Elements of the complete installation

NOTE: this control panel is valid for operators for the following types of door and gate:
swing (C301),
sliding (C302),
up-and-over (C303).

Electrical wiring
A: Main power supply
B/F: Flashing light with antenna
C: Photocells (Rx / Tx)
D: Key switch
E: Operator

VERY IMPORTANT: the TC closing stopper and the TA opening stoppers must be installed.

2 X 1 mm²/
3 X 0,5 mm²
max. 8 m

RG-58/U
max. 5 m

B 2 X 0,5 mm²
max. 20 m

2 X 0,5 mm²
max. 25 m

4 X 0,5 mm²
max. 20 m

3 X 1,5 mm²
max. 30 m

E255A

Power supply and peripheral connections (valid for all cases)

Firmware V1.03 or later

EPS1: card for traffic lights (with parameter Ab00). See other options on page 16 (parameters Ab01 - Ab03).

ST1: open
ST2: close

DL6: LED ST1
DL8: LED ST2
DL13: LED radio running
DL14: LED battery
DL15: LED 12Vdc
DL16: LED mains

F1: 2A (VIVO-D203),
    4A (VIVO-D203M)
F2: 10A
F3: 315mA

ANT
R. E.

BAT (2 x 12V/2,2Ah)

F2

DL15

EPS1
DL13

F3

BATTERY
GND
+24Vdc
CN22
DL16

CHG (AVI04)

AUX
(24Vdc,
315mA)

DL14

FT

ST1
ST2

ENCODER1   ENCODER2
V+ GND SNG1 SNG2   V+ GND SNG1 SNG2
P13 P14 P15 P16   P17 P18 P19 P20

MOTOR2
G4 G5 G6

F1

LB/ LR

DL6   DL8

MOTOR1
G1 G2 G3

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12

G7 G8   G9 G10   N L
                    POWER - 230V

VIVO-D203:
230V,
DEST.   125V
max. 60W VIVO-D203M:
          (resistive)

T

VIVO-D203:
230V, 50Hz
VIVO-D203M:
125V, 60Hz

A.T.   ST1
        GND
        FT1

S. EXT

A.P.   ST2
        GND

STOP

EC
(12Vdc)

VIVO-D203:
230Vac, max 2.300W
VIVO-D203M:
LG   125Vac, max 1.250W

(resistive)

