SEA®

Automatic Gate Openers

International registered trademark n. 804888

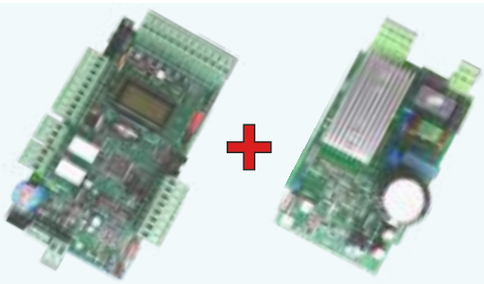
CE

ENGLISH

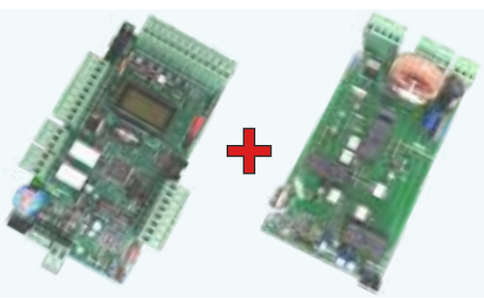
# QUICK START

## UNIGATE INVERTER

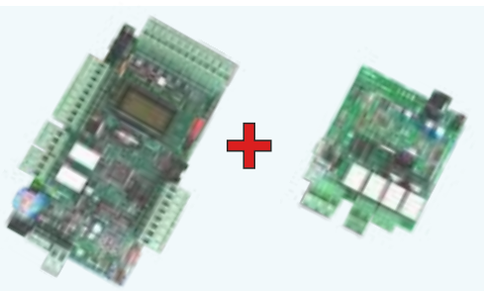
(1I - 2I - 1I BIG - 2I BIG)



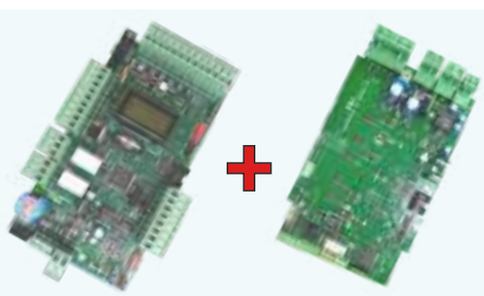
## UNIGATE 2PM - 4PM



## UNIGATE 24V



## UNIGATE BR (36V)



**FULL MANUAL (Rev. 11) & SAFETY INFORMATION**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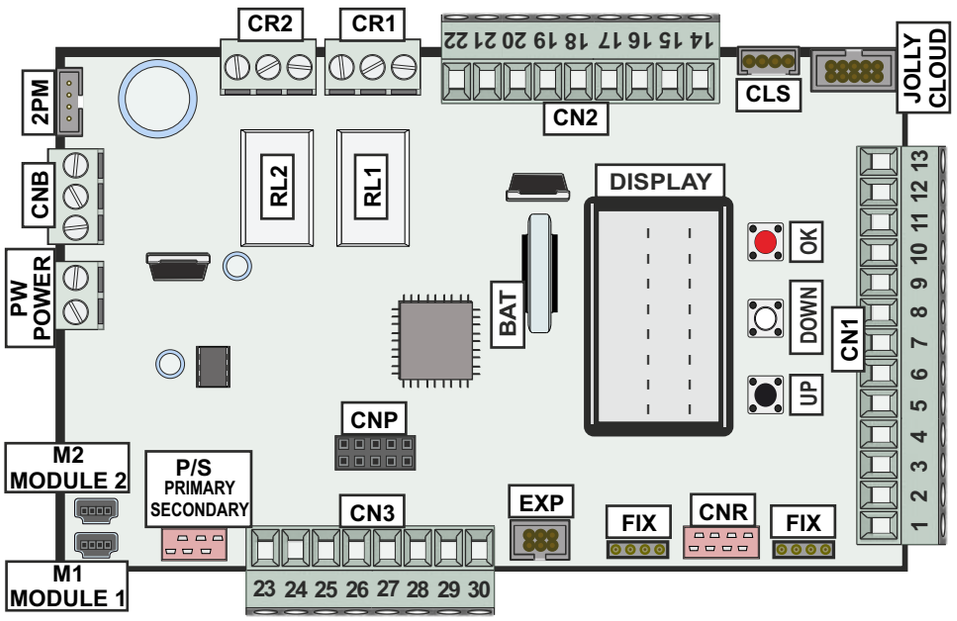
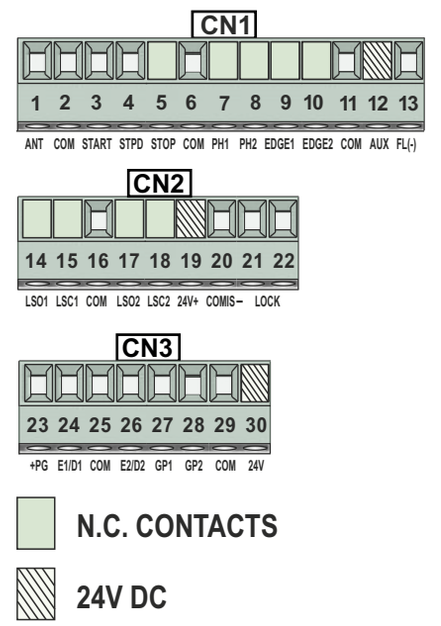
**THE UNIGATE REQUIRES THE PROGRAMMING OF THE WORKING TIMES *(CHAPTER 13)*;**
IT IS NOT POSSIBLE TO START THE OPERATOR CORRECTLY WITHOUT FIRST PROGRAMMING THE CONTROL UNIT!

