# ULTRA

WARNING	This quick guide is a summary of the complete installation guide. The guide contains safety warnings and other explanations that must be taken into account. The most recent versions of this guide and the installation manual are available in the "Downloads" section on Erreka's website. http://www.erreka.com.
	The options and functions described in this guide apply for the firmware version indicated on the circuit. The firmware, as part of a process of continuous improvement, is subject to new functionalities or upgrades being included as a result of new versions which are not necessarily compatible with previous ones. For this reason, some options or functions may differ or be unavailable if your firmware is older than shown in this guide.

Elements of the complete installation
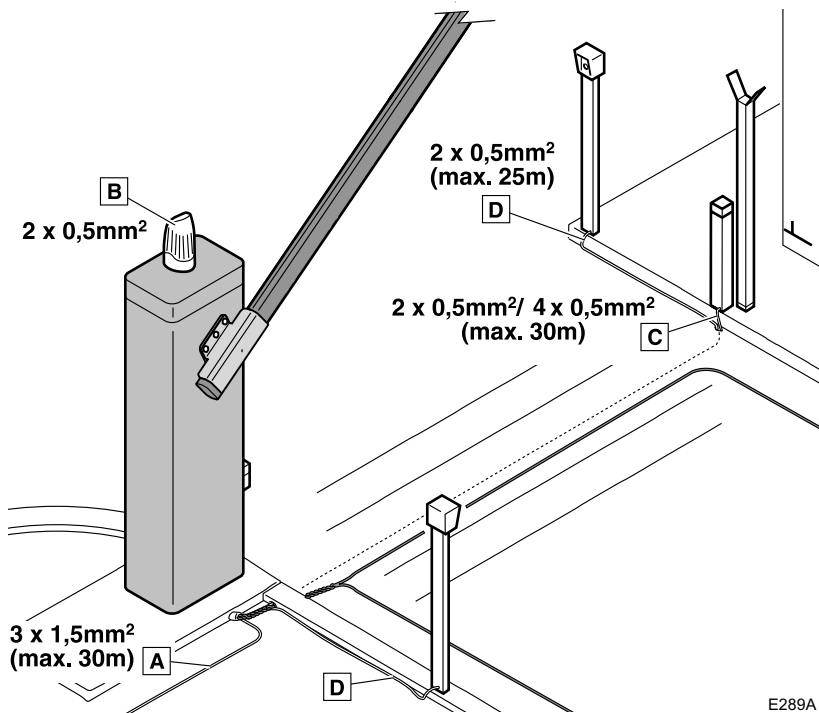
☞ **The drawing shows a right side barrier (ULS6ECD, ULS45ECD).**

2 x 0,5mm² **B**

2 x 0,5mm²
(max. 25m) **D**

2 x 0,5mm²/ 4 x 0,5mm²
(max. 30m) **C**

3 x 1,5mm²
(max. 30m) **A**

D

E289A

Electrical cables

A: Main power supply
3x1.5mm² (max. 30m)

B: Flashing light
2x0.5mm²

C: Photocells (Tx / Rx)
2x0.5mm² / 4x0.5mm² (max. 30m)

D: Key switch
2x0.5mm² (max. 25m)

Unlocking

⚠ **Unlocking should be carried out with caution. The internal spring may cause jolting if the barrier is not balanced or the arm is not mounted.**
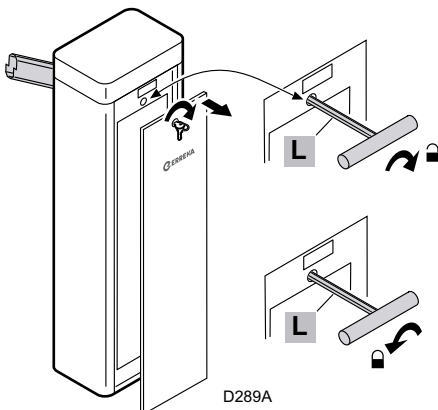
**Unlocking
(manual drive)**

Turn the key (L) clockwise until it is released.
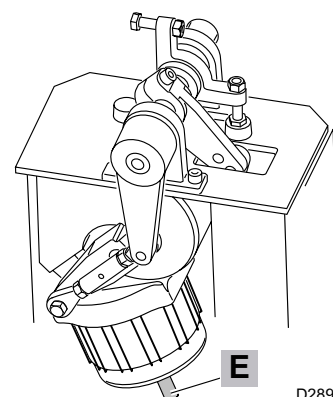
**Locking
(motorised drive)**

Turn the key (L) anti-clockwise until locked.

