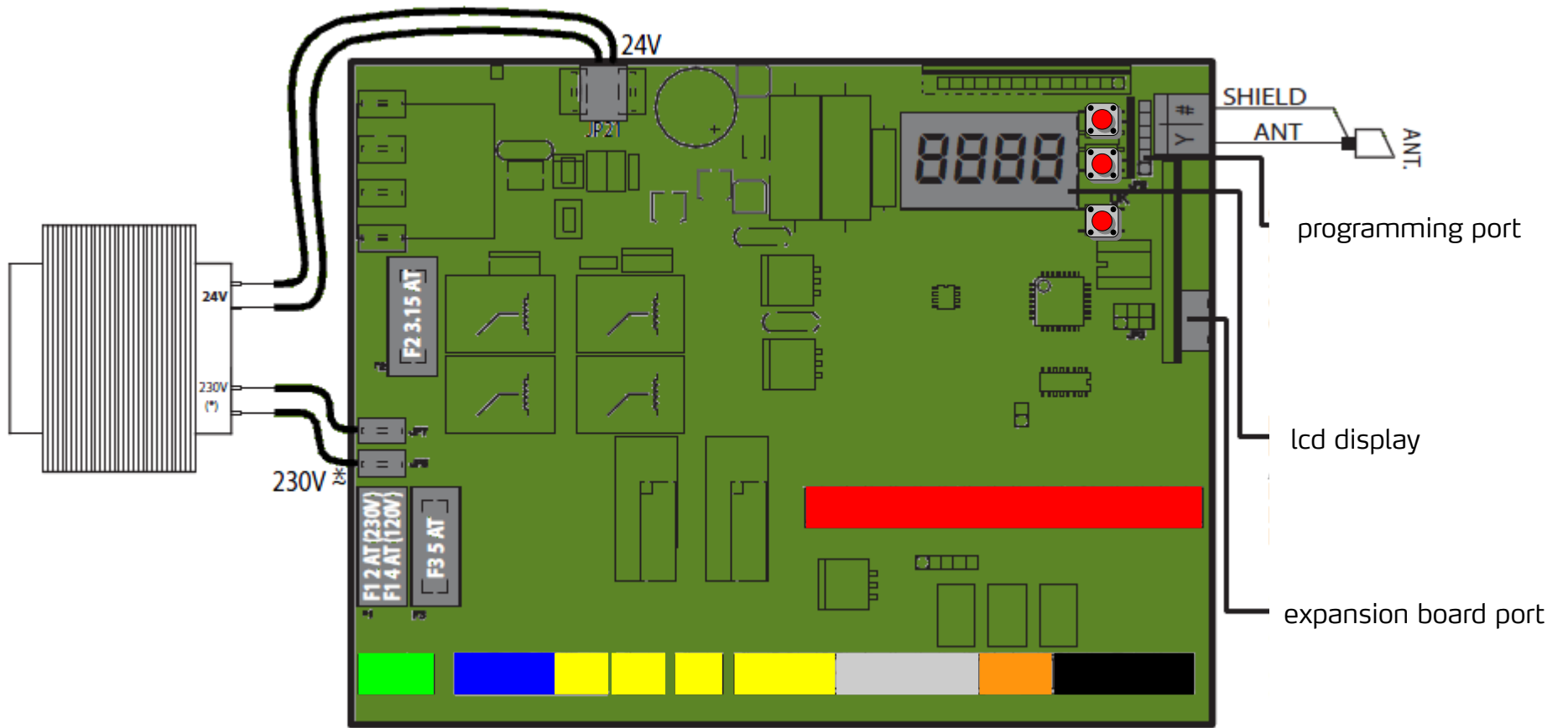


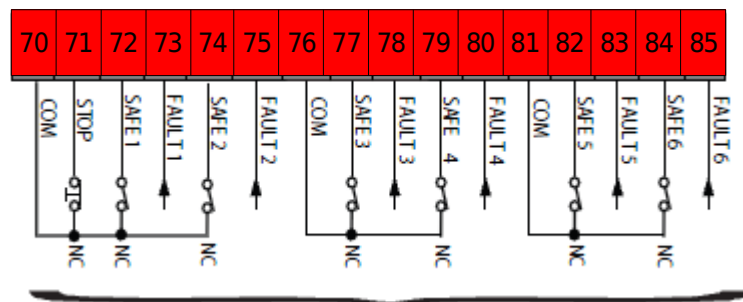
THALIA P

Controller for all 24V Bft swing gate operators

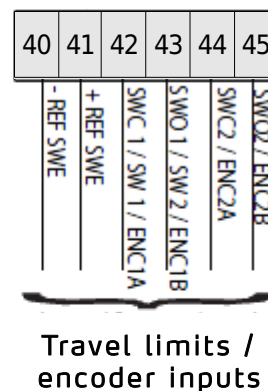
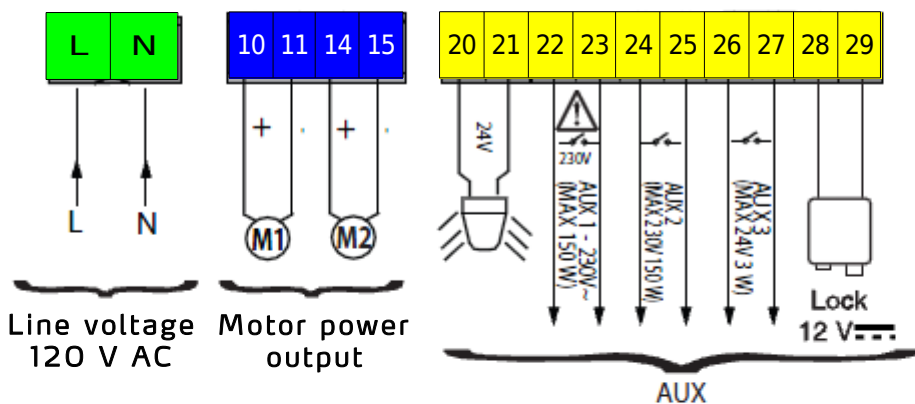




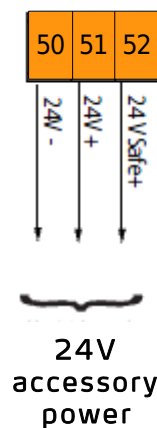
control board wiring



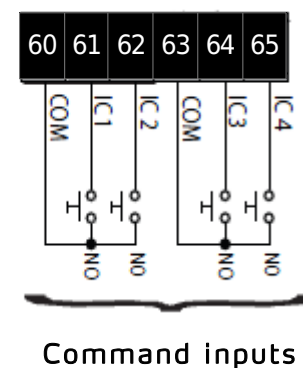
Safety devices inputs



Travel limits / encoder inputs



24V accessory power



Command inputs

| Type | Operator | Description | Motor terminal | Wire color | Thalia terminals for Motor 1 | Thalia terminals for Motor 2 |
|------|-------------|--------------|----------------|------------|------------------------------|------------------------------|
| 1 | Eli 250 BT | Motor + | n/a | Brown | 10 | 14 |
| | | Motor - | n/a | Blue | 11 | 15 |
| | | Limit common | n/a | White | 41 | 41 |
| | | Close limit | n/a | Brown | 42 | 44 |
| | | Open limit | n/a | Brown | 43 | 45 |
| 2 | Phobos BT | Limit output | 1 | White | 42 | 43 |
| | | Motor + | 2 | Red | 10 | 14 |
| | | Motor - | 3 | Black | 11 | 15 |
| 3 | Igea BT | Limit output | 1 | White | 42 | 43 |
| | | Motor + | 2 | Red | 10 | 14 |
| | | Motor - | 3 | Black | 11 | 15 |
| 4 | Lux BT 2B | Motor + | 1 | Red | 10 | 14 |
| | | Motor - | 2 | Black | 11 | 15 |