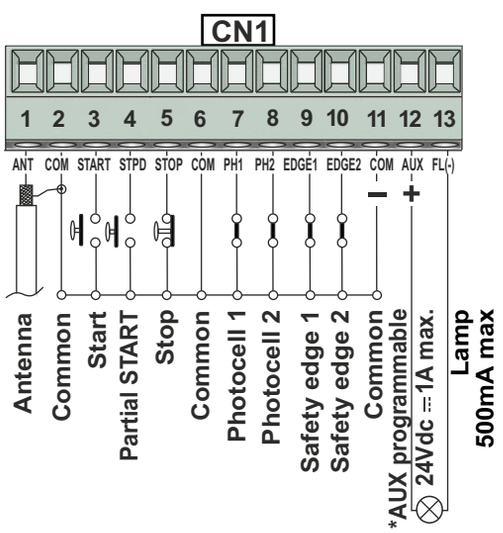
# «UNILOGIC» MAIN MODULE - COMPONENTS

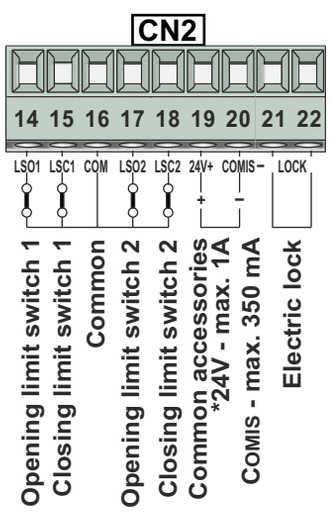
***WARNING: CONNECT ALL DEVICES WHEN THE CONTROL UNIT IS SWITCHED-OFF***

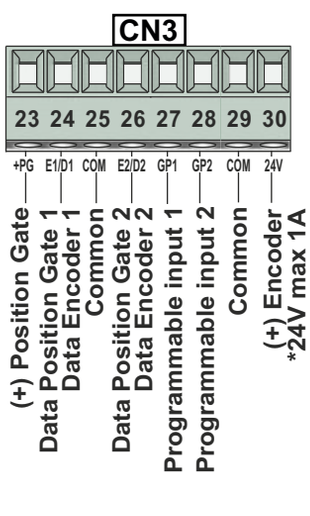


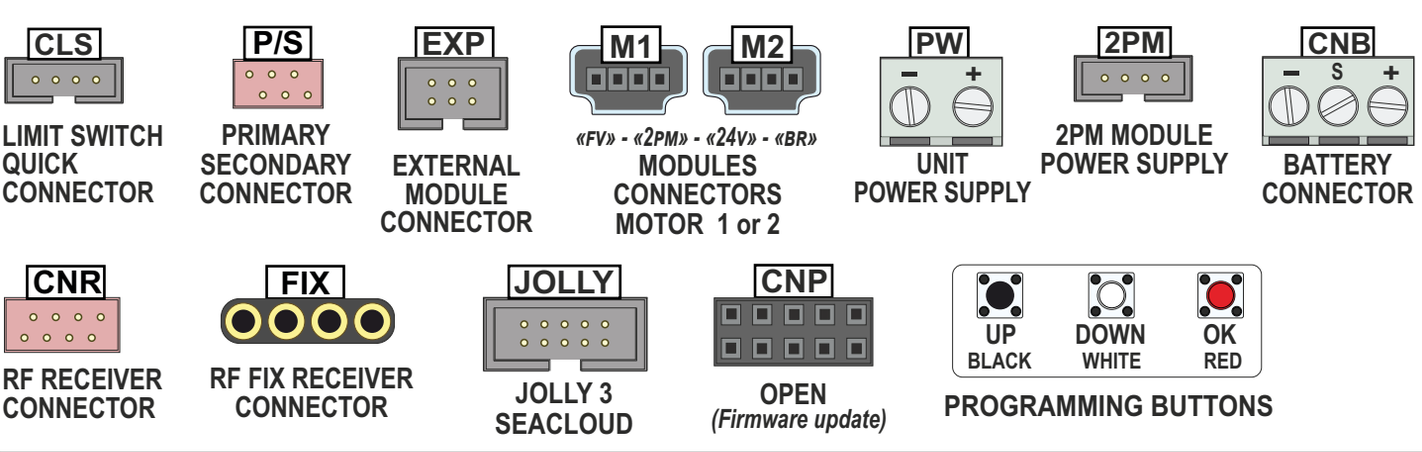

● AUTOMATIC RECOGNITION OF THE N.C. INPUTS NOT IN USE - NO JUMPERS REQUIRED ON THE N.C. CONTACTS



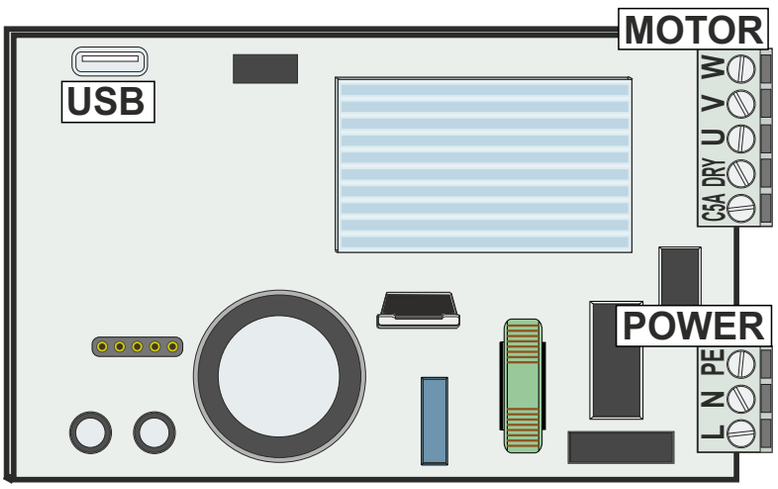




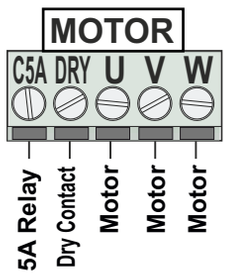

** ALL THE 24V INPUTS SUPPORT A MAXIMUM LOAD OF 1A REFERRED TO THE SUM OF THE LOADS OF ALL 24V ACCESSORIES CONNECTED, INCLUDING THE ABSORPTION OF THE RECEIVER ON BOARD (30 mA)*