D289A

**ONLY UNLOCK THE BARRIER IF THE ARM IS INSTALLED.**

Locking in opening position

☞ The bar (arm) can be moved and left locked in opening or closing position.

• To do this, turn the bottom shaft (E) of the geared motor so the arm is locked in opening position.

E

D289E

Choosing the spring and anchoring hole

The balancing spring and the hole it is anchored in depend on the length of the barrier arm, the type of arm and the accessories placed on the arm (in short, the weight of the arm).

P289L
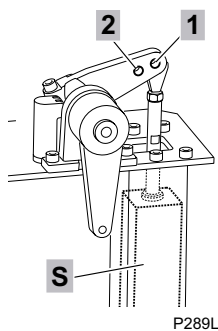
The barriers are supplied with one spring mounted in the box (S) and one spring removed:

- Spring removed: Ø5.5mm, blue
- Spring mounted:
  ULS45EC: Ø6.5mm (yellow), mounted in hole 2
  ULS6EC: Ø6.5mm (yellow) x2, mounted in hole 2

The table below shows the spring to be used and the anchoring hole, as appropriate. Using other accessories may influence the choice of spring and orifice.

☞ **If the spring or anchoring hole must be changed, do this before installing the barrier and arm.**

ULS45EC barrier with AUL13 arm (3m, 100x45mm), 10A001 flange

Springs / Hole	bar only	bar + LED	bar + leg	bar + LED + leg
1x Ø6.5 / 1	x	x	x	x
1x Ø6.5 / 2	x	x	3 m	2.8 - 3 m
1x Ø5.5 / 2	3 m	2.6 - 3 m	2.5 - 3 m	2.5 - 2.8 m

ULS45EC barrier with AUL02 arm (4.5m, 100x45mm), 10A001 flange

Springs / Hole	bar only	bar + LED	bar + leg	bar + LED + leg
1x Ø6.5 / 1	x	4.1 - 4.5 m	4 - 4.5 m	3.5 - 4.5 m
1x Ø6.5 / 2	3.8 - 4.5 m	3.4 - 4.1 m	3 - 4 m	2.8 - 3.5 m
1x Ø5.5 / 2	3 - 3.8 m	2.6 - 3.4 m	2.5 - 3 m	2.5 - 2.8 m

ULS45EC barrier with ANT09 arm (4.3m, Ø70), 10A072 flange

Springs / Hole	bar only	bar + LED	bar + leg	bar + LED + leg
1x Ø6.5 / 1	3.9 - 4.3 m	3.7 - 4.3 m	3.3 - 4.3 m	3.2 - 4.3 m
1x Ø6.5 / 2	3.2 - 3.9 m	3 - 3.7 m	2.6 - 3.3 m	2.5 - 3.2 m

ULS6EC barrier with AUL01 arm (6m, 100x45mm), 10A001 flange

| Springs / Hole	bar only	bar + LED	bar + leg	bar + LED + leg
2x Ø6.5 / 1	x	x	x	5.3 - 6 m
2x Ø6.5 / 2	5 - 6 m	4.7 - 6 m	4.5 - 6 m	4.2 - 5.3 m
1x Ø6.5 / 1	4.5 - 5 m	4 - 4.7 m	4 - 4.5 m	4 - 4.2 m
1x Ø6.5 / 2	4 - 4.5 m	x	x	x

ULS6EC barrier with ANT10 arm (3.5+2.8m + Ø70 joint), 10A072 flange

Springs / Hole	bar only	bar + LED	bar + leg	bar + LED + leg
2x Ø6.5 / 1	5.6 - 6.3 m	5.2 - 6.3 m	5 - 6.3 m	4.8 - 6.3 m
2x Ø6.5 / 2	4.5 - 5.6 m	4.2 - 5.2m	4 - 5 m	4 - 4.8 m

☞ **More arms than those shown in this table can be mounted; see the complete manual for more information.**

Changing the anchoring hole

1. Put the barrier arm in upright position.
2. Turn the tensioning handle (M) anti-clockwise until the spring is tensionless.
3. Release the anchoring bolt (1) and mount it in the other hole.
4. Balance the barrier as described below.

