TORO KM1800 / KM2500

Quick installation and programming guide

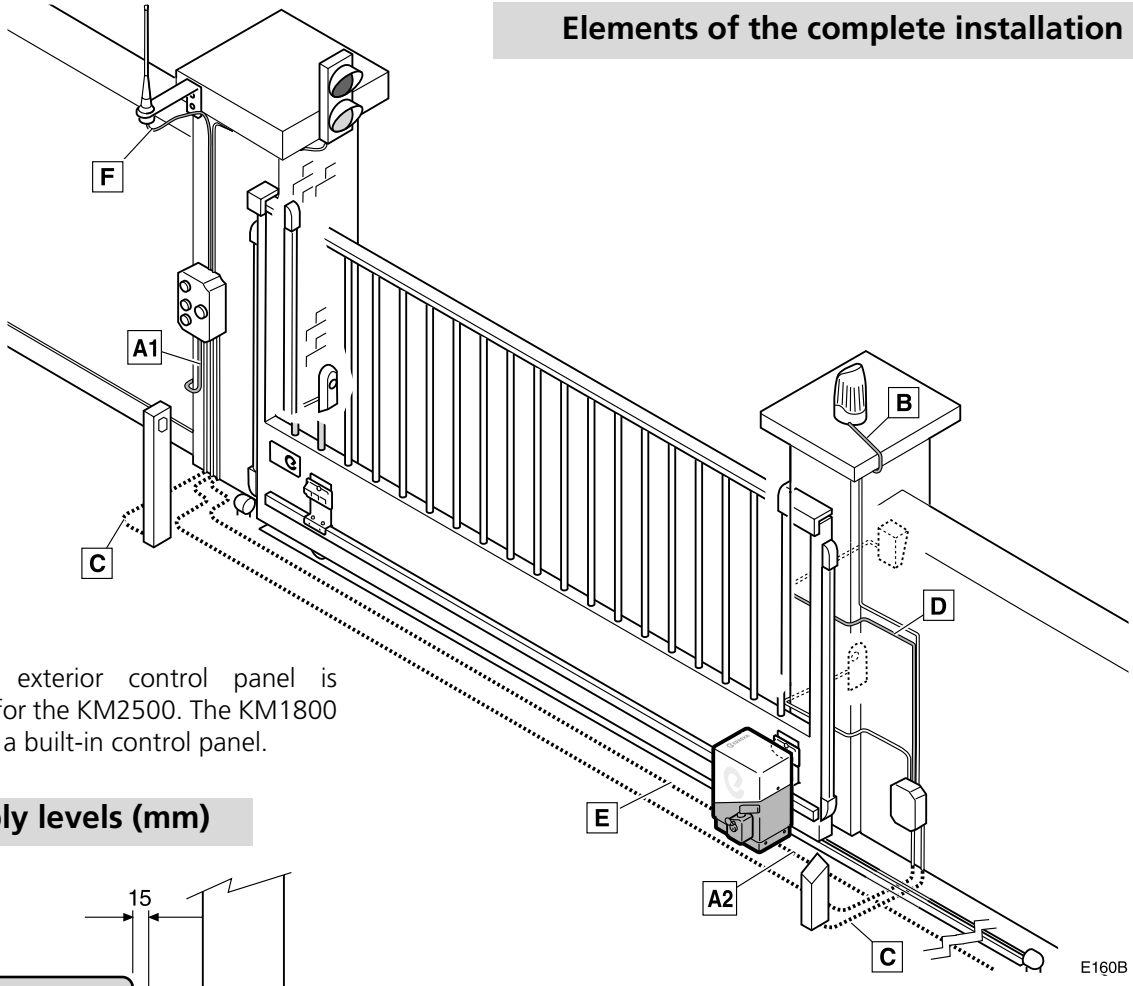
English

IMPORTANT NOTE

This quick guide summarises the full installation manual. The full manual contains safety warnings and other explanations that must be taken into account. You can download the latest version of this guide and the installation manual in the "Downloads" section of the Erreka website:
http://www.erreka-automation.com