FT2

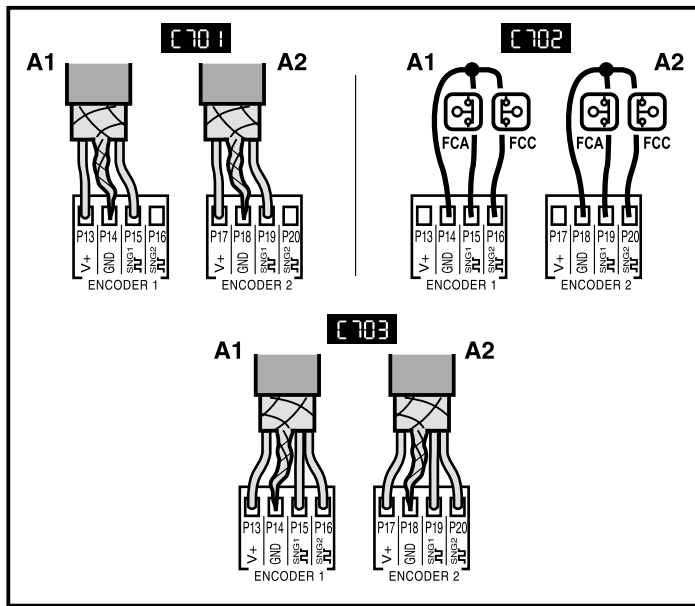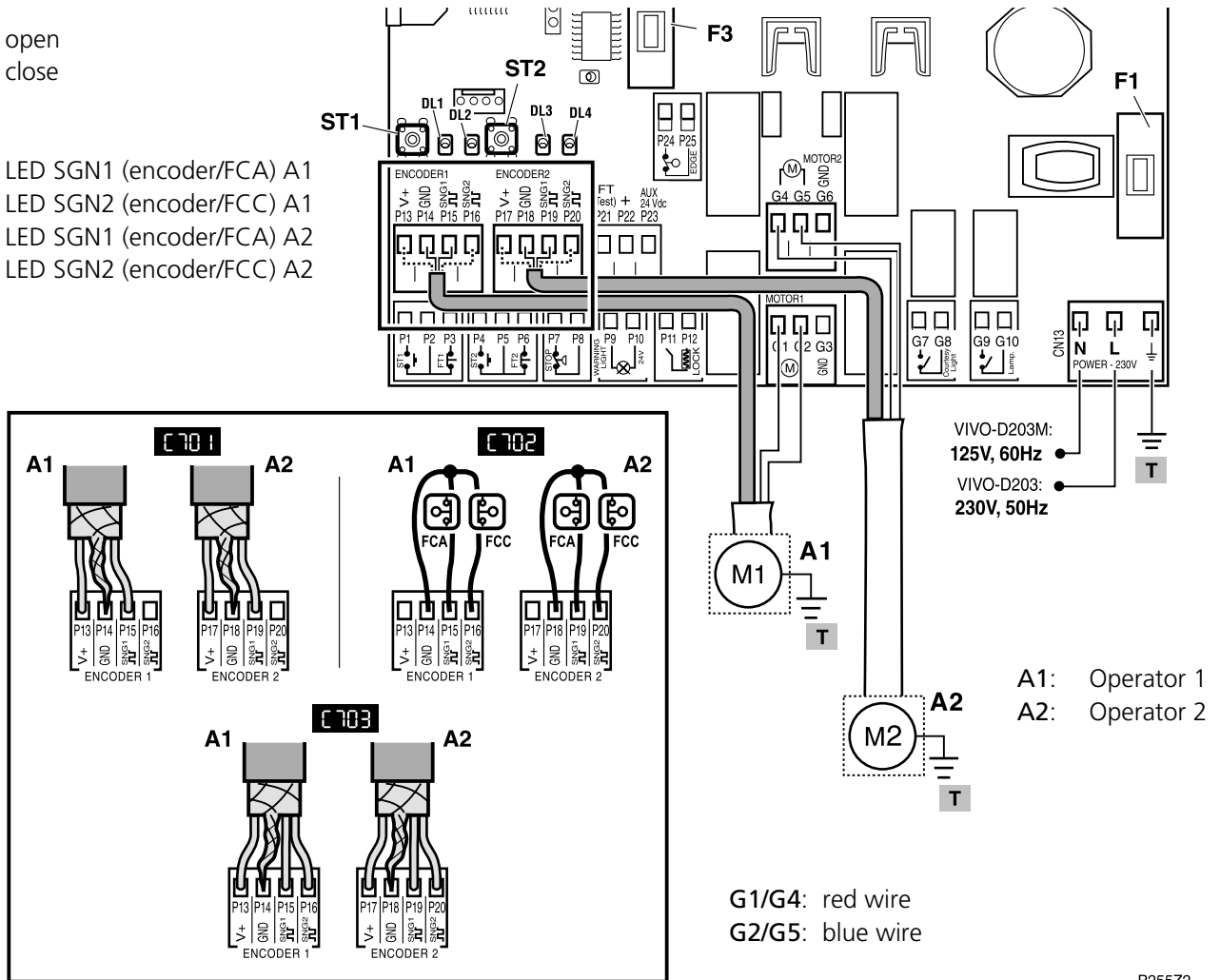S. INT

SCA (24Vdc)

P255Z

Operator connections for swing gates with single or dual leaf (parameter ⌐30 ⌐)

ST1: open
ST2: close

DL1: LED SGN1 (encoder/FCA) A1
DL2: LED SGN2 (encoder/FCC) A1
DL3: LED SGN1 (encoder/FCA) A2
DL4: LED SGN2 (encoder/FCC) A2

A1: Operator 1
A2: Operator 2

VIVO-D203M: **125V, 60Hz**
VIVO-D203: **230V, 50Hz**

G1/G4: red wire
G2/G5: blue wire

P255Z2

Single encoder connection (⌐70 ⌐)
V+: brown wire
GND: mesh
SGN1: green wire
SGN2: do not connect

Limit switches connection (⌐702)
V+: do not connect
GND: common (COM)
SGN1: opening (FCA)
SGN2: close (FCC)

Dual encoder connection (⌐703)
V+: brown wire
GND: mesh
SGN1: green wire
SGN2: yellow wire

☞ The option ⌐704 is not available for swing gate operators. If ⌐704 is selected, it will work as ⌐70 ⌐.