| | | Encoder Com | 3 | Green | 41 | 41 |
| | | Encoder Out | 4 | White | 42 | 43 |
| 5 | Lux G BT 2B | Motor + | 1 | Red | 10 | 14 |
| | | Motor - | 2 | Black | 11 | 15 |
| | | Encoder Com | 3 | Green | 41 | 41 |
| | | Encoder Out | 4 | White | 42 | 43 |
| 6 | Sub BT | Limit output | n/a | White | 42 | 43 |
| | | Motor + | n/a | Red | 10 | 14 |
| | | Motor - | n/a | Black | 11 | 15 |

auxiliary outputs

| TERMINAL | NAME | DEFAULT |
|----------|-------------|--|
| 20 | 24V LIGHT | 24 V DC COURTESY LIGHT OUTPUT (25W MAX) |
| 21 | | |
| 22 | AUX 1 | 120V OUTPUT - COURTESY LIGHT. POWERED DURING AND FOR 90 SECONDS AFTER OPERATION |
| 23 | | |
| 24 | AUX 2 | GATE OPEN INDICATOR – OPEN CONTACT – CLOSSES WHEN GATE IS NOT CLOSED. FLASHES DURING THE CLOSING CYCLE |
| 25 | | |
| 26 | AUX 3 | RADIO RECEIVER 2ND CHANNEL OUTPUT (N.O.) |
| 27 | | |
| 28 | LOCK OUTPUT | 12V DC OUTPUT FOR SOLENOID LOCK |
| 29 | | |

command inputs

| TERMINAL | NAME | DEFAULT | DESCRIPTION |
|----------|------|---------|--------------------------|
| 60 | COM | COMMON | |
| 61 | IC 1 | START | OPENS, STOPS AND CLOSSES |
| 62 | IC 2 | PED | PARTIAL OPENING |
| 63 | COM | COMMON | |
| 64 | IC 3 | OPEN | OPEN ONLY COMMAND |
| 65 | IC 4 | CLOSE | CLOSE ONLY COMMAND |