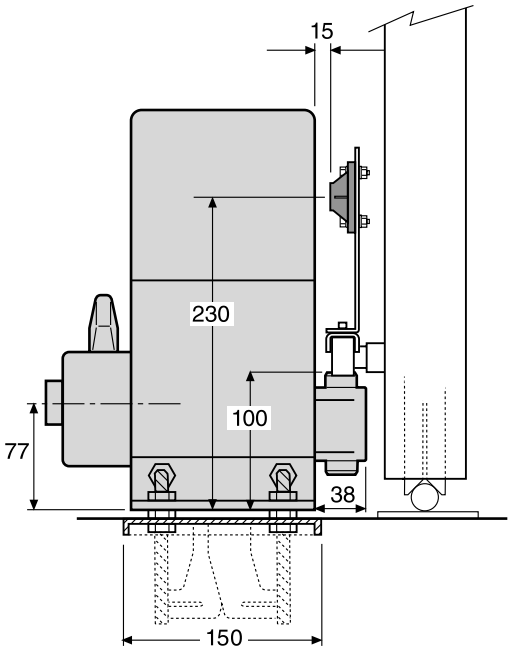
The options and functions described in this guide are applicable from the *firmware* version indicated on the circuit. As part of a process of continuous improvement, the *firmware* is subject to the incorporation of new functionalities or their extension, and consequently to the generation of new versions not necessarily compatible with the previous ones. Therefore, if your *firmware* version is lower than the one indicated in this guide, some options and functions may not be available or may be different.

Elements of the complete installation



☞ Only the exterior control panel is necessary for the KM2500. The KM1800 model has a built-in control panel.

Assembly levels (mm)



ELECTRICAL CABLING:

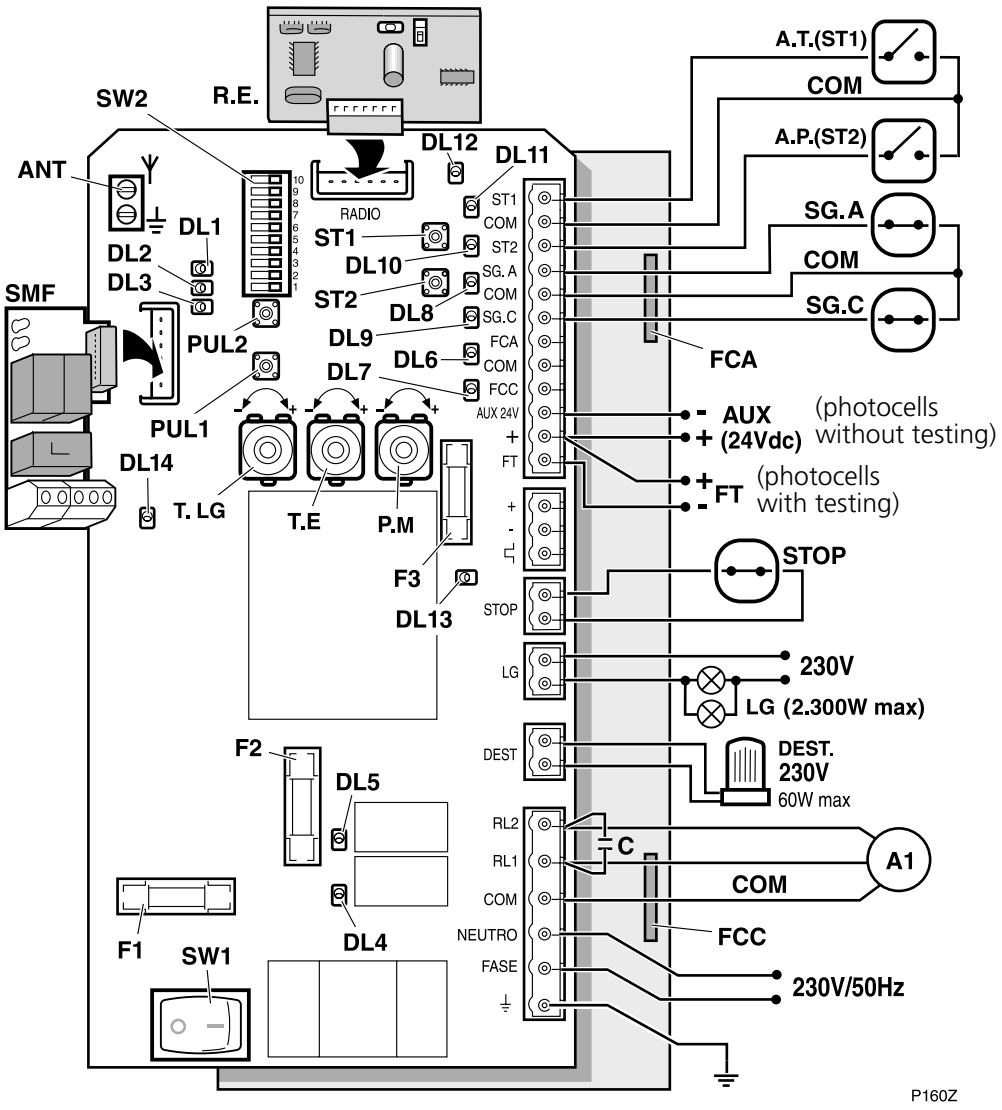
Element	Nº threads x section	Maximum length
A1: Main power supply KM1800	3x1.5mm^2	30m
A2: Main power supply KM2500	5x1.5mm^2	30m
B: Flashing light	2x0.5mm^2	20m
C: Photocells (Tx / Rx)	2x0.5mm^2 / 4x0.5mm^2	30m
D: Pushbutton/wall key	2x0.5mm^2	50m
E: Operator KM2500 (motor/ limit switches)	4x1.5mm^2 / 3x0.5mm^2	20m
F: Antenna	Coaxial cable 50Ω (RG-58/U)	5m