P289J
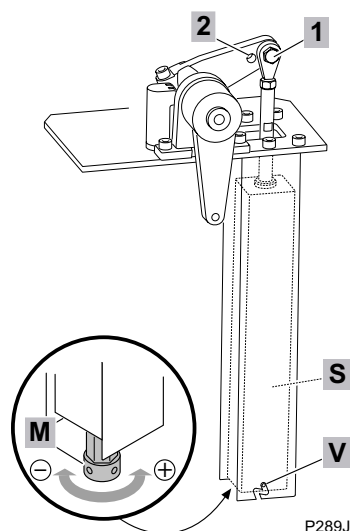
Changing the spring

1. Place the arm in upright position.
2. Turn the tensioning handle (M) anti-clockwise until the spring is tensionless.
3. Release the anchoring bolt (1).
4. Take down the spring box (S), releasing the pivot (V).
5. Completely unscrew the tensioning handle, remove the spring and put the new spring in place. Finally, screw in the tensioning handle.
6. Mount the spring box (S), inserting the pivot (V).
7. Screw the anchoring bolt in the appropriate hole (1) or (2).
8. Balance the barrier as described below.

☞ **If the spring or anchoring hole must be changed, do this before installing the barrier and arm.**

☞ The illustrations and explanations refer to ULS45EC barriers, which have a single balancing spring. The procedure for ULS6EC barriers is similar, bearing in mind that the spring and its adjacent elements are duplicated.

Mounting on the ground
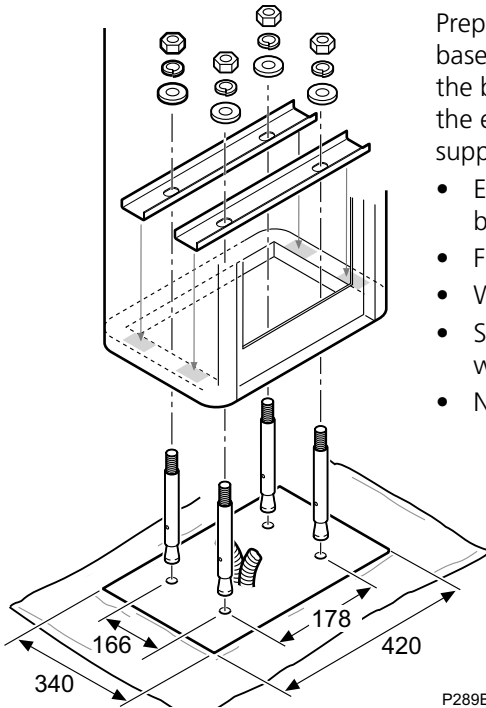
Prepare a firm base and fasten the barrier with the elements supplied:

- Expansion bolts
- Flatbars
- Washers
- Spring washers
- Nuts

166 178 420 340

P289B

Assembling the arm

☞ Choose the barrier in accordance with assembly side and arm length:

    ULS6ECD: right, 100x45mm, 6m;
    ULS45ECD: right, 100x45mm, 4.5m;
    ULS6ECI: left, 100x45mm, 6m;
    ULS45ECI: left, 100x45mm, 4.5m.

- Lock the operator and mount the arm.

P289C
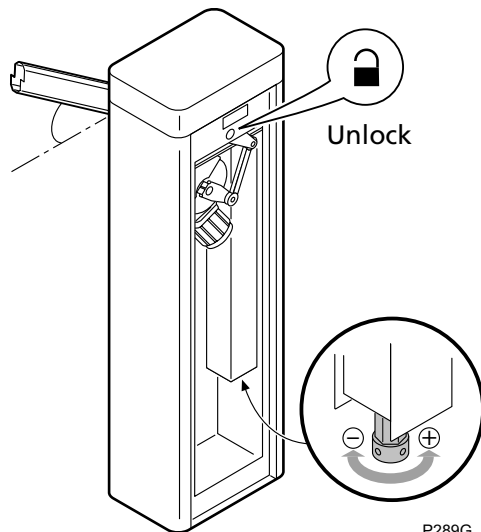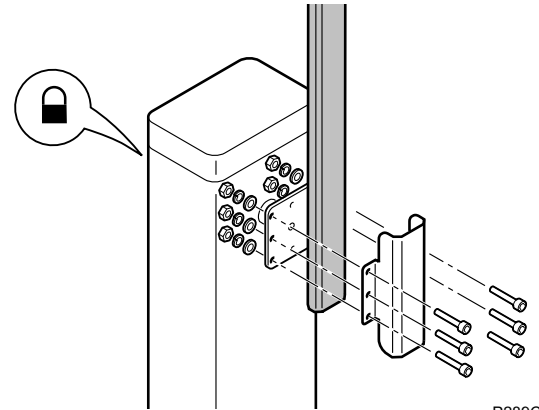
Balancing the barrier