Operator connections for sliding gates and up-and-over doors (parameters C302 and C303)

ST1: open
ST2: close

DL1: LED SGN1 (encoder) A1
DL2: LED SGN2 (encoder) A1
DL3: LED SGN1 (FCA) A1
DL4: LED SGN2 (FCC) A1

VIVO-D203M:
125V, 60Hz
VIVO-D203:
230V, 50Hz

P255Z3

G1: red wire
G2: blue wire

A1: Operator 1
E1: "ENCODER 1" cable connectors
E2: "ENCODER 2" cable connectors
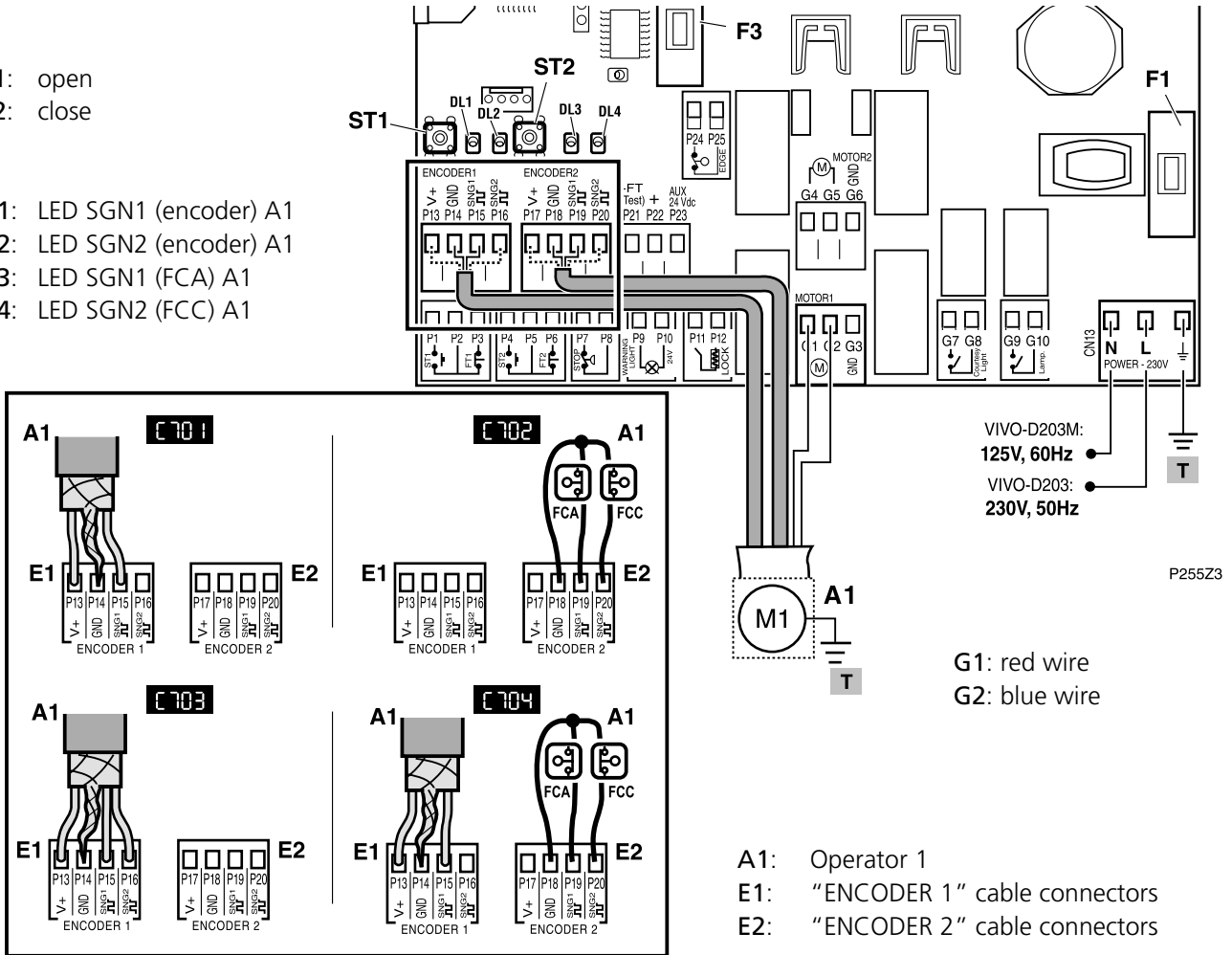
Single encoder connection (C701)	Limit switches connection (C702)	Dual encoder connection (C703)	FC and single encoder connection (C704)	
Connector E1:	Connector E2:	Connector E1:	Connector E1:	Connector E2:
V+: brown wire	V+: do not connect	V+: brown wire	V+: brown wire	V+: do not connect
GND: mesh	GND: common (COM)	GND: mesh	GND: mesh	GND: common (COM)
SGN1: green or blue wire	SGN1: opening (FCA)	SGN1: green or blue wire	SGN1: green or blue wire	SGN1: opening (FCA)
SGN2: do not connect	SGN2: close (FCC)	SGN2: yellow wire	SGN2: do not connect	SGN2: close (FCC)

☞ In sliding gates (C302) and up-and-over doors (C303) it is only possible to use a single motor (M1), which should be connected to the "MOTOR 1" cable connectors.
When using a single encoder (C701, C704) or dual encoder (C703), always connect to the "ENCODER 1" cable connectors.
When using limit switches (C702 or C704), always connect to the "ENCODER 2" cable connectors.