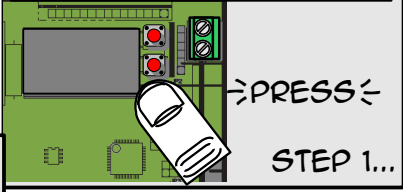
safety inputs

| TERMINAL | NAME | DEFAULT | DESCRIPTION |
|----------|---------|-----------------------|--|
| 70 | COM | COMMON | |
| 71 | STOP | STOP | STOP BUTTON INPUT |
| 72 | SAFE 1 | PHOT | OBSTRUCTION SENSOR INPUT – ALWAYS ACTIVE |
| 73 | FAULT 1 | SUPERVISION CIRCUIT 1 | |
| 74 | SAFE 2 | BAR | SAFETY EDGE INPUT |
| 75 | FAULT 2 | SUPERVISION CIRCUIT 2 | |
| 76 | COM | COMMON | |
| 77 | SAFE 3 | PHOT OP | OBSTRUCTION SENSOR – ACTIVE ONLY WHILE OPENING |
| 78 | FAULT 3 | SUPERVISION CIRCUIT 3 | |
| 79 | SAFE 4 | PHOT CL | OBSTRUCTION SENSOR – ACTIVE ONLY WHILE CLOSING |
| 80 | FAULT 4 | SUPERVISION CIRCUIT | |
| 81 | COM | COMMON | |
| 82 | SAFE 5 | PHOT | OBSTRUCTION SENSOR INPUT – ALWAYS ACTIVE |
| 83 | FAULT 5 | SUPERVISION CIRCUIT | |
| 84 | SAFE 6 | BAR | SAFETY EDGE INPUT |
| 85 | FAULT 6 | SUPERVISION CIRCUIT | |

quick start menu

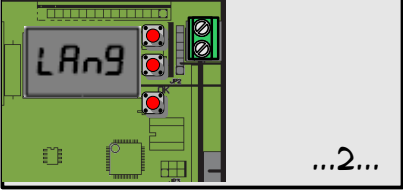


PRESS THE [OK] BUTTON ONCE TO ENTER THE QUICK START MENU.



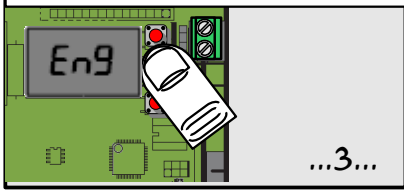
STEP 1...

THE SCREEN WILL DISPLAY "LANG" (LANGUAGE)...



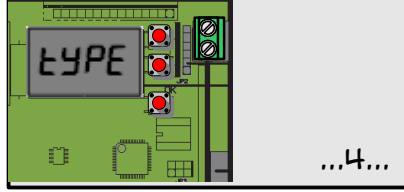
...2...

...PRESS THE [-] BUTTON TO SCROLL DOWN TO "ENG" (ENGLISH) AND THEN PRESS [OK]



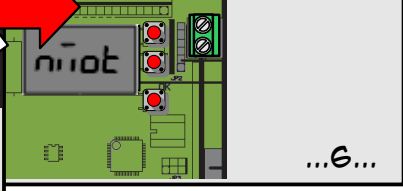
...3...

NEXT YOU SELECT THE TYPE OF MOTOR...



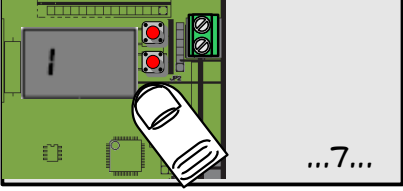
...4...

THEN SELECT THE NUMBER OF MOTORS CONNECTED...



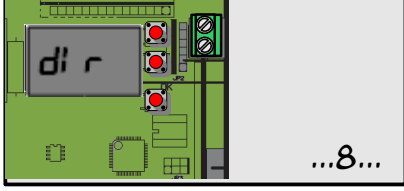
...6...

"1" OR "2" AND PRESS [OK]



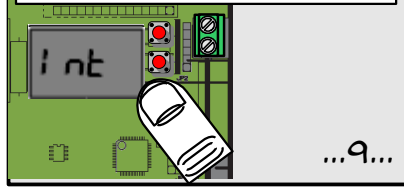
...7...

NEXT, DETERMINE THE OPENING DIRECTION...



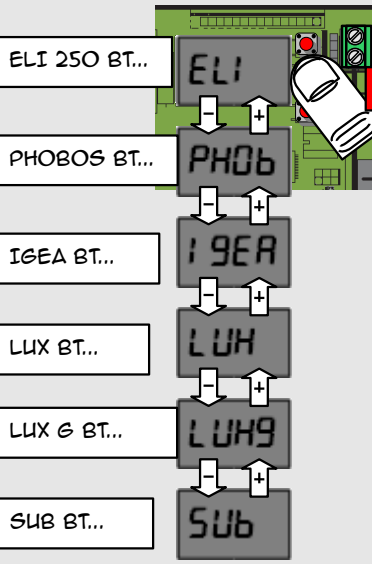
...8...