AP606: firmware V1.14 IND or later

KM1800: general connections (AP606 control panel)

F1 Motor fuse (5x20; 6.3A)
F2 Electronic fuse (5x20; 500mA)
F3 FT and AUX24V outputs fuse (5x20; 315mA)
DL1 Gate 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 Pedestrian key command contacts closed
DL11 Total key command contacts closed
DL12 Radio key command
DL13 Encoder signal
- Operator working: DL13 comes on intermittently, since the encoder sends the signal in the form of pulses.
- Operator shutdown: DL13 may be on or off, indistinctly, depending on the position of the encoder (high pulse or low pulse).

DL14 Power supply



Turning direction:

Press PUL1 (close) and PUL2 (open) to check the turning direction of the operator. If it is not correct, interchange the operator cables connected in cable connectors RL1 and RL2.

DIP7, DIP8, DIP10:

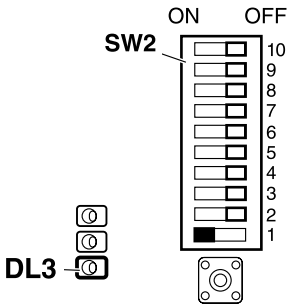
For the correct operation of the system, ensure DIP7, DIP8 and DIP10 are in OFF position.

Photocell testing:

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

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

KM1800: SW2 functions during programming (DIP1=ON)

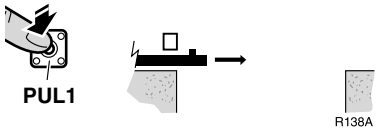


DIP1=ON: programming enabled (DL3 lights up)
DIP1=ON and DIP2=ON: total open/close programming
DIP1=ON and DIP3=ON: pedestrian open/close programming
DIP1=ON and DIP4=ON: total opening radio code programming
DIP1=ON and DIP6=ON: pedestrian opening radio code programming

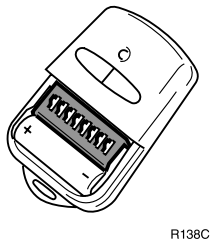
KM1800: Total opening radio code programming (with RSD receiver only)

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

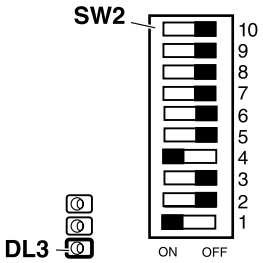
1 Connect the electrical power supply and close the gate by keeping PUL1 pressed down.



