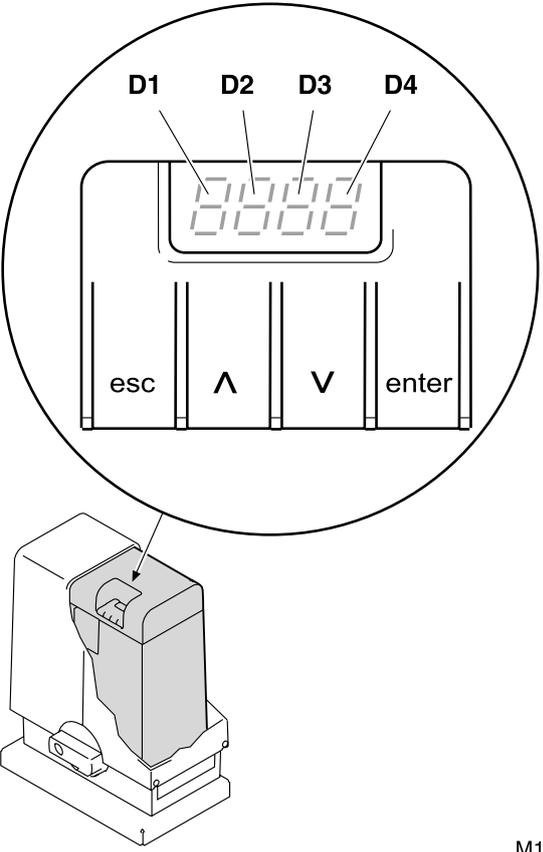
- 1 Connect the line cable (L) to the connection strip lower terminal and the neutral cable (N) to the upper terminal.
 - 2 Connect the earth cable (T) to the actuator frame.
 - 3 Ensure the general cut-out (F) is correctly in place.
 - ☞ Cut-out (LIS424 - LIS624): FUS 5x20, 2.5A
 - ☞ Cut-out (LIS424M - LIS624M): FUS 5x20, 4A
- ▲ Never forget to connect the earth cable, in order to prevent the risk of electrical discharge.**

1 CONNECTION TO THE GRID

- 1 Plug the actuator into the electricity supply.
 - 2 Press the ENTER button: the display should light up.
- ☞ Reset (r5): after connecting the electricity power supply and activating any of the operation devices, the gate closes to the stopper, with the stopper being assigned the position "gate closed".

⚠ **During programming, ensure there is no person or object in the radius of action of the gate and the operation mechanisms.**

2 DISPLAY



M17C

D1: Display Menu
D2: Display Parameters
D3 - D4: Display parameter value

📄 The display goes off following a long period without pressing any key on the control panel. Press the ENTER key to reactivate.

Indications during operation:

D1 and D2:

| | |
|----------------|-----------------------------------|
| CL (static) | Gate closed |
| CL (flashing) | Gate closed |
| OP (static) | Gate open |
| OP (flashing) | Gate opening |
| PC (flashing) | Pedestrian gate closing |
| PO (static) | Pedestrian gate open |
| PO (flashing) | Pedestrian gate opening |
| XX (countdown) | Gate on standby |
| STOP | Actuator unlocked |
| PR (static) | Pause (operation not complete) |
| r5 (static) | Gate searching for close position |

D3 and D4:

| | |
|-------|---------------------------------|
| CY | Opening safety device activated |
| CS | Closing safety device activated |
| E I | Encoder motor halted |
| F I | Force limit exceeded |
| bR | Battery working |
| Ft no | Photocells defective (testing) |

Indications during programming

D1 (Menus): Shows the selected menu. The following menus are available:

- C Menu Prior Conditions
- P Menu Recording
- F Menu Main Functions
- R Menu Advanced Functions
- n Operation Counter