SELECT "INT" FOR PULL-TO-OPEN, OR, "EXT" FOR PUSH-TO-OPEN. THEN PRESS [OK]



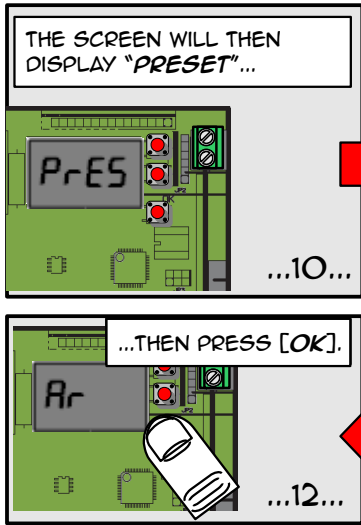
...9...

PRESS THE [-] BUTTON TO SCROLL DOWN...



...AND THEN PRESS THE [OK] BUTTON ONCE YOU HAVE SELECTED YOUR OPERATOR

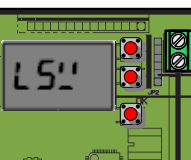
...5...



SCROLL DOWN USING THE [-] BUTTON AND SELECT YOUR PRESET, "AR", "SR", "AC", "SC" OR "IND" BASED ON THE LOGIC FEATURES ON THE TABLE BELOW.

| LOGIC PRESETS | AR | SR | AC | SC | IND |
|----------------------------|-----------------------|----------------------------|----------------------|---------------------------|------------|
| | AUTOMATIC RESIDENTIAL | SEMI-AUTOMATIC RESIDENTIAL | AUTOMATIC COMMERCIAL | SEMI-AUTOMATIC COMMERCIAL | INDUSTRIAL |
| AUTOMATIC CLOSING TIMER | X | | X | | |
| PRE-ALARM | | | X | X | |
| UNINTERRUPTED OPEN CYCLE | | | X | X | |
| INSTANT REVERSE ON CLOSING | X | | X | | |
| HOLD TO RUN | | | | | X |
| QUICK REMOTE PROGRAMMING | X | X | X | X | |

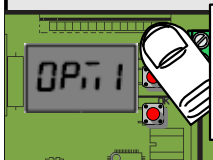
THE SCREEN WILL THEN READ "LSW ADJUST" IF LUX OR LUX G WAS SELECTED.



...13...

"OPM1" (OPEN MOTOR 1) WILL BE DISPLAYED ON THE SCREEN

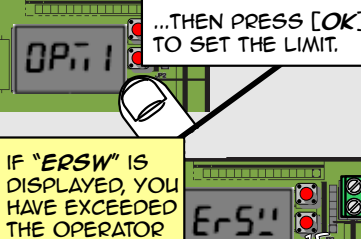
PRESS THE [+] BUTTON UNTIL THE GATE HAS REACHED IT OPEN LIMIT.



...14...

...THEN PRESS [OK] TO SET THE LIMIT.

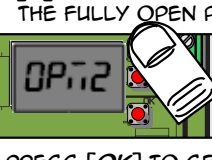
IF "ERSW" IS DISPLAYED, YOU HAVE EXCEEDED THE OPERATOR LIMIT.



...15...

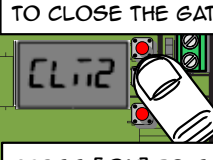
IF 2 MOTORS WERE SELECTED, "OPM2" WILL SHOW. PRESS [+] TO BRING THE 2ND GATE TO THE FULLY OPEN POSITION...

PRESS [OK] TO SET LIMIT ...16...




IF 2 MOTORS WERE SELECTED, "CLM2" (CLOSE MOTOR 2) WILL SHOW. PRESS THE [-] BUTTON TO CLOSE THE GATE.

PRESS [OK] TO SET LIMIT...17...

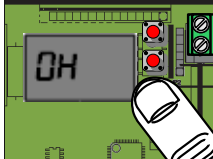


"CLM1" (CLOSE MOTOR 1) IS DISPLAYED. PRESS THE [-] BUTTON TO BRING THE GATE TO IT'S FULLY CLOSED POSITION

PRESS [OK] TO SET LIMIT ...18...

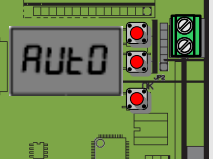


THE SCREEN WILL READ "OK" . PRESS [OK] TO CONTINUE..



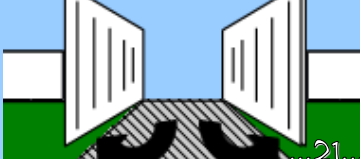
...19...

THE WORD "AUTOSET" WILL SCROLL ACROSS THE SCREEN



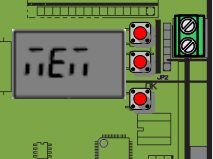
...20...

UPON PRESSING [OK], THE GATE WILL OPEN AND CLOSE AUTOMATICALLY 1 TO 3 TIMES



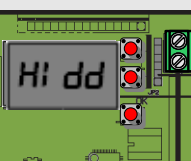
...21...