## EPS1 connections with parameters Ab02 and Ab03

☞ When using the EPS1 card with parameters Ab02 or Ab03 (see the table on page 16), make the connections as shown in the following figure.
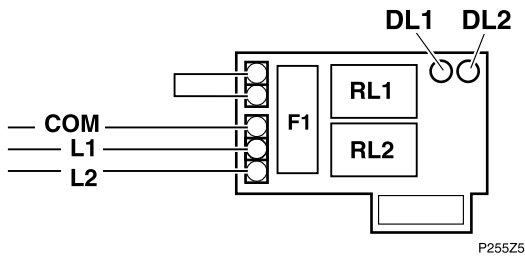
DL1: red LED, L1-COM contact
DL2: green LED, L2-COM contact

Display indications

☞ After 15 minutes without touching any key, the display shows a horizontal segment in D4. This will come on when touching any of the ESC, ENTER, UP, DOWN pushbuttons.
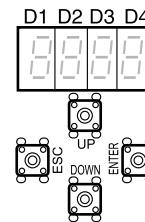
D1 and D2 (gate status):

CL (static)	Gate closed
CL (flashing)	Gate closing
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 stand-by
StOP	Operator unlocked
PA (static)	Pause (operation not complete)
r5 (static)	Gate resetting (searching for close position)
HP. (static)	Dead-man mode

D3 and D4 (error messages):

C4	Opening safety device activated
C5	Closing safety device activated
C9	Mechanical or resistive strip activated
E1	Encoder failure motor 1
E2	Encoder failure motor 2
F1	Motor 1 thrust limit exceeded
F2	Motor 2 thrust limit exceeded

☞ In swing gates, C4 refers to the interior photocell and C5 to the exterior photocell (instead of opening and closing, respectively).
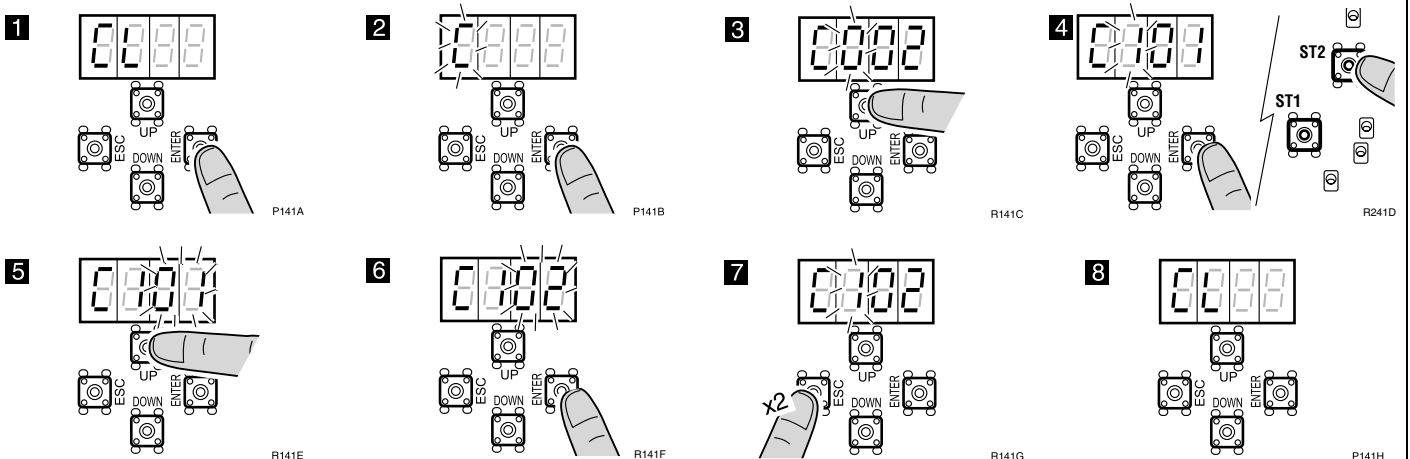
Door or gate type selection (C3)

1

2

3 x3

4

5

6 Select door or gate type:
   C301: swing
   C302: sliding
   C303: up-and-over

7 x2

8

Operator number selection (C0); in swing gates only (C301)