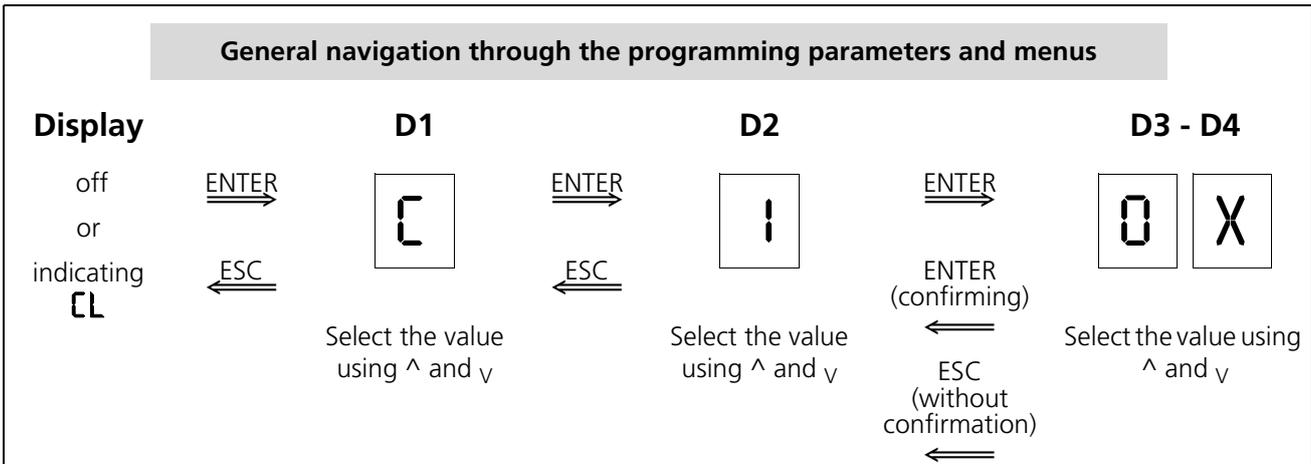
D2 (Parameters):

Shows each parameter of the selected D1 menu.

D3 - D4 (Parameter Values):

Shows the value or option of the selected D2 parameter.

3 PROGRAMMING SEQUENCE

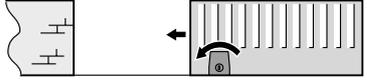
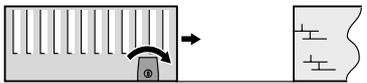


- ✎ Before entering the programming menus, it is necessary to close the gate or disconnect the device and then reconnect.
- ✎ Press the ENTER button to access the programming menus. The display shows " [| 0 | 0 | 0 | " [| 0 | 2 | .
- ✎ Use the keys ^ and v to select the required values, and confirm by pressing ENTER.
- ✎ Use ESC to go back to the previous display.
- ✎ To leave the programming menu, press ESC several times until the display goes off or shows CL.

- 1 Programme the prior conditions (see "Prior Conditions Programming (D1= "[")" on page 55).
- 2 Record the pedestrian and total opening radio codes, along with the gate travel (see "Radio Code Recording (only with RSD) and Gate Travel (D1= "P")" on page 56).
- 3 Programme the operation mode, automatic standby time and pedestrian opening (see "Main Functions Programming (D1= "F")" on page 56).
- 4 Programme the advanced functions (see "Advanced Functions Programming (D1= "R")" on page 57).

Prior Conditions Programming (D1= "[")

- 1 Press ENTER to access the programming menus. The display lights up and D1 flashes.
- 2 Press the buttons ^ and v until D1 shows the letter [flashing. Press ENTER to confirm. D2 flashes.
- 3 Press the buttons ^ and v until the required D2 parameter appears. Press ENTER to confirm. D3 and D4 flash.
- 4 Press the buttons ^ and v until the required D3 and D4 value appears (see chart). Press ENTER to confirm.
- 5 Press ESC to return to the previous display.

| D1 | D2 | Parameter | D3 | D4 | Option predetermined | Options |
|----|----|--|----|----|----------------------|---|
| [| | Motor rotation direction | 0 | | x |  |
| | | | 0 | 2 | |  |
| 4 | | Opening safety device (photocell or strip) | 0 | 0 | x | Device not installed |
| | | | | 0 | | Device without testing |
| | | | | | | Device with testing |
| 5 | | Closing safety device (photocell or strip) | 0 | 0 | x | Device not installed |
| | | | | 0 | | Device without testing |
| | | | | | | Device with testing |



Radio Code Recording (only with RSD) and Gate Travel (D1= "P")

❶ Before recording the gate travel, ensure the rotation direction of the actuator is correct (see "Prior Conditions Programming (D1= "E")" on page 55).