NEXT, THE SCREEN WILL THEN READ "MEM REMOTES"



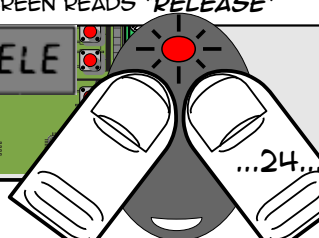
...22...

WHEN THE SCREEN READS "HIDDEN BUTTON" ...



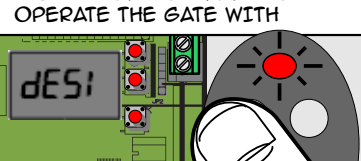
...23...

SIMULTANEOUSLY PRESS AND HOLD THE 2 BUTTONS ON YOUR REMOTE UNTIL THE SCREEN READS "RELEASE"



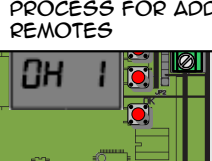
...24...

THE SCREEN WILL THEN READ "DESIRED BUTTON". PRESS THE BUTTON YOU WANT TO OPERATE THE GATE WITH




...25...

THE SCREEN WILL DISPLAY "OK" AND THE NUMBER OF THE REMOTE IN MEMORY. REPEAT THE PROCESS FOR ADDITIONAL REMOTES



...26...

PRESS [OK] TO FINISH SETUP

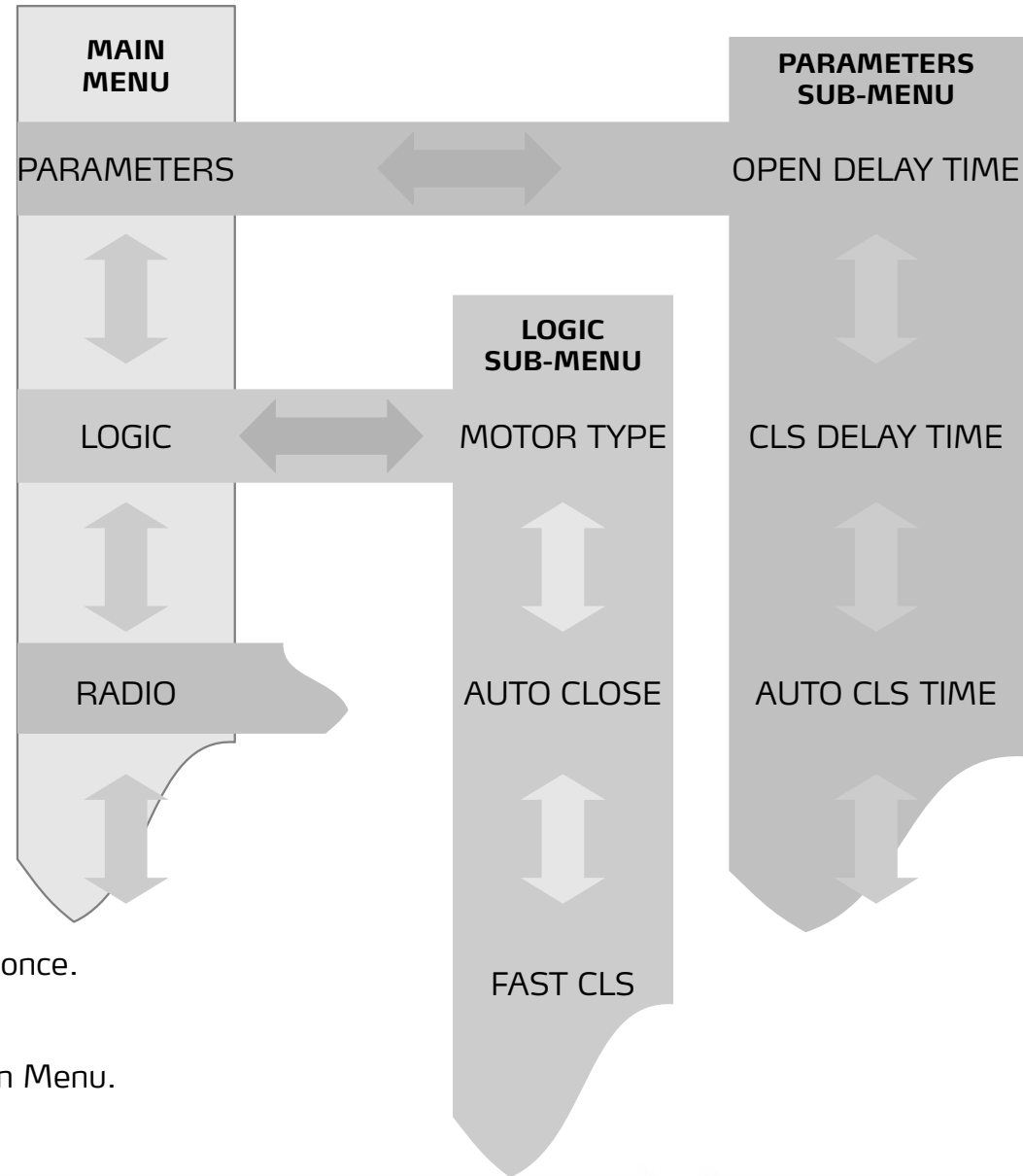
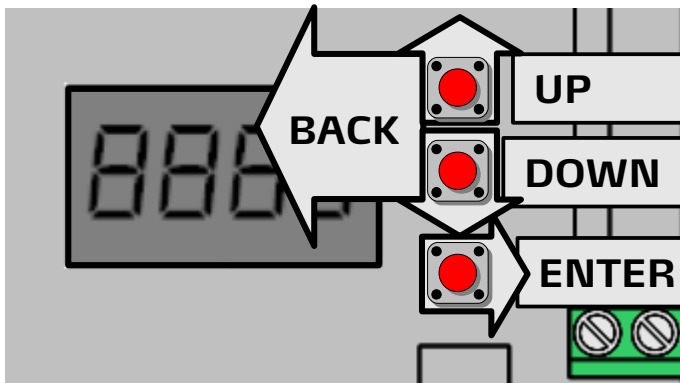