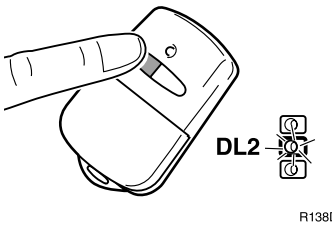
2 Select the code in the transmitter.



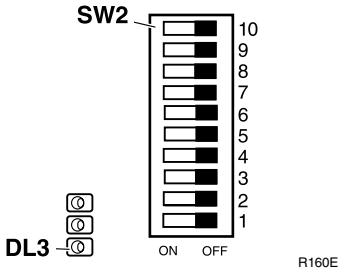
3 Place the DIPs as shown in the figure (DIP1=ON, DIP4=ON). DL3 lights up to show programming mode enabled.



4 Press the button of the required channel. DL2 flashes to show programming is complete.



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



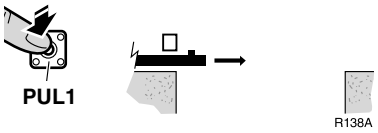
6 Disconnect and reconnect the electrical power supply.

Pedestrian opening radio code

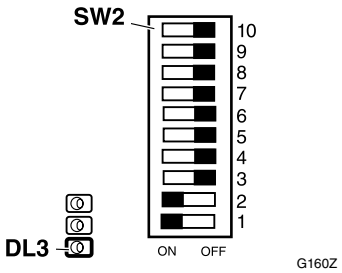
Programming is carried out in the same way, using DIP6 instead of DIP4.

KM1800: total open/close programming

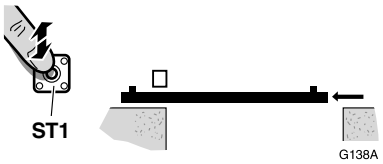
1 Connect the electrical power supply and close the gate by keeping PUL1 pressed down.



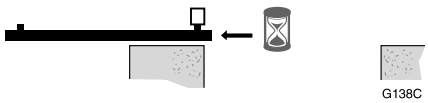
2 Place the DIPs as shown in the figure (DIP2=ON, DIP1=ON).
DL3 lights up to show programming mode enabled.



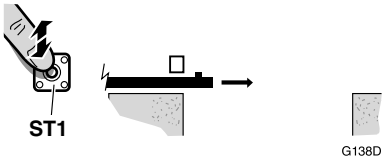
3 Press ST1 to start opening.



4 Wait for it to come to a stop at the end of travel.

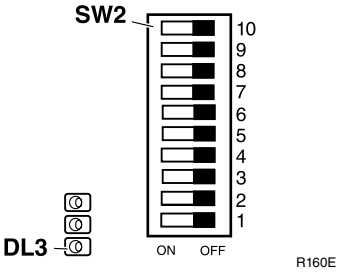


5 Press ST1 to start closing.



6 Wait for it to come to a stop at the end of travel.

7 Place DIP1 and DIP2 in OFF. DL3 remains off.



KM1800: pedestrian open/close programming

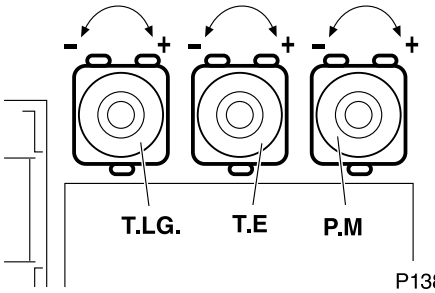
This is carried out in the same way as total travel programming, with the following differences:

- DIP1 and DIP3 are used instead of DIP1 and DIP2
- ST2 is used instead of ST1
- In step 4, stop the gate with ST2

KM1800: function and mode selection using SW2 (DIP1 = OFF)

DIP	Modes and functions	Option	Effect
DIP1		OFF	
DIP2	Advance 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	Opening mode	ON	step-by-step opening (the gate halts if a key command is activated during opening, and closes if activated again)
		OFF	collective opening (the control board does not obey the key commands during opening)
DIP4	Automatic or step-by-step mode (for pedestrian and total operation)	ON	automatic mode (the gate closes automatically after the standby time has passed, which is adjusted using T.E.)
		OFF	step-by-step mode (the gate only closes when receiving the key command)
DIP5	Automatic mode optional (only if DIP4 = ON)	ON	during standby, the gate obeys the key commands (this can be closed before standby time finishes)
		OFF	the gate cannot be closed until standby time finishes; a key command (or photocell activation) will cause standby time to restart
DIP6	Opening photocell testing	ON	testing enabled
		OFF	testing disabled
DIP7	Reserved for future upgrades	ON	always place in OFF
		OFF	always place in OFF
DIP8	Reserved for future upgrades	ON	always place in OFF
		OFF	always place in OFF
DIP9	Closing photocell testing	ON	testing enabled
		OFF	testing disabled
DIP10	Reserved for future upgrades	ON	always place in OFF
		OFF	always place in OFF

KM1800: potentiometer adjustment



T.LG: garage light time

If the garage lighting circuit has been connected to the control panel, regulate the time which the lights shall remain on using T.LG.

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

T.E: gate open standby time

If automatic functioning mode has been programmed (DIP4=ON), set T.E. to adjust standby time with the gate open (before automatic closing begins).

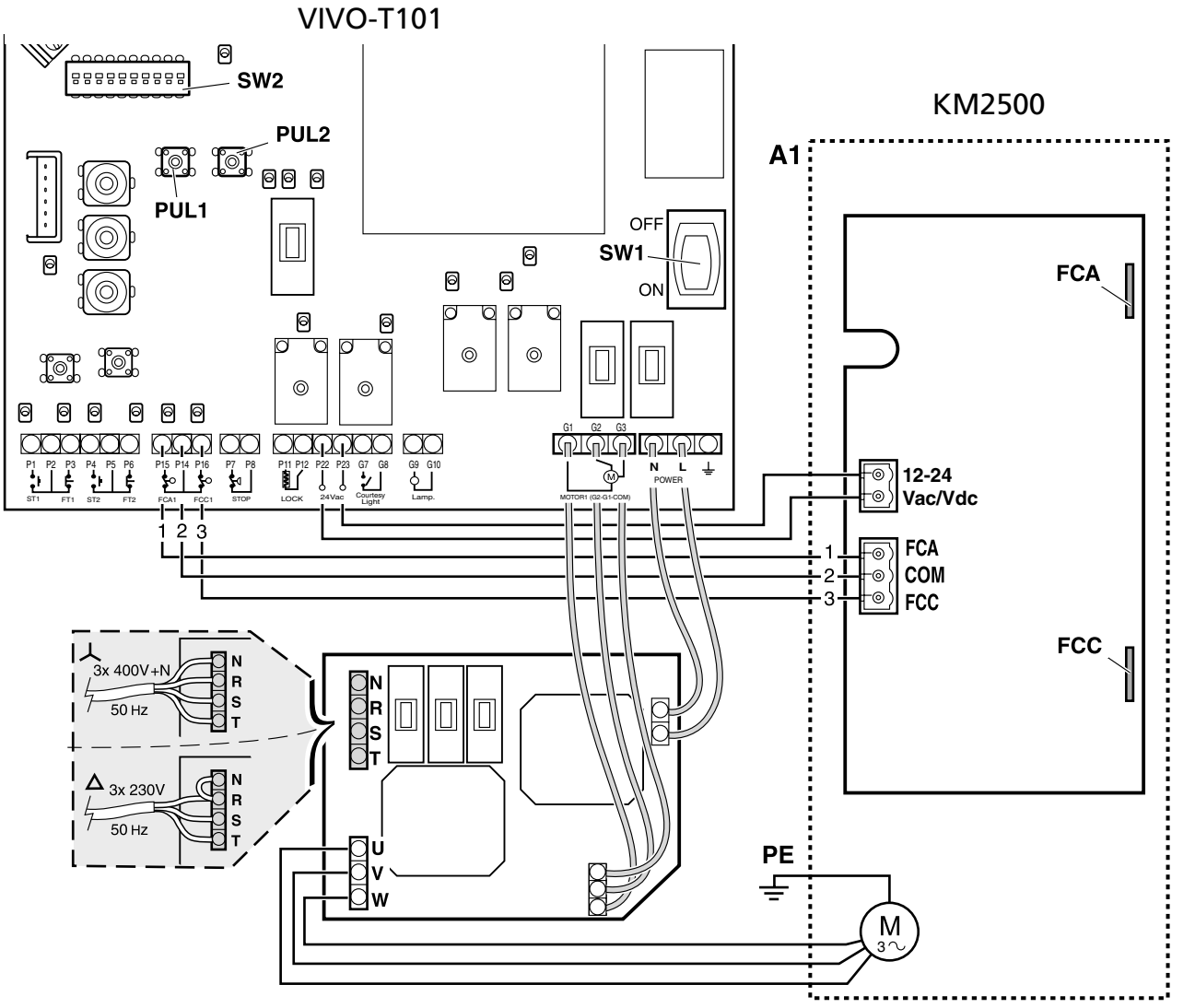
- Minimum value: 0 seconds; maximum value: 90 seconds