🔌 The recording of the radio code described below is only valid if the plug-in receiver RSD is installed. If another receiver is used, record the radio code as described in the corresponding instructions.

- 1 Press ENTER to access the programming menus. The display lights up and D1 flashes.
- 2 Press the buttons ^ and v until D1 shows the letter P flashing. Press ENTER to confirm. D2 flashes.

| D1 | D2 | D3 | D4 | |
|----|----|----|----|---|
| P | 1 | 0 | n | Total opening radio code recording |
| | 2 | 0 | n | Pedestrian opening radio code recording |
| | 3 | 0 | n | Gate travel recording |

3 Press the buttons ^ and v until the required D2 parameter appears (see chart). Press ENTER to confirm. D3 and D4 flash.

4.a Radio code recording (D2=1 or D2=2):

- Press the emitter button. If the code is correctly recorded, D3-D4 stop flashing (remain static).

4.b Gate travel recording (D2=3):

- Press ENTER. D3-D4 stop flashing (remain static)
- Press the total opening button. D3-D4 flash again whilst the recording of the operations is made automatically. The gate carries out the following movements:
 - Reset (close position search)
 - Total opening
 - Total close
- When recording is finished, D3-D4 stop flashing (remaining static).

5 Press ESC to return to the previous display.

Main Functions Programming (D1= "F")

- 1 Press ENTER to access the programming menus. The display lights up and D1 flashes.
- 2 Press the buttons ^ and v until D1 shows the letter F flashing. Press ENTER to confirm. D2 flashes.
- 3 Press the buttons ^ and v until the required D2 parameter appears. Press ENTER to confirm. D3 and D4 flash.

4 Press the buttons ^ and v until the required D3 and D4 value appears (see chart). Press ENTER to confirm.

5 Press ESC to return to the previous display.

📘 For operation different to the options defined in this menu, access the advanced functions menu (see "Advanced Functions Programming (D1= "R")" on page 57).



| D1 | D2 | Parameter | D3 | D4 | Pre-determined option | Options or values |
|----|----|-----------------------------|-------|-------|-----------------------|---------------------------------------|
| F | 1 | Operation mode ^a | 0 | 1 | | Automatic |
| | | | 0 | 2 | x | Semi-automatic |
| | 2 | Standby in automatic mode | 1 | 5 | x | 15 seconds |
| | | | 0...5 | 0...9 | | 59 = 59 sec; 2.5 = 2 min. 50 sec, etc |
| | | | 0 | 0 | x | Pedestrian opening is not carried out |
| | 3 | Pedestrian opening | 1 | 0 | | 10% of total opening |
| | | | 2 | 0 | | 20% of total opening |
| | | | 3 | 0 | | 30% of total opening |
| | | | 4 | 0 | | 40% of total opening |
| | | | 5 | 0 | | 50% of total opening |

a. For further details, see "Operation modes" on page 46.