YOU'RE DONE!!!

programming menu

The programming menu is navigated using the 3 buttons found on the upper right corner of the control board, next to the LCD screen. The top button is the UP button. It is also used to increase displayed values in the programming menu. The middle button is the DOWN button. It is also used to decrease displayed values in the programming menu. The lower button is the ENTER button.

Pressing the UP & DOWN button at the same time serves as the BACK button



To enter the **QUICK SETUP MENU**, press the **ENTER** button once.

To enter the **MAIN MENU**, press **ENTER** twice quickly.

To exit programming, press **BACK (UP + DOWN)** from the Main Menu.

MAIN PROGRAMMING MENU

| MAIN | SELECTION |
|------------|---|
| PARAM > | SUB-MENU - ADJUSTMENT OF ALL NUMERICAL VALUES (TIME, TORQUE & PERCENTAGES) |
| LOGIC > | SUB-MENU - ADJUSTMENT AND/OR SELECTION OF ALL FEATURES AND BEHAVIOR LOGICS |
| RADIO > | SUB-MENU - BUILT-IN 2 CHANNEL RECEIVER PROGRAMMING |
| DEFAULT | Restores board to factory settings. No effect on RADIO |
| LANGUAGE > | PROGRAMMING MENU LANGUAGE SELECTION |
| AUTOSET | Operates motor(s) several times and automatically adjust its FORCE settings |
| L. SW ADJ | Limit of travel adjustment. Only available with type 4 and 5 motors |
| STAT > | BOARD INFORMATION AND DIAGNOSTICS |
| PASSWORD | Password setting for wireless programmer |

| MAIN | SELECTION | DESCRIPTION | DEFAULT | RANGE |
|---------|------------------|---|---------|-------|
| PARAM > | OPEN DELAY TIME | Motor 2 opening delay in seconds | 1 | 0-10 |
| | CLS DELAY TIME | Motor 1 closing delay in seconds | 1 | 0-10 |
| | TCA | Auto-close time adjustment in seconds | 10 | 1-180 |
| | TRF. LGHT.CLR. T | Traffic zone clear time adjustment in seconds | 40 | 1-180 |
| | OP. DIST. SLOWD | Slowdown starting distance from end of open travel expressed in percentage | 10 | 0-50 |
| | CL. DIST. SLOWD | Slowdown starting distance from end of close travel expressed in percentage | 10 | 0-50 |
| | DIST. DECEL | Slowdown starting distance from end of open and close travel expressed in percentage | 15 | 0-50 |
| | OP. FORCE | Percentage of opening force exerted over the AUTOSET value before obstruction is sensed | 50 | 1-99 |
| | CLS. FORCE | Percentage of closing force exerted over the AUTOSET value before obstruction is sensed | 50 | 1-99 |
| | OP SPEED | Motor opening speed expressed in percentage | 99 | 15-99 |
| | CL SPEED | Motor closing speed expressed in percentage | 99 | 15-99 |
| | SLOW SPEED | Slowdown speed expressed in percentage from maximum speed. | 25 | 15-99 |