1	2	3	4
`C`	`C`	`C00 1`	`C003`
P241A	P241B	P241C	P241D

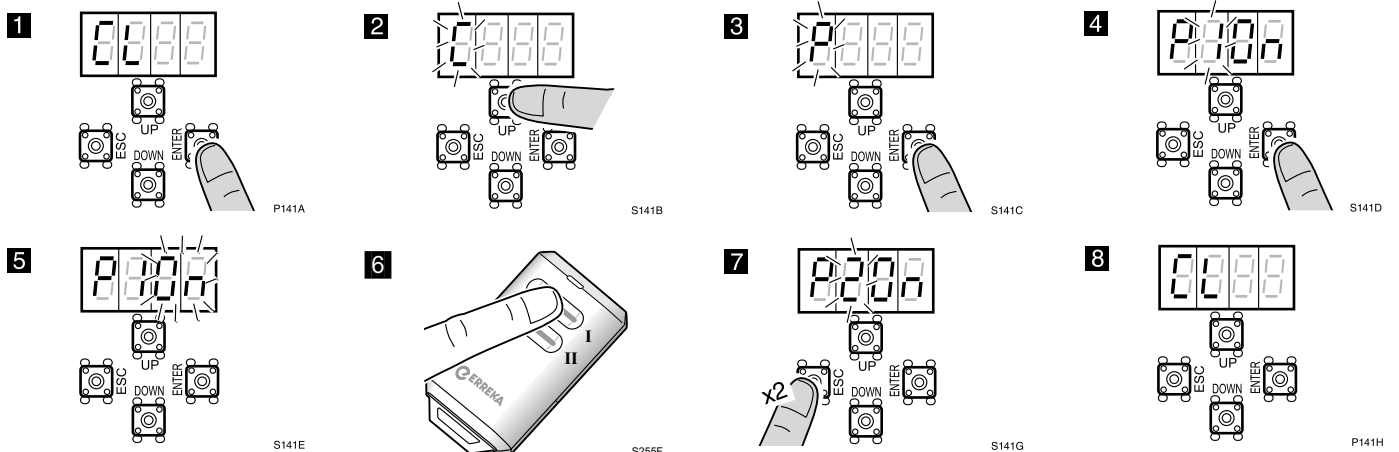| 5	6	7	8
`C002`	`C002`	`C`	`C1`
P241E	P241F	P241G	P241H
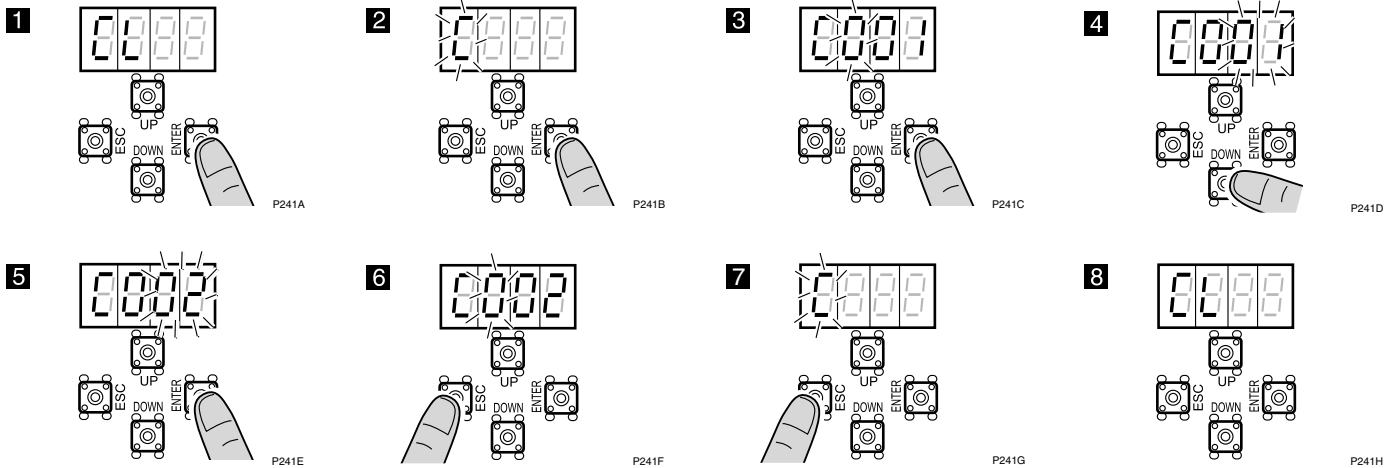
Changing and checking turning direction of operator A1-A2 (C1 - C2)

☞ This operation is only necessary if operator A1-A2 closes the leaf instead of opening it when resetting (r5).

☞ In step **4**, check turning direction using ST1 (open) and ST2 (close). C1 is used to activate operator 1 and C2 is used to activate operator 2.