# UNIGATE INVERTER - «FV» MODULE

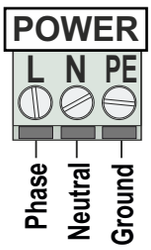
## CONNECTIONS ON «FV» MODULE




MOTOR CONNECTOR AND DRY CONTACT RELAY




INVERTER POWER SUPPLY 230V/115VAC




USB CONNECTOR TO «UNILOGIC»

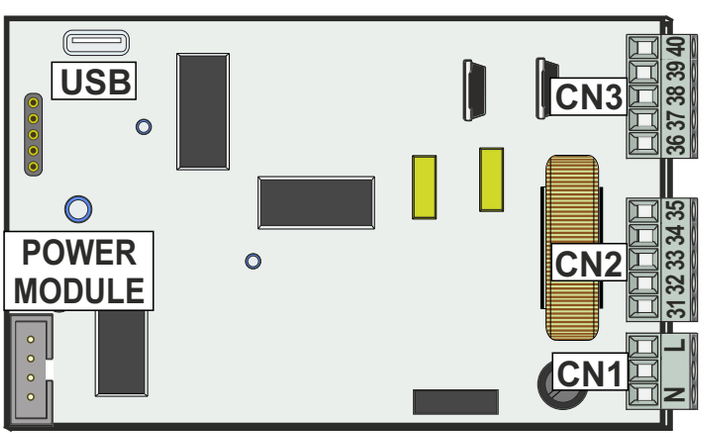

COMPONENTS ALSO VALID FOR «FV-BIG» MODULE

DO NOT CONNECT THE CAPACITORS!

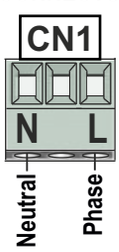
IT IS MANDATORY TO CONNECT THE GROUND CABLE ON THE «PE» INPUT

# UNIGATE 2PM / 4PM - «2PM» MODULE

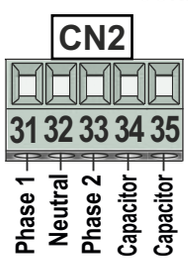
## CONNECTIONS ON «2PM» MODULE

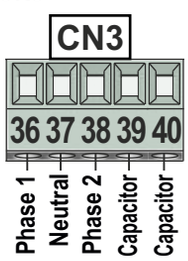


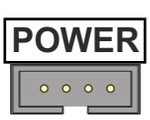

POWER SUPPLY CONNECTOR




MOTOR 1 and MOTOR 2 CONNECTORS



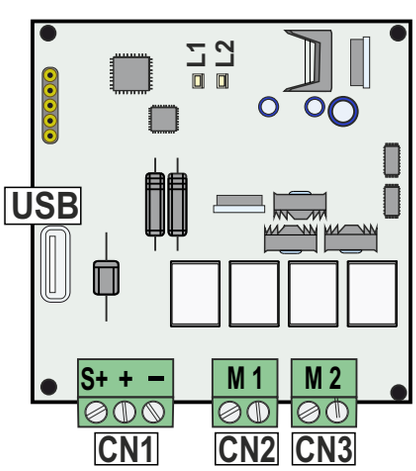



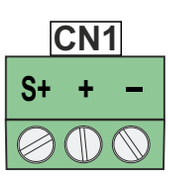

CONNECTOR TO «UNILOGIC»


USB CONNECTOR TO «UNILOGIC»

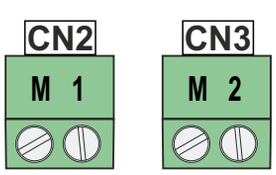
# UNIGATE 24V - «24V» MODULE

## CONNECTIONS ON «24V» MODULE




POWER SUPPLY CONNECTOR

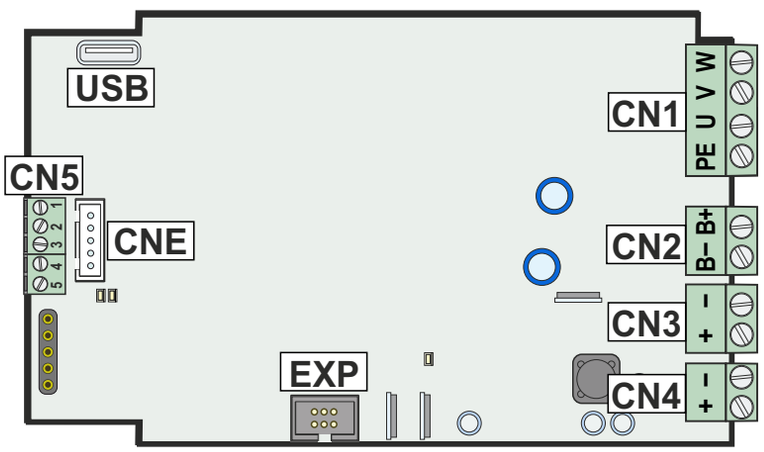


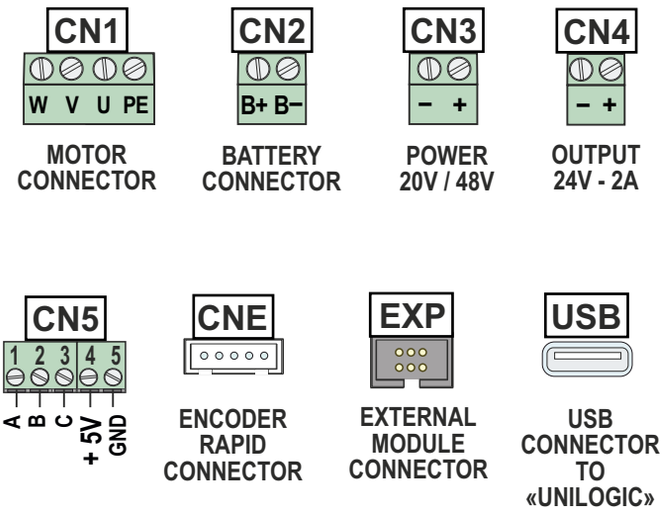

MOTOR 1 and MOTOR 2 CONNECTORS


USB CONNECTOR TO «UNILOGIC»