| MAIN | SELECTION | DESCRIPTION | DEFAULT | RANGE | |
|----------------------------------|---|---|---------|-------|---|
| LOGIC > | MOTOR TYPE | 1=Eli 250; 2=Phobos BT, 3=Igea BT; 4=Lux BT; 5=Lux G BT; 6=Sub BT | 0 | 0-6 | |
| | TCA | Timer to Close Automatically. 0=OFF / 1=ON | 0 | 0-1 | |
| | FAST CLS. | Closes when sensors are cleared. 0=OFF / 1=ON | 0 | 0-1 | |
| | STEP-BY-STEP MOVEMENT * | Determines how the system reacts when a START command is received during operation | 0 | 0-2 | * |
| | PRE-ALARM | Gate running output (AUX value=6) closes 3 sec. before gate movement. 0=OFF / 1=ON | 0 | 0-1 | |
| | HOLD-TO-RUN | Requires continuous OPEN or CLOSE command input for gate to operate. 0=OFF / 1=ON | 0 | 0-2 | |
| | IBL OPEN | Ignores START input during the opening cycle. 0=OFF / 1=ON | 0 | 0-1 | |
| | IBL TCA | Ignores the START input while counting down for automatic closing. 0=OFF / 1=ON | 0 | 0-1 | |
| | IBL CLOSE | Ignores the START input during the closing cycle. 0=OFF / 1=ON | 0 | 0-1 | |
| | RAM BLOW C. OP | Pushes gate against physical stop before opening | 0 | 0-1 | |
| | RAM BLOW C. CL | Pushes gate against physical stop before closing | 0 | 0-1 | |
| | BLOC PERSIST | Hourly push against physical stop | 0 | 0-1 | |
| | PRESS SWC | Pushes gate against physical stop for .5 seconds after close limit has been reached. | 0 | 0-1 | |
| | ICE | Continuos force learning on every operation. | 0 | 0-1 | |
| | 1 MOT. ON | Single Motor operation. 0= (2)motors; 1=(1)motor. | 0 | 0-1 | |
| | OPEN IN OTHER DIRECT. | 0 = Pull to open; 1 = Push to open | 0 | 0-1 | |
| | SAFE 1 * | Configuration of safety input terminal 72. Defaulted as Phot (Obstruction) | 0 | 0-8 | * |
| | SAFE 2 * | Configuration of safety input terminal 74. Defaulted as Bar(Safety Edge) | 6 | 0-8 | * |
| | SAFE 3 * | Configuration of safety input terminal 77. Defaulted as Phot Op (Opening Obstruction) | 2 | 0-8 | * |
| | SAFE 4 * | Configuration of safety input terminal 79. Defaulted as Phot Cl (Closing Obstruction) | 4 | 0-8 | * |
| | SAFE 5 * | Configuration of safety input terminal 82. Defaulted as Phot (Obstruction) | 0 | 0-8 | * |
| | SAFE 6 * | Configuration of safety input terminal 84. Defaulted as Bar(Safety Edge) | 6 | 0-8 | * |
| | IC 1 * | Configuration of command input terminal 61. Defaulted as Start E | 0 | 0-6 | * |
| | IC 2 * | Configuration of command input terminal 62. Defaulted as Ped (Partial open) | 4 | 0-6 | * |
| | IC 3 * | Configuration of command input terminal 64. Defaulted as Open | 2 | 0-6 | * |
| | IC 4 * | Configuration of command input terminal 65. Defaulted as Close | 3 | 0-6 | * |
| | AUX 1 * | Configuration of auxiliary output terminals 22 & 23 . Defaulted as Gate not closed contacts. | 3 | 0-8 | * |
| | AUX 2 * | Configuration of auxiliary output terminals 24 & 25 . Defaulted as Mag-lock contacts. | 1 | 0-8 | * |
| | AUX 3 * | Configuration of auxiliary output terminals 26 & 27. Defaulted as 2 nd channel contacts. | 0 | 0-8 | * |
| | LOCK * | Terminal 28 and 29 output selection. Defaulted as 12v Solenoid lock | 0 | 0-3 | * |
| | FIXED CODE | Rolling code defeat. 0 = rolling code; 1 = fixed code | 0 | 0-1 | |
| | RADIO PROG | Quick remote programming. 0 = disabled; 1 = enabled | 1 | 0-1 | |
| | SERIAL MODE | 0 = Slave unit; 1 = Master unit | 0 | 0-1 | |
| | ADDRESS | Unit's network identification number. | 0 | 0-127 | |
| EXPI 1 * | Configuration of Expansion board input 1. Defaulted as Start command. | 1 | 0-14 | * | |
| EXPI 2 * | Configuration of Expansion board input 2. Defaulted as Start command. | 0 | 0-10 | * | |
| EXPO 1 * | Configuration of Expansion board output 1. Defaulted as Traffic light control.. | 9 | 0-9 | * | |
| EXPO 2 * | Configuration of Expansion board output 2. Defaulted as Traffic light control.. | 9 | 0-9 | * | |
| TRAFFIC LIGHT PREFLASHING | Red light flashes for 3 sec. at every start. 0 = Off; 1 = On | 0 | 0-1 | | |
| TRAFFIC LIGHT RED LAMP ALWAYS ON | Red light remains on when gate is closed. 0 = Off; 1 = On | 0 | 0-1 | | |