1	2	3	4
`C`	`C`	`C002`	`C10 1`
P141A	P141B	R141C	R241D (ST2 / ST1)

5	6	7	8
`C00`	`C002`	`C102`	`C1`
R141E	R141F	R141G (x2)	P141H

Total opening radio code programming P1 (with RSD receiver only, C801)

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

☞ Select the option C801 (RSD receiver) before starting programming.

1	2	3	4
`C`	`C`	`P`	`P10n`
P141A	S141B	S141C	S141D

| 5	6	7	8
`P10n`		`P20n`	`C1`
S141E	S255F	S141G (x2)	P141H

Pedestrian opening radio code programming P2 (with RSD receiver only)

☞ This procedure is the same as for total opening, but using parameter P2 instead of P1.

13

Travel programming (all cases)

⚠ **The opening and closing stopper must be installed before programming the travel (see the operator manual).**

⚠ **When using operators without encoder or limit switches, adjust the maximum thrust (A6) at the minimum value necessary to move the gate before programming the run. Failure to do so will mean the controlboard cannot detect any halting of the gate during the Reset (r5).**
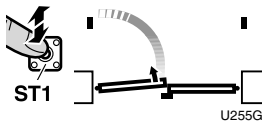
1 *P141A*

2 *S141B*

3 *S141C*

4 *T141D*

5 *T141E*
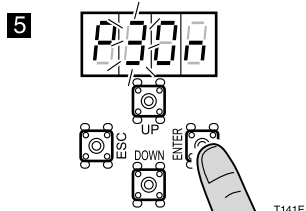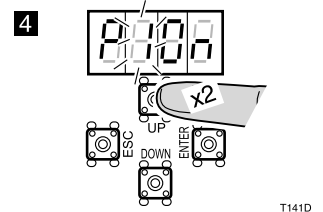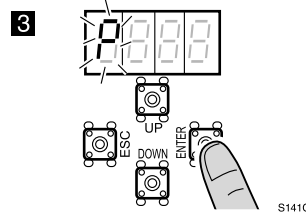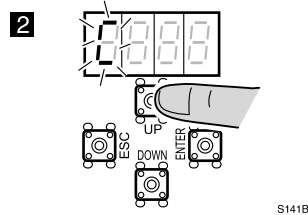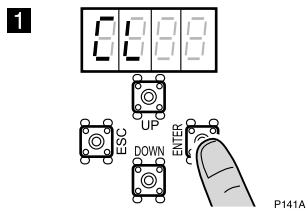
6 The door/gate carries out the approach manoeuvre (closes in order to save the closing point).

7 *T141H*
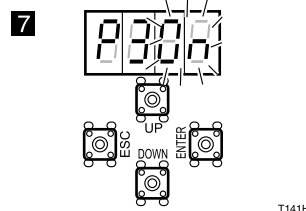
☞ The procedure with a swing gate is shown below.
Proceed in the same manner for sliding gates or up-and-over doors.

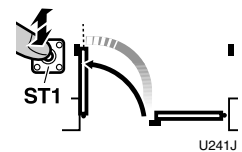**8** Start opening of leaf 1 with ST1:
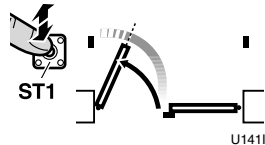
 U255G

8a With up-and-over door and slowdown, press ST1 again to pass from slow to quick speed.

9 Start slowdown of leaf 1 with ST1 (only with CAO1 or CAO2):
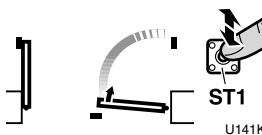
 U141I

10 Finish opening of leaf 1 with ST1:

☞ In any case, this is carried out automatically when the opening stopper (with C700, C701, C703 or C704) or the FCA (with C702 or C704) is reached.

 U241J
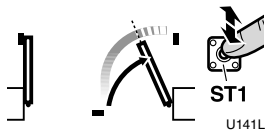
11 Start opening of leaf 2 with ST1:
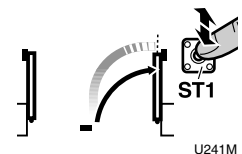
 U141K

12 Start slowdown of leaf 2 with ST1 (only with CAO1 or CAO2):
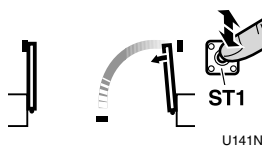
 U141L

13 Finish opening of leaf 2 with ST1:

☞ In any case, this is carried out automatically when the opening stopper (with C700, C701, C703 or C704) or the FCA (with C702 or C704) is reached.