# UNIGATE BR - «BR» MODULE

## CONNECTIONS ON «BR» MODULE




IT IS MANDATORY TO CONNECT THE GROUND CABLE ON THE «PE» INPUT

# QUICK START

**1** MAKE ALL THE CONNECTIONS WHEN THE CONTROL UNIT IS SWITCHED-OFF: ACCESSORIES ***(CHAP. 1)***, MOTORS ***(CHAP. 2 - 5)***, POWER SUPPLY ***(CHAP. 6 - 10)***

**2** **DO NOT JUMPER THE N.C. CONTACTS *(AUTOMATIC DETECTION OF THE N.C. CONTACTS NOT IN USE)***

**3** POWER ON THE CONTROL UNIT AND CHECK THE CORRECT STATUS OF THE INPUTS ***(CHAP. 11)*** 00111110 11111111

***START AND PARTIAL START MUST BE N.O. (0) - ALL OTHER CONTACTS MUST BE N.C. (1)***

**4** OPTIONAL - SET UP THE «START» COMMAND ON THE TRANSMITTER ***(CHAPTER 12)***

**5** SET A PAUSE TIME TO OPERATE IN «AUTOMATIC» LOGIC, OTHERWISE THE LOGIC WILL BE «SEMI-AUTOMATIC» *(AUTOMATIC RECLOSING DISABLED)* 7 PAUSE TIME

**6** CHOOSE THE MOTOR TYPE ON MENU 3 ***(SEE THE MENU TABLE)*** 3 MOTOR

**7** MOVE THE OPERATOR USING THE MENUS 192 MOVE GATE 1 OR 193 MOVE GATE 2 ; IF THE GATE OPENS BY PRESSING UP AND IF THE GATE CLOSES BY PRESSING DOWN THE MOTORS RUN CORRECTLY, OTHERWISE SWAP THE MOTORS CABLES

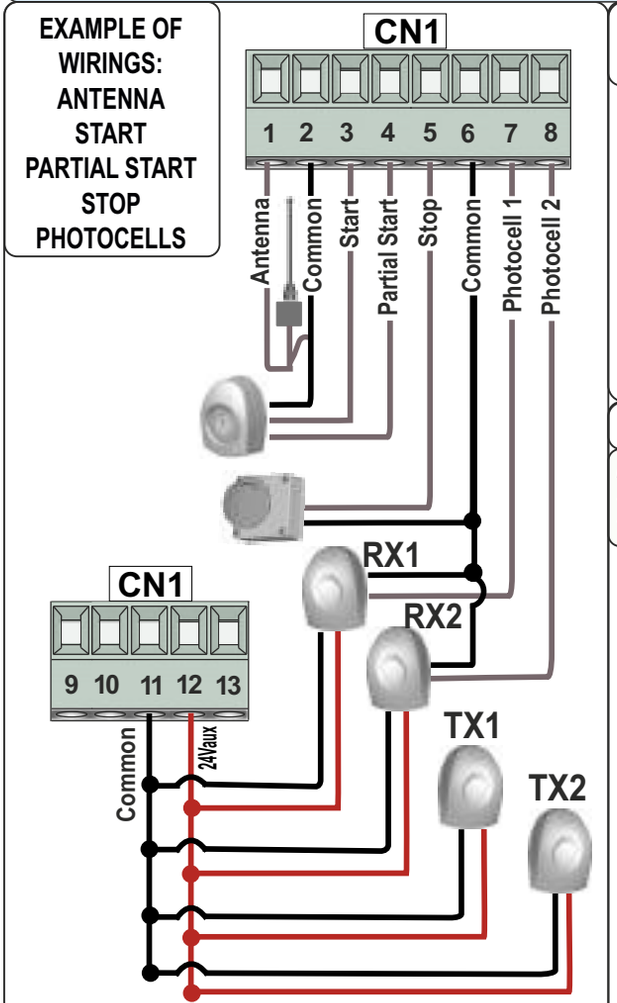
**8** START THE WORKING TIMES LEARNING BY FOLLOWING THE PROCEDURE IN ***CHAPTER 13***

***THE UNIGATE UNIT HAS HUNDREDS OF SPECIFIC FUNCTIONS AND SETTINGS THAT ALLOW ITS USE IN VARIOUS APPLICATIONS AND CONDITIONS; IT ALSO ALLOWS THE CONNECTION OF MANY ACCESSORIES, SUCH AS DIFFERENT TYPES OF ENCODERS OR LIMIT SWITCHES, POTENTIOMETERS, BUTTONS, VARIOUS SAFETY DEVICES, ETC.***

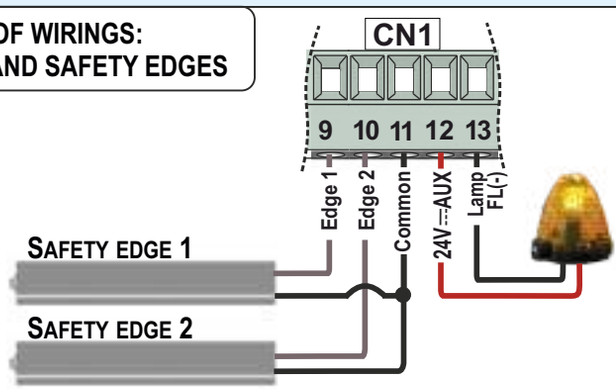
***FOR ALL THESE REASONS, SEA RECOMMENDS TO BROWSE THE COMPLETE TECHNICAL MANUAL BEFORE USE!***