P.M: motor torque

Adjust P.M at its maximum value, since the operator has a mechanical clutch for torque adjustment.

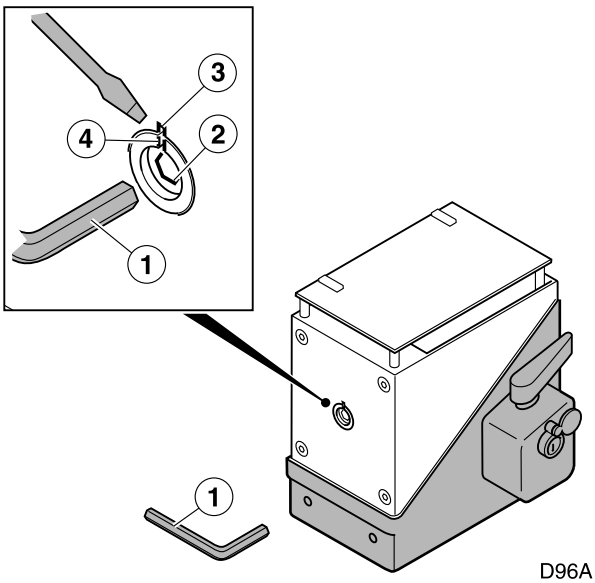
KM2500: general connections (exterior control panel)

☞ The connection of the operator to the VIVO-T101 control panel is shown as an example. Check the control board instructions.



Turning direction:
Press PUL1 and PUL2 to check the turning direction of the operator. If it is not correct, interchange the operator cables connected in cable connectors V and W.

All models: clutch adjustment



1 Introduce the Allen key (1) in the housing (2).

2 Turn the Allen key until the notches (3) and (4) face each other.

3 Introduce a screwdriver in the notches (3) and (4) in order to immobilise the transmission and adjust the clutch by turning the key (1). Turning clockwise increases the power, whilst turning anticlockwise decreases it.

⚠ **Adjust the torque to respect the maximum closing thrusts set out in Standard EN12453:2000. Make the measurements as described in Standard EN 12445:2000.**

4 If the control panel has torque adjustment (PM), set it to the maximum.