 U241M

14 Start closing of leaf 2 with ST1:

 U141N

15 Start slowdown of leaf 2 with ST1 (only with CAO1 or CAO3):
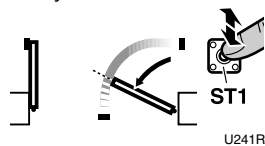
 U241R

16 Finish closing of leaf 2 with ST1:

☞ In any case, this is carried out automatically when the closing stopper (with C700, C701, C703 or C704) or the FCC (with C702 or C704) is reached.

 U241S

17 Start closing of leaf 1 with ST1:

 U255T

17a With up-and-over door and slowdown, press ST1 again to pass from slow to quick speed.
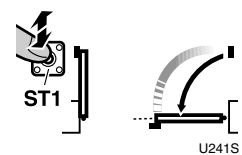
18 Start slowdown of leaf 1 with ST1 (only with CAO1 or CAO3):

 U241U

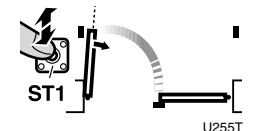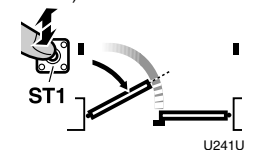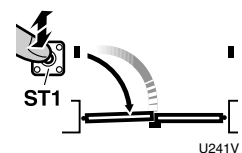**19** Finish closing of leaf 1 with ST1:

☞ In any case, this is carried out automatically when the closing stopper (with C700, C701, C703 or C704) or the FCC (with C702 or C704) is reached.

 U241V
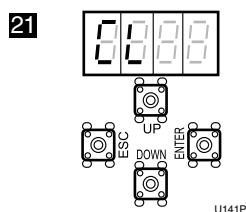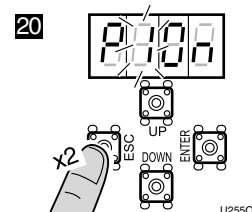
☞ The anti-trapping safety system continues to run during the programming operations.

☞ Pedestrian opening is programmed using F3, meaning the travel for this pedestrian opening does not need to be programmed.

☞ If an obstacle is detected during programming in up-and-over operation with C5 Closing photocell activated, this will be considered the point from which the photocell shadow function should be activated. This only works with Collective Opening (A901).

20 *U255O*

21 *U141P*

14

D1	D2	Parameter	D3	D4	Preset option	Options or values
C	0	Number of operators	0	1, 2	01	01: one operator, 02: two operators (only available with C301)
	1	Operator 1 turning direction (also changes operator 2)	0	1, 2	01	01: direction A, 02: direction B. Check direction by pressing ST1 (open) and ST2 (close)
	2	Operator 2 turning direction (also changes operator 1)	0	1, 2	01	01: direction A, 02: direction B. Check direction by pressing ST1 (open) and ST2 (close)
	3	Type of gate	0	1...3	01	01: swing, 02: sliding, 03: up-and-over
	4	Opening safety device (photocell)	0, 1	0, 1	00	00: not installed, 10: no testing, 11: with testing
	5	Closing safety device (photocell) Closing photocell with C520 or C521, also prevents the start of gate opening	0...2	0, 1	00	00: not installed, 10: no testing, 11: with testing, 20: no testing, 21: with testing
	6	Electrolock / electromagnet C630 and C640 are used to manage an external relay at 24Vdc, connected to cable connectors P11-P12. The electromagnet must be externally supplied (through this relay) and sized in line with the electromagnets used.	0...4	0...4	00	00: not installed 1X: electrolock without reverse impulse. Programmable electrolock time: 3 seconds with $X=0$ (default), 3.5s with $X=1$, 4s with $X=2$, 4.5s with $X=3$, 5s with $X=4$. 2X: electrolock with reverse impulse. Programmable time (electrolock/motor reverse): 4.5/1.5 seconds with $X=0$ (by default), 5/2s with $X=1$, 5.5/2.5s with $X=2$, 6/3s with $X=3$, 6.5/5s with $X=4$. 30: electromagnet without impulse 40: drop electromagnet
	7	Encoder / Limit switches The connections depend on the type of operator selected (C301, C302 or C303); see the corresponding wiring diagram	0	0...4	00	00: not installed; 01: with single encoder; 02: with limit switches; 03: with dual encoder; 04: with encoder and ends of travel (not available with C301 selected);
	8	Radio card	0	1, 2	02	01: RSD card (non-decoding); 02: two channel decoder card
	9	Safety strip	0	1, 2	01	01: mechanical; 02: resistive 8k2
	A	Slowdown	0	0...3	01	00: no slowdown; 01: slowdown in opening and closing; 02: slowdown in opening; 03: slowdown in closing
P	1	Total opening radio programming	o	n		Programmes total opening code and channel
	2	Pedestrian opening radio programming	o	n		Programmes pedestrian opening code and channel
	3	Gate travel programming	o	n		Programmes the operations in accordance with configuration CA
F	1	Key command using ST1 and ST2 pushbuttons. With F101 the gate (total or pedestrian) can be kept open by keeping ST1 or ST2 pressed down respectively. This allows the time scheduler to be used in combination with F2 and/or F4 $\neq$ 00.	0	0...4	01	00: ST1 and ST2 without effect, key commands are made by radio (channel 1: total opening-closing, channel 2: pedestrian opening-closing) 01: ST1 total opening-closing, ST2 pedestrian opening-closing 02: ST1 total opening, ST2 total closing 03: dead-man mode (the display shows HP.); 04: dead-man mode in closing
	2	Semi-automatic or automatic operation mode and stand-by time (in seconds) in automatic mode	0...5	0...9	00	00: semi-automatic mode 01: automatic mode and stand-by time 1 second; ... 59: automatic mode and stand-by time 59 sec.; 1.0: 1 min. 0 sec.; ...; maximum 4 minutes
	3	Pedestrian opening (%)	0...9	0...9	40	00: pedestrian opening is not carried out, 10: 10% of total opening, etc
	4	Pedestrian closing mode	0...5	0...9	00	00: semi-automatic mode 01: automatic mode and stand-by time 1 second; ... 59: automatic mode and stand-by time 59 sec.; 1.0: 1 min. 0 sec.; ...; maximum 4 minutes