# 1 - MAIN WIRINGS ON «UNILOGIC» MODULE

**EXAMPLE OF WIRINGS: ANTENNA START PARTIAL START STOP PHOTOCELLS**

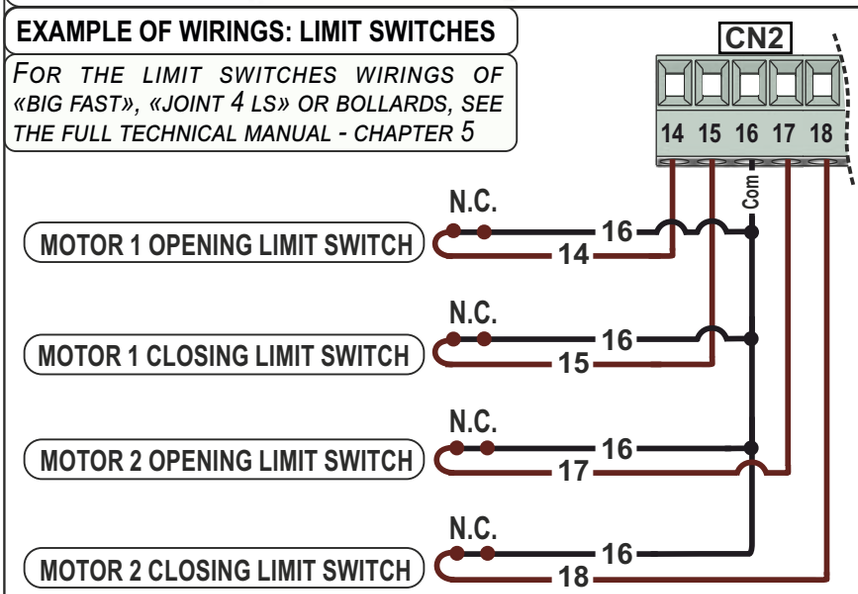


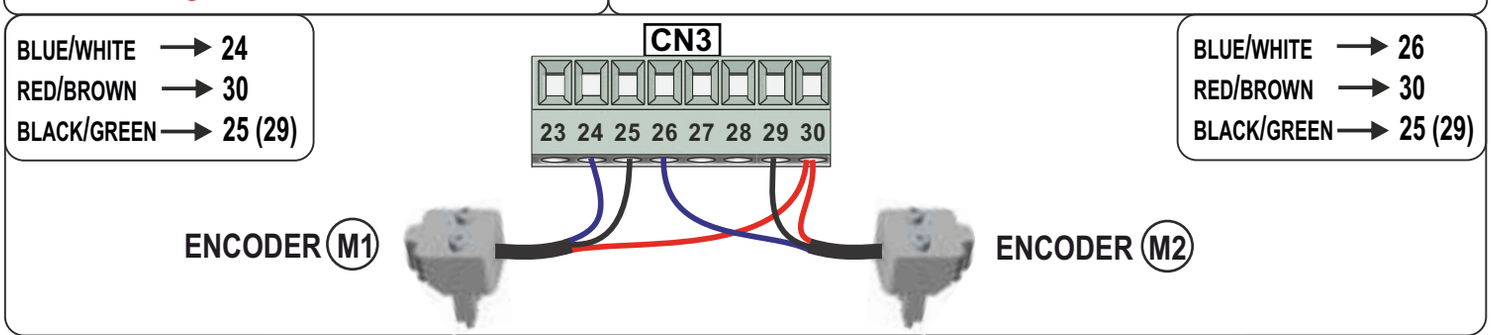

**EXAMPLE OF WIRINGS: FLASHING LAMP AND SAFETY EDGES**

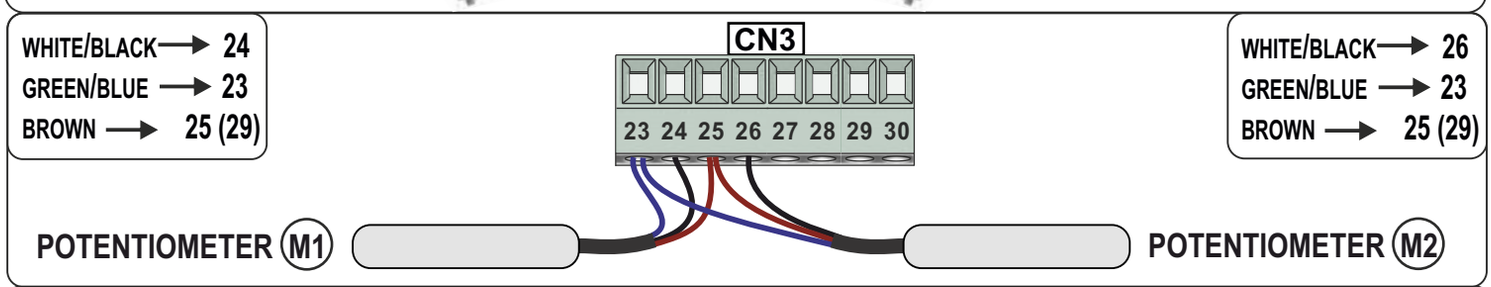



**EXAMPLE OF WIRINGS: LIMIT SWITCHES**

*FOR THE LIMIT SWITCHES WIRINGS OF «BIG FAST», «JOINT 4 LS» OR BOLLARDS, SEE THE FULL TECHNICAL MANUAL - CHAPTER 5*




*FOR THE WIRINGS OF OTHER ENCODER TYPES AND FOR ENCODER/POTENTIOMETER ADJUSTMENTS, SEE THE FULL TECHNICAL MANUAL*

**FOR THE CONNECTION OF FURTHER ACCESSORIES, FOR MORE DETAILS ON THE SPECIAL INPUTS «COMIS», «GP1», «GP2», «RELAY 1» AND «RELAY 2» AND FOR ALL DETAILS ON ACCESSORIES SETTINGS, SEE THE FULL TECHNICAL MANUAL**