Unlock

P289G

☞ **THE BARRIER MUST BE BALANCED FOR PROPER OPERATION.**

1 Unlock the operator. The bar can be moved smoothly by hand throughout the entire run if the barrier is balanced correctly.

**2** If the barrier is not balanced, turn the tensioning handle until it is.

☞ The tensioning handle is only accessible with the arm in upright position.

☞ **ULS6EC barriers have two springs and two knobs for tensioning**.
Balancing is done by acting equally on the two knobs, to ensure the tensioning of both springs is approximately the same.

3 The anchoring hole or spring must be changed if the barrier cannot be balanced. See the table when choosing the spring and anchoring hole.

Adjusting the stoppers

A B

P289H
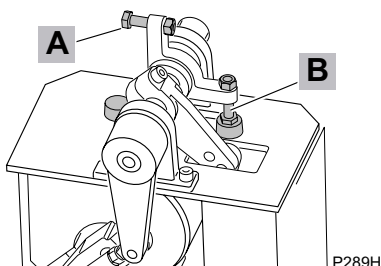
- Unlock the operator and move the barrier by hand to check its position in the stoppers. If it is not correct, adjust the associated stopper, (A) or (B).

- Lock the operator and check operation.

Adjusting the limit switches

LC LA FCA FCC

P289I

Unlock the operator and move the barrier by hand to check the adjustment of the LA and LC cams that drive the FCA and FCC limit switches.
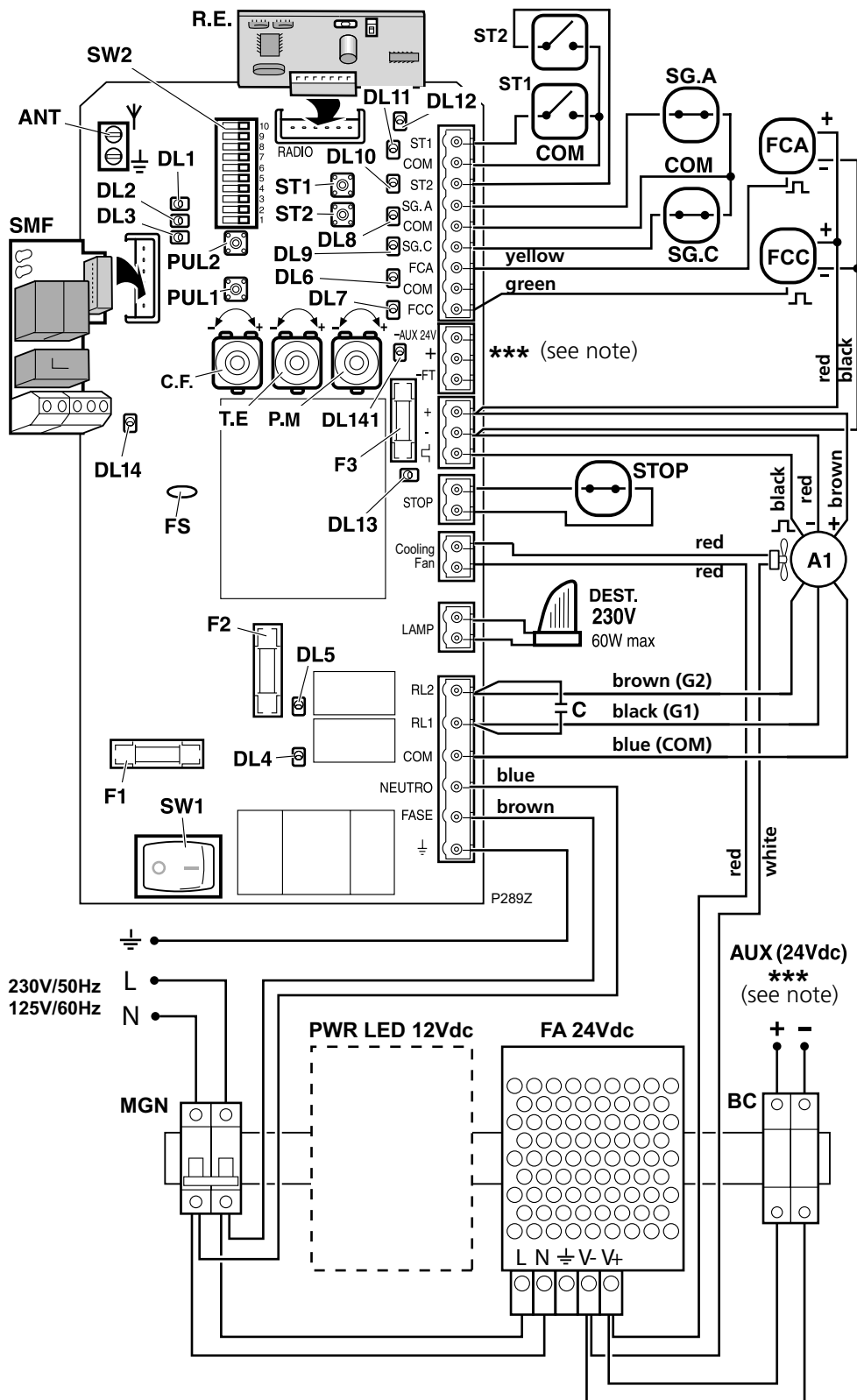
The limit switch has two LEDs to indicate whether it is enabled or not:

- The closing LED (FCC) is red (cam LC)
- The opening LED (FCA) is green (cam LA)

☞ **Ensure the cams are correctly adjusted, so they act before reaching the stoppers.**
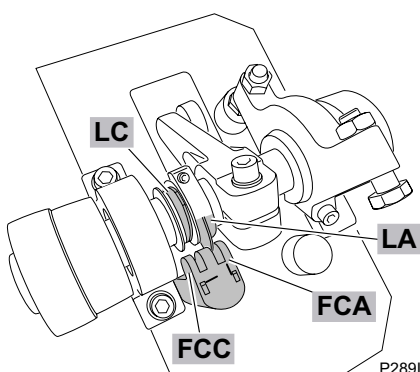
General connections

F1 Motor fuse (5x20):
  230 VAC: 2.5A
  125 VAC: 6.3A
F2 Electronic fuse
  (5x20; 230 VAC: 500mA)
F3 FT and AUX24V outputs fuse
  (5x20; 500mA)
FS Resettable* fuse secondary
  * automatically resets when
  overload ends

DL1 Barrier open
DL2 Radio code programming
  indicator / Receiving radio
  code
DL3 Radio code or operation
  programming
DL4 Opening relay enabled
DL5 Closing relay enabled
DL6 Opening limit switch contacts
  closed
DL7 Closing limit switch contacts
  closed
DL8 Opening safety device
  contacts closed
DL9 Closing safety device contacts
  closed
DL10 Closing device contacts (ST2)
  closed
DL11 Full running device contacts
  (ST1) closed
DL12 Radio key command
DL13 Encoder signal
  [i] Operator working: DL13
  flashes, since the encoder
  sends the signal in the form of
  pulses.
  [i] Operator stopped: DL13 can
  be on or off, indistinctly,
  depending on the position of
  the encoder (high pulse or
  low pulse).
DL14 LED** resettable fuse FS
DL141 LED** fuse F3
  ** DL on: fuse closed; DL off:
  fuse open

R.E.
SW2
ANT
DL1
DL2
DL3
SMF
PUL2
PUL1
C.F.
T.E P.M DL141
DL14
FS
F2
DL5
F1
SW1
DL11 DL12
RADIO
DL10
ST1
ST2
DL8
DL9
DL6
DL7
F3
DL13
ST2
ST1
COM
ST2
COM
SG.A
COM
SG.C
COM
FCA
COM
FCC
yellow
green
AUX 24V
+
FT
+
-
STOP
Cooling Fan
LAMP
RL2
RL1
COM
NEUTRO
FASE
P289Z
ST2
ST1
COM
SG.A
COM
SG.C
FCA
+
-
FCC
+
-
red
black
STOP
black
red
+ brown
A1
red
red
DEST.
230V
60W max
brown (G2)
black (G1)
blue (COM)
C
blue
brown
red
white

230V/50Hz
125V/60Hz
L
N
MGN
PWR LED 12Vdc
FA 24Vdc
L N ⏚ V- V+
AUX (24Vdc)
***
(see note)
+ −
BC

***(see note)

Encoder

For correct operation of the
encoder, ensure DIP7 is in ON.