15

Complete programming chart (and II)

D1	D2	Parameter	D3	D4	Preset option	Options or values
A	0	Flashing light	0	1, 2	01	01: output with voltage, without pre-warning 02: output with voltage, with pre-warning
	1	Garage light time	0..5.	0...9	03	03 = 3 sec.; 59 = 59 sec.; 25 = 2 min. 50 sec.; ....; maximum 4 minutes
	2	Gate speed	0	1...9	05	01: minimum,..., 09: maximum
	3	Soft stop speed	0	1...9	05	01: minimum,..., 09: maximum
	5	Reverse after closing (prevents the operator from seizing up on the stopper)	0	0...5	00	00: no reverse; ...; 05: maximum reverse
	6	Maximum trapping torque/thrust (level of increase relative to nominal) The digit D3 allows the level to be adjusted during opening; The digit D4 allows the level to be adjusted during closing	2...9	2...9	55	22: level 2 in opening and level 2 in closing; 34: level 3 in opening and level 4 in closing; ....; 65: level 6 in opening and level 5 in closing; ...; 99: level 9 in opening and closing
	7	Passage through **photocell** (opening or closing) during stand-by (in automatic mode only)	0	0...2	02	00: does not affect stand-by time 01: immediate close when the photocells are released 02: restarts stand-by time
	8	Effect of **ST1-ST2 pushbuttons** during stand-by time (in automatic mode only)	0	0...2	02	00: have no effect during stand-by 01: produce closing after 3 seconds 02: restart stand-by time
	9	Opening mode	0	1...3	02	01: collective opening 02: semi-automatic alternative shutdown 03: automatic alternative shutdown (when F200 is selected, A903 becomes A902)
	A	Lapse between leaves in opening and closing	0...9	0...9	22	00: no lapse in opening or closing (only applies in gates without overlap); 11: minimum lapse in opening (1 second) and closing (1 second) 23: 2 second lapse in opening and 3 second lapse in closing ... 99: maximum lapse in opening (9 seconds) and closing (9 seconds)
	b	Using the EPS1 card connector For parameters Ab02 and Ab03, use the EPS1 card and bridge the network input cable connectors instead of connecting them to the network (see "EPS1 Connections for Ab02 or Ab03").	0	0...3	00	00: use for standard traffic light; 01: use for brakes 02: NC contact with gate open (L1-COM), with gate closed (L2-COM) 03: impulse Open 1 second (L1-COM) when starting opening and Close 1 second (L2-COM) when starting closing. Allows another board to be activated.
n	0	Programming lock key Be sure to remember any key used, for future access to the programming	0	0, 1	0000	The preset option is 0000 (no key). If any figure is changed, this is considered a key. Select the required key (starting with D1) using UP and DOWN. Press ESC to cancel or ENTER to confirm and move to D2, and so on.
	1	Total operations completed	X	X		Indicates the hundreds of cycles completed (for example, 68 indicates 6,800 cycles completed)
	2	Partial operations completed	X	X		Indicates the hundreds of cycles completed. This can be reset by pressing ST1, ST2 and ENTER at the same time.
t	0	FTP communication	0	n		Immediate communication with the server
	1	GSM signal strength	X	X		Indicates signal strength