## 2 - MOTOR WIRINGS ON «FV» INVERTER MODULE

### UNIGATE - 1I

MOTOR

C5A DRY U V W

MOTOR 1 (230V)
U = BLACK
V = BLUE
W = BROWN

*DO NOT CONNECT CAPACITORS!*

*EXEMPLE*

CONNECTOR ON THE FIRST «FV» MODULE

### UNIGATE - 2I

MOTOR

C5A DRY U V W

MOTOR 2 (230V)
U = BLACK
V = BLUE
W = BROWN

*DO NOT CONNECT CAPACITORS!*

*EXEMPLE*

CONNECTOR ON THE SECOND «FV» MODULE

## 3 - MOTOR WIRINGS ON «2PM» MODULE

### UNIGATE 2PM

CN2

31 32 33 34 35

MOTOR 1 (230V)
PHASE 1 = BLACK
NEUTRAL = BLUE
PHASE 2 = BROWN


*EXEMPLE*

CN3

36 37 38 39 40

MOTOR 2 (230V)
PHASE 1 = BLACK
NEUTRAL = BLUE
PHASE 2 = BROWN


*EXEMPLE*

⇨ UNIGATE 4PM: *CONNECT THE OTHER TWO OPERATORS ON CN2 AND CN3 OF THE SECOND 2PM MODULE*

## 4 - MOTOR WIRINGS ON «24V» MODULE

### UNIGATE 24V

CN2

M 1

MOTOR 1 (24V)
+ = RED (BROWN)
– = BLACK (BLUE)

*EXEMPLE*

CN3

M 2

MOTOR 1 (24V)
+ = RED (BROWN)
– = BLACK (BLUE)

*EXEMPLE*

## 5 - MOTOR WIRINGS ON «BR» 36V MODULE

### UNIGATE BR

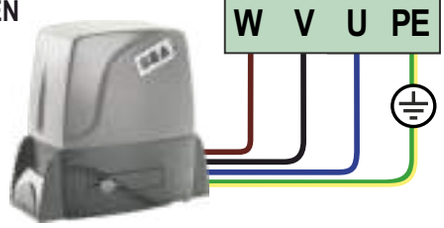
MOTOR 1 (36V)
W = BROWN
V = BLACK
U = BLUE
PE = YELLOW/GREEN

*IT IS MANDATORY TO CONNECT THE GROUND CABLE ON THE «PE» INPUT*

CONNECTOR ON THE FIRST «BR» MODULE

CN1

W V U PE



### UNIGATE 2BR

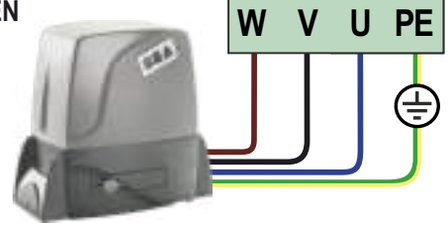
MOTOR 2 (36V)
W = BROWN
V = BLACK
U = BLUE
PE = YELLOW/GREEN

*IT IS MANDATORY TO CONNECT THE GROUND CABLE ON THE «PE» INPUT*

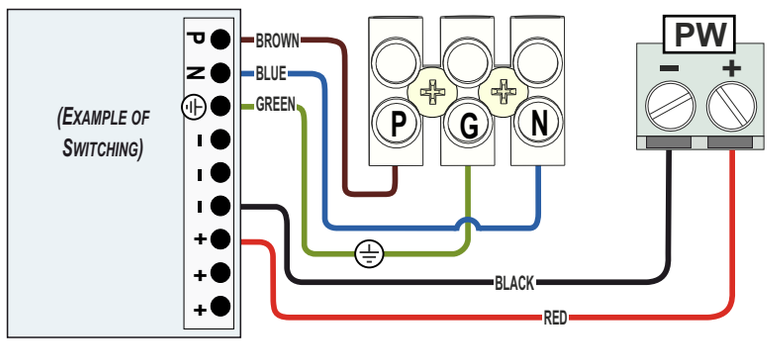
CONNECTOR ON THE SECOND «BR» MODULE

CN1

W V U PE



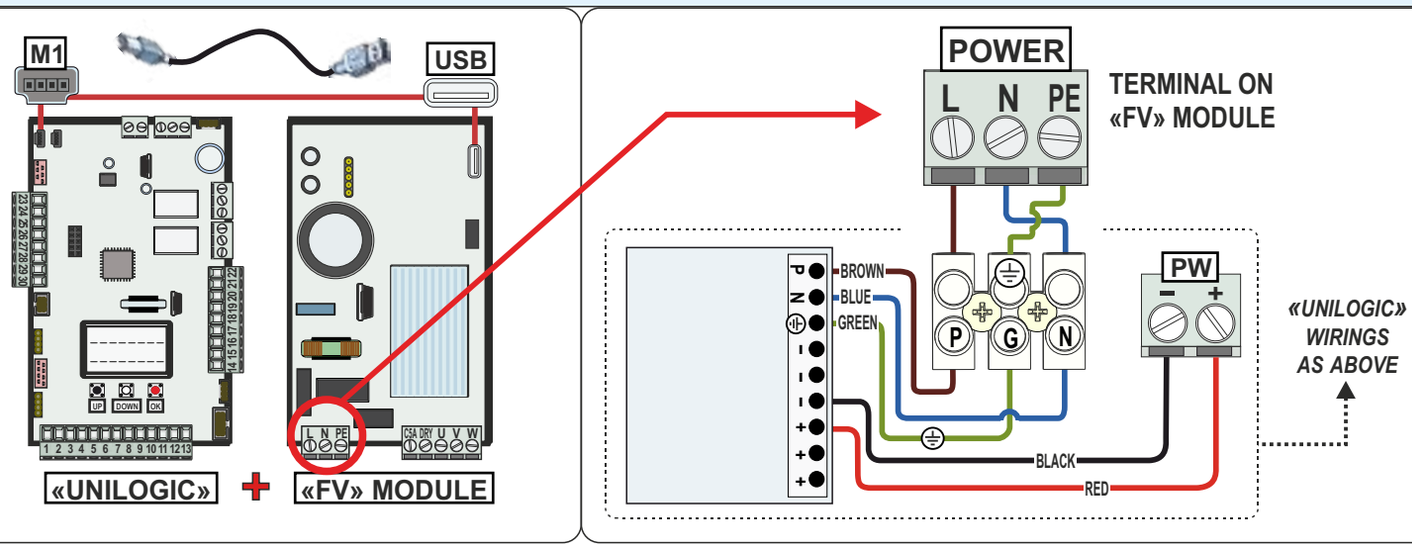
# 6 - «UNILOGIC» MODULE POWER SUPPLY WIRINGS