Photocell testing

Opening photocells (SG.A):
place DIP6 in ON to enable testing.
Closing photocells (SG.C): place
DIP9 in ON to enable testing.

***NOTE**: if you install 24VDC powered accessories (photocells,
etc.), do not connect them to the control panel terminals, but to the
external BC-AUX(24vdc) terminals, located on the DIN rail, which are
powered from the 24Vdc auxiliary power supply (FA 24Vdc).

STOP button enabled (emergency stop): DL1 and DL3 flash
simultaneously every 0.5 seconds.

Opening or closing photocell testing error: DL1 and DL3 flash
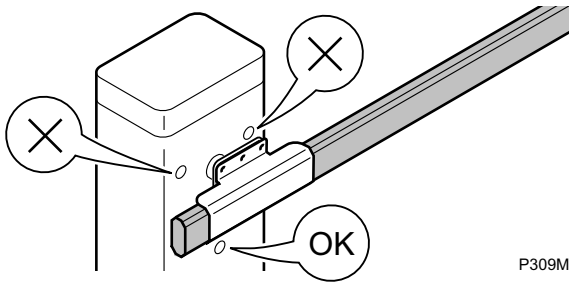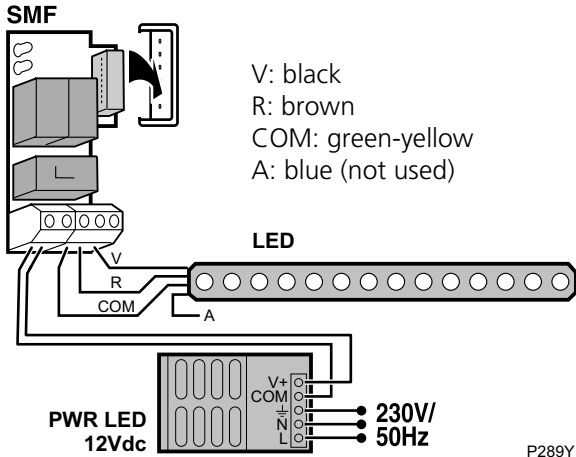simultaneously every 2 seconds.

Installing the LED strip

☞ Use the bottom hole to insert the cable in the barrier when using the arm with the LED strip (AUL11 for 6m barriers, AUL12 for 4.5m barriers, AUL17 for 3m barriers).

P309M

Connecting the LED strip

SMF

V: black
R: brown
COM: green-yellow
A: blue (not used)

LED

PWR LED 12Vdc

V+
COM
N
L

230V/ 50Hz

P289Y

The LED strip is fitted in arms with rubber and LED strip with the following specific codes:
- AUL11: for 6m barriers
- AUL12: for 4.5m barriers
- AUL17: for 3m barriers

The power supply system is available separately (reference AUL10). It consists of:
- a traffic light card (SMF),
- a 12Vdc power supply (PWR LED 12Vdc),
- the required cables and cable glands.

☞ **The LED strip must be powered with 12 Vdc, with the 12 Vdc power supply (PWR LED 12Vdc). Do not power the LED strip with 24Vdc as this will damage it.**
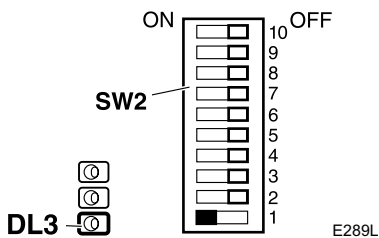
SW2 functions during programming (DIP1=ON)

SW2

ON — OFF

10 9 8 7 6 5 4 3 2 1

DL3

E289L

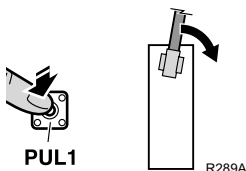**DIP1=ON**: programming enabled (DL3 lights up)

DIP1=ON and DIP4=ON: radio code programming

☞ The barrier run does not need to be programmed, as this is set at factory.