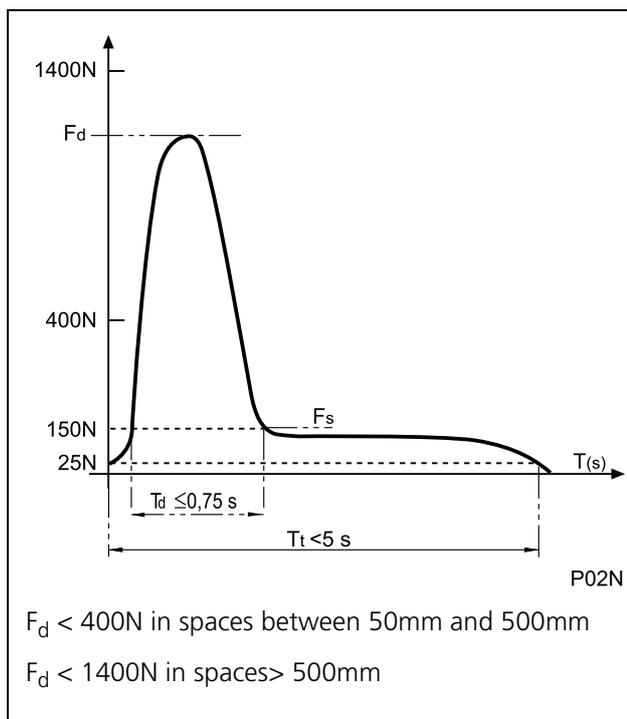
Advanced Functions Programming (D1= "R")

- 1 Press ENTER to access the programming menus. The display lights up and D1 flashes.
- 2 Press the buttons ^ and v until D1 shows the letter R flashing. Press ENTER to confirm. D2 flashes.
- 3 Press the buttons ^ and v until the required D2 parameter appears. Press ENTER to confirm. D3 and D4 flash.
- 4 Press the buttons ^ and v until the required D3 and D4 value appears (see chart). Press ENTER to confirm.
- 5 Press ESC to return to the previous display.

| D1 | D2 | Parameter | D3 | D4 | Pre-determined option | Options or values |
|----|----|---|--------|-------|-----------------------|---|
| R | 0 | Flashing light | 0 | 1 | x | No warning |
| | | | 0 | 2 | | With warning |
| | 1 | Garage light time | 0 | 3 | x | 3 sec. |
| | | | 0...5 | 0...9 | | 59 = 59 sec; 2.5 = 2 min. 50 sec, etc |
| | 2 | Gate speed | 0 | 1...5 | 05 | 0 1: minimum speed; 05: maximum speed |
| | 3 | Soft stop speed | 0 | 1...5 | 03 | 0 1: minimum speed; 05: maximum speed |
| | 4 | Soft stop function | 0 | 0...5 | 0 1 | 00: minimum distance; 05: maximum distance |
| | 5 | Recede after closing (allows offsetting of gate expansion) | 0 | 0...9 | 0 1 | 00: no recede; 09: maximum recede |
| | 6 | Maximum force | 0 | 8 | x | |
| | | | 0... 1 | 0...9 | | 0 1: minimum force; 10: maximum force |
| | 7 | Closing photocell used during standby (in automatic mode only) | 0 | 1 | | Immediate close |
| | | | 0 | 2 | x | Restart standby time |
| | | | 0 | 3 | | Has no effect |
| | 8 | Pushbutton operation during standby (in automatic mode only) | 0 | 1 | | Immediate close |
| | | | 0 | 2 | x | Restart standby time |
| | | | 0 | 3 | | Has no effect |
| | 9 | Opening mode | 0 | 1 | x | Opening in accordance with the mode selected in the main functions (F) |
| | | | 0 | 2 | | Community opening (the control panel does not obey the commands during opening) |
| | | | 0 | 3 | | Step-by-step opening (the gate halts if an operation device is activated during opening. The gate closes when operated again) |



4 CHECKING THE IMPACT FORCE



1 Measure the impact force and compare it to the values indicated in Standard EN12453:2000. If the values measured are higher than those in the Standard, reduce the maximum force, the speed of the gate, the soft stop speed, or increase the soft stop distance.

- Gate speed: R20X
- Soft stop speed: R30X
- Soft stop function: R40X
- Maximum force: R6XX

▲ The control panel must be programmed in a manner which respects the values indicated in standard EN 12453:2000, as shown in the attached chart. The measurements must be made in line with the method described in standard EN 12445:2000.