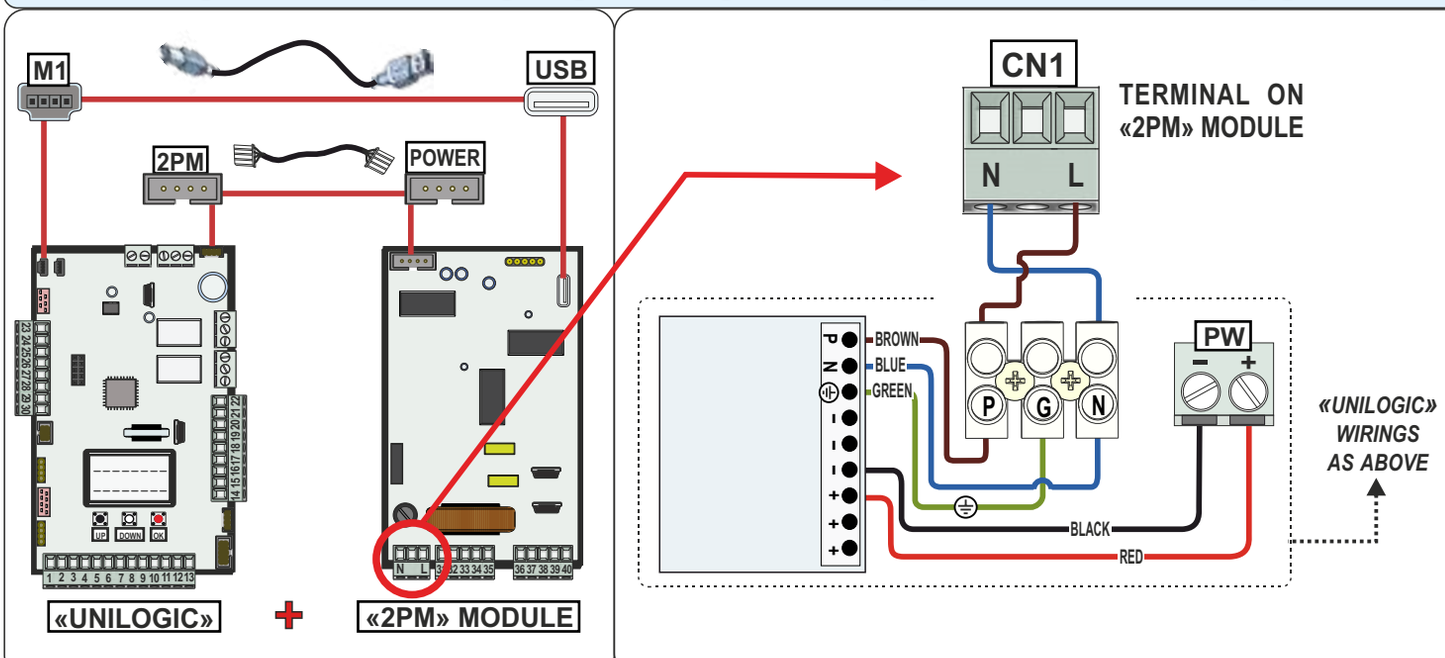

- FUSE 16AT DELAYED ON 230V~ POWER SUPPLY
  FUSE 16AT DELAYED ON 115V~ POWER SUPPLY
- USE A 16A DIFFERENTIAL SWITCH TO PROTECT THE POWER SUPPLY SYSTEM
- IN CASE OF UNSTABLE POWER SUPPLY, THE USE OF AN EXTERNAL UPS OF MIN.800VA IS RECOMMENDED