Programming the radio code (with RSD receiver only)

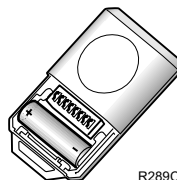☞ If a receiver other than RSD is used, see the relevant instructions.

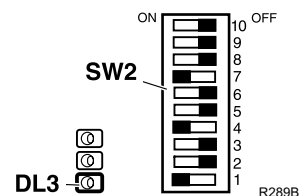**1** Connect the electrical power supply and close the barrier by keeping PUL1 pressed down.
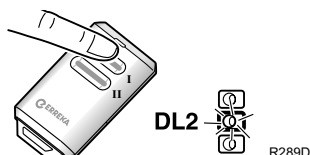
PUL1

R289A

2 Select the code in the transmitter.

R289C

3 Place the DIPs as shown in the figure (DIP1=ON, DIP4=ON). DL3 lights up to show programming mode enabled.
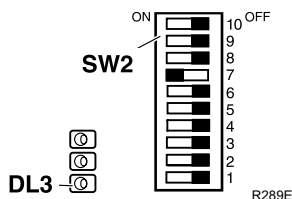
SW2

ON — OFF

10 9 8 7 6 5 4 3 2 1

DL3

R289B

4 Press the required channel button. DL2 flashes when programming is complete.

DL2

R289D

5 Place DIP1 and DIP4 in OFF. DL3 remains off.

SW2
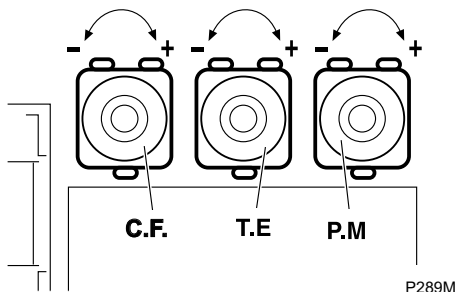
ON — OFF

10 9 8 7 6 5 4 3 2 1

DL3

R289E

6 Disconnect and reconnect the electrical power supply.

Selecting functions and modes using SW2 (DIP1 = OFF)

DIP	Modes and functions	Option	Effect
DIP1		OFF	
DIP2	Operation warning	ON	the flashing light comes on and the operation begins after a 3 second warning
		OFF	the flashing light comes on and the operation begins immediately
DIP3	Key commands using ST1 and ST2	ON	ST1: opening command; ST2: closing command
		OFF	ST1: opening and closing commands; ST2: no function
DIP4	Automatic or step-by-step mode	ON	automatic mode (the barrier closes automatically at the end of standby time, which is adjusted using T.E.)
		OFF	semi-automatic mode (the barrier only closes when receiving the key command)
DIP5	Automatic mode optional (only if DIP4 = ON)	ON	during standby, the barrier obeys the key commands (can be closed before standby time finishes)
		OFF	the barrier cannot be closed until standby time finishes; key commands will cause standby time to restart.
DIP6	Opening photocell testing	OFF	always place in OFF
DIP7	Encoder	ON	encoder enabled
		OFF	encoder disabled
DIP8	Interlock mode (with FT1)	ON	interlock mode enabled: the barrier closes if SG.C is enabled during standby time (in automatic mode)
		OFF	interlocking mode disabled
DIP9	Closing photocell testing	OFF	always place in OFF
DIP10	No function	OFF	always place in OFF

Adjusting the potentiometers

C.F.   T.E   P.M

P289M

T.E.: barrier open standby time

If automatic or optional automatic operation mode has been programmed, regulate T.E. to adjust standby time with the barrier open (before automatic closing begins).

- Minimum value: 0 seconds; maximum value: 90 seconds

P.M.: motor torque

Use P.M. to adjust the maximum motor power value.

⚠ **Torque adjustment, respecting the maximum closing forces set out in Standard EN12453:2000. Make the measurements as described in Standard EN 12445:2000.**

C.F.: fan running time

Regulate the time the operator's cooling fan is working.

- Minimum value: 3 seconds; maximum value: 90 seconds