- The standard indicates that at distances of between 50mm and 500mm, the dynamic force must be less than 400N. At distances of over 500mm, the dynamic force must be less than 1400N.

5 FINAL CHECKS

Following installation and programming, start up the actuator and check the devices installed.

1 Check the correct operation of the control devices (button and wall key, remote control).

■ See "Operation modes" on page 46.

2 Check the correct operation of the safety devices (photocells or mechanical strips).

■ See "A- Detection by photocell or safety strip" on page 46.

3 Place an obstacle and make the gate collide with it in order to check operation in the event of collision.

■ See "B- Direct detection (built-in safety)" on page 46.

▲ If the system does not work correctly, find out why and put it right (see section "Failure diagnosis" on page 60).

User instruction

1 Instruct the user with regards to the use and maintenance of the installation and provide him/her with the instructions on use.

2 Signal the gate, showing that it opens automatically and indicating how to operate it manually. Where appropriate, indicate that operation is using the remote control.

1 MAINTENANCE

▲ Before carrying out any maintenance operation, disconnect the device from the power supply.

- 1 Frequently check the installation in order to discover any imbalance or sign of deterioration or wear. Do not use the actuator if any repair or adjustment is necessary.
- 2 Clean and lubricate the articulations and tracks of the gate, so as not to increase the effort of the actuator.
- 3 Check that the operation devices, safety strips and photocells, as well as their installation, have not suffered any damage from the weather or external agents.
- 4 Check unlocking can be carried out easily.
- 5 Check the operations made in the display (see "Operations Counter" below).

2 OPERATIONS COUNTER

- 1 Press ENTER to access the main programming menu. The display lights up and D1 flashes.
- 2 Press the buttons ^ and v until D1 shows the letter n.
 ☞ D3 and D4 show the number of operations carried out (hundreds of operations).
- 3 Press ESC to return.

| D1 | D2 | Parameter | D3 | D4 | Pre-determined option | Options or values |
|----|----|------------------------|----|----|-----------------------|---|
| n | i | Operations carried out | X | X | | Indicates the hundreds of cycles completed (for example, 68 indicates 6,800 cycles completed) |



3 FAILURE DIAGNOSIS

| Problem | Cause | Solution |
|--|---|--|
| The actuator does not make any movement when the operation devices are activated | Absence of system power supply voltage | Re-establish the power supply |
| | Electrical installation defective | Check that the installation does not present any short-circuits or cut-off points |
| | The handle for manual operation is in unlock position (the display shows STOP) | Place the handle in locking position for motorised operation |
| | The emitter radio code is not recorded in the actuator | Correctly record the radio code |
| | The emitter batteries are flat | Replace the batteries |
| The gate does not open (the display shows E4 or FERRA) | The closing safety device (photocell or strip) or its cabling are open or defective | Check the cabling and device (photocell or safety strip) |
| The gate does not close (the display shows E5 or FERRA) | The opening safety device (photocell or strip) or its cabling are open or defective | Check the cabling and device (photocell or safety strip) |
| | The resistance of the gate has increased when closing (or when opening) | Check the moving parts of the gate and remove the resistance |
| | The force of the actuator during closing (or opening) is too low | Using programming, increase the opening or closing force |
| | The contact between pinion and the rack is not correct | Check the contact between the pinion and the rack and adjust the actuator if necessary |
| The gate cannot completely close (or open) | The gate travel recording has not been carried out correctly | Correctly record the travel |

4 SCRAP

⚠ The actuator, up until the end of its useful life, must be dismantled at its location by an installer who is as well qualified as the person who completed the assembly, observing the same precautions and safety measures. In this manner we will avoid possible accidents and damage to adjacent facilities.

♻ The actuator must be deposited in the appropriate containers for subsequent recycling, separating and classifying the different materials in line with their nature. NEVER deposit it in domestic rubbish or in landfills which are not suitably controlled, as this will cause environmental contamination.