* see advanced logic programming for additional information

| MAIN | SELECTION | DESCRIPTION | DEFAULT | RANGE |
|---------|-----------|--|---------|-------|
| RADIO > | ADD START | Learns transmitter button as START command | | |
| | ADD 2CH | Learns transmitter button as 2 nd channel | | |
| | ERASE 64 | Erase complete memory | | |
| | COD RX | Show receiver ID Code | | |
| | WK | W LINK. | | |

| MAIN | SELECTION | DESCRIPTION | DEFAULT | RANGE |
|------------|-----------|-------------|---------|-------|
| LANGUAGE > | ITA | Italian | | |
| | FRA | French | | |
| | DEU | German | | |
| | ENG | English | | |
| | ESP | Spanish | | |

| MAIN | SELECTION | DESCRIPTION | DEFAULT | RANGE |
|--------|------------|---|---------|-------|
| STAT > | VERS | Displays board firmware version. | | |
| | N. CYCLES | Displays number of hundreds of cycles (001=100; 010=1000; 100=10,000) | | |
| | N. REMOTES | Displays the number of remotes in memory. | | |
| | ERR | Displays the last 30 board errors in decending order. | | |

other main menu options



advanced logic programming

STEP-BY-STEP LOGICS

| VALUE | 0 | 1 | 2 |
|---------|-------------|-------------|----------|
| LOGIC | 4-STEP | 3-STEP | 2-STEP |
| OPENING | STOPS + TCA | STOPS + TCA | REVERSES |
| CLOSING | STOPS | REVERSES | REVERSES |

SAFE LOGICS

| VALUE | FUNCTION | DESCRIPTION |
|-------|--------------|---|
| 0 | PHOT | OBSTRUCTION SENSOR INPUT, NON-CONTACT |
| 1 | PHOT TEST | OBSTRUCTION SENSOR INPUT, NON-CONTACT, SUPERVISED |
| 2 | PHOT OP | OPENING OBSTRUCTION SENSOR INPUT, NON-CONTACT |
| 3 | PHOT OP TEST | OPENING OBSTRUCTION SENSOR INPUT, NON-CONTACT, SUPERVISED |
| 4 | PHOT CL | CLOSING OBSTRUCTION SENSOR INPUT, NON-CONTACT |
| 5 | PHOT CL TEST | CLOSING OBSTRUCTION SENSOR INPUT, NON-CONTACT, SUPERVISED |
| 6 | BAR | SAFETY EDGE (CONTACT OBSTRUCTION) INPUT |
| 7 | BAR TEST | SAFETY EDGE (CONTACT OBSTRUCTION) INPUT, SUPERVISED |
| 8 | BAR 8K2 | SAFETY EDGE (CONTACT OBSTRUCTION) EOL RESISTOR SUPERVISED INPUT |

IC & EXPI LOGICS

| VALUE | FUNCTION | IC 1 - 4 | EXPI 1 | EXPI 2 |
|-------|---------------------------------|----------|--------|--------|
| 0 | START - EXTERNAL | ● | ● | ● |
| 1 | START - INTERNAL | ● | ● | ● |
| 2 | OPEN | ● | ● | ● |
| 3 | CLOSE | ● | ● | ● |
| 4 | PED (PARTIAL OPEN) | ● | ● | ● |
| 5 | TIMER (HOLD OPEN) | ● | ● | ● |
| 6 | TIMER PED (HOLD PARTIAL OPEN) | ● | ● | ● |
| 7 | OBSTRUCTION | | ● | ● |
| 8 | OPENING OBSTRUCTION | | ● | ● |
| 9 | CLOSING OBSTRUCTION | | ● | ● |
| 10 | SAFETY EDGE | | ● | ● |
| 11 | OBSTRUCTION, SUPERVISED | | ● | |
| 12 | OPENING OBSTRUCTION, SUPERVISED | | ● | |
| 13 | CLOSING OBSTRUCTION, SUPERVISED | | ● | |
| 14 | SAFETY EDGE, SUPERVISED | | ● | |

AUX LOGICS

| VALUE | FUNCTION |
|-------|---|
| 0 | 2ND CHANNEL RECEIVER OUTPUT |
| 1 | GATE OPEN LIGHT. CONTACTS CLOSE WHEN GATE IS NOT CLOSED. FLASHES WHILE CLOSING |
| 2 | COURTESY LIGHT. CONTACTS CLOSE DURING AND FOR 90 SECONDS AFTER OPERATION. |
| 3 | GATE NOT CLOSED. CONTACTS CLOSE UNTIL CLOSE LIMIT IS REACHED |
| 4 | START OF CYCLE. CONTACTS CLOSE FOR 1 SECOND AT THE BEGINNING OF EACH CYCLE |
| 5 | GATE OPEN ALARM. CONTACTS CLOSE IF GATE IS HELD OPEN FOR MORE THAN DOUBLE THE TIMER TO CLOSE TIME |
| 6 | GATE RUNNING. CONTACTS CLOSE WHILE MOTORS ARE POWERED |
| 7 | SOLENOID LOCK. CONTACTS CLOSE FOR 2 SECOND AT THE BEGINNING OF OPEN CYCLE |
| 8 | MAGNETIC LOCK. CONTACTS CLOSE WHEN GATE IS CLOSED |
| 9 | TRAFFIC LIGHT CONTROL (EXPANSION BOARD OUTPUT WITH TLB BOARD ONLY) |

LOCK LOGICS

| VALUE | FUNCTION |
|-------|-----------------------------|
| 0 | 12V DC SOLENOID LOCK OUTPUT |
| 1 | 12V DC MAGNETIC LOCK OUTPUT |
| 2 | 24V DC SOLENOID LOCK OUTPUT |
| 3 | 24V DC MAGNETIC LOCK OUTPUT |