***FOR THE CONNECTION TO THE POWER GRID RESPECT THE LAWS IN FORCE***

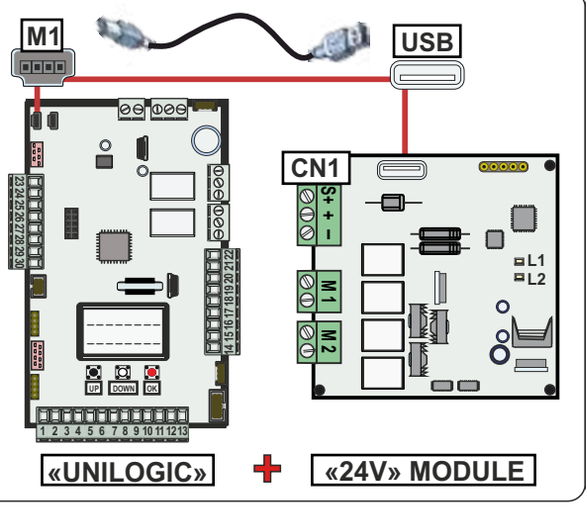
# 7 - «FV» MODULE POWER SUPPLY WIRINGS

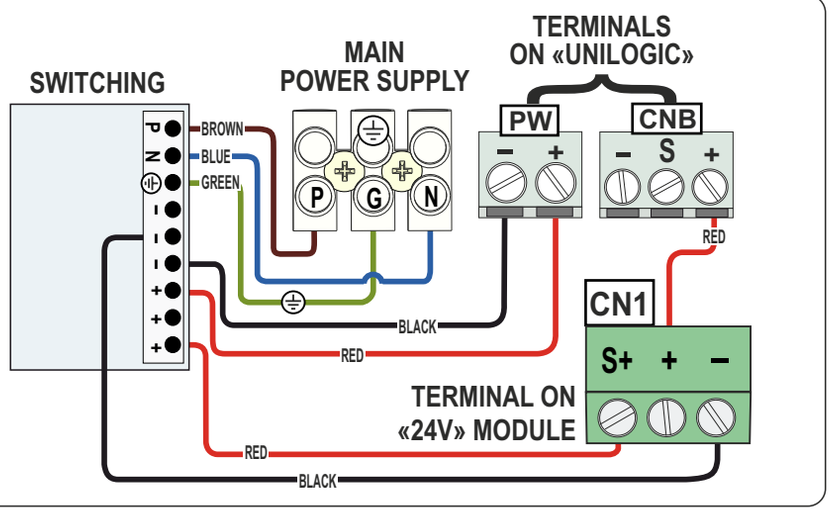



# 8 - «2PM» MODULE POWER SUPPLY WIRINGS

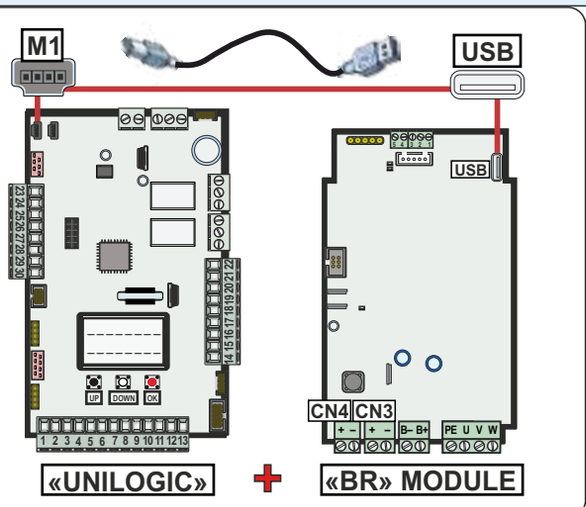


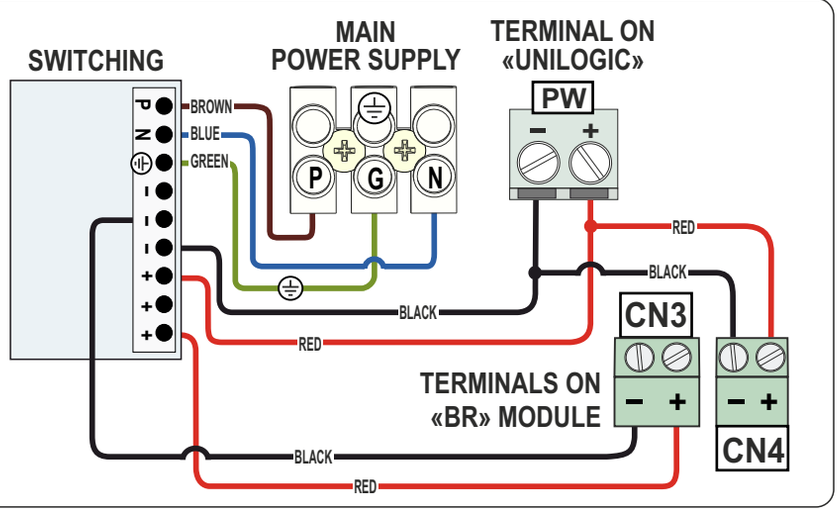
## 9 - «24V» MODULE POWER SUPPLY WIRINGS




## 10 - «BR» MODULE POWER SUPPLY WIRINGS

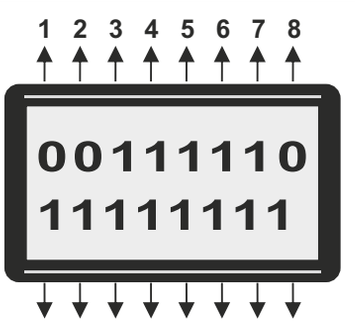



## 11 - INPUTS STATUS

- EVERY INPUT CORRESPONDS TO A POSITION ON THE DISPLAY, ACCORDING TO THE DIAGRAM BELOW
- EVERY INPUT CAN BE: **NORMALLY OPEN (0) - NORMALLY CLOSED (1)**

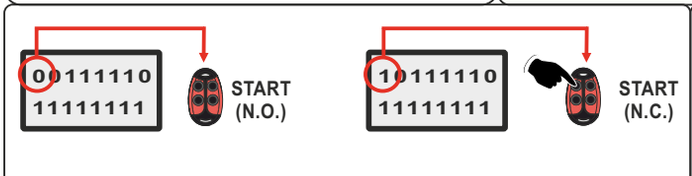
**0** **N.O. - NORMALLY OPEN** **1** **N.C. - NORMALLY CLOSED**

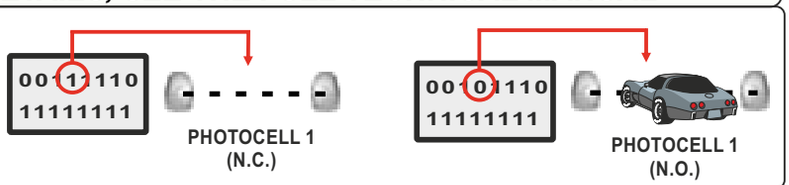



| | | | |
|---|---|---|---|
| 1 | START (**) | 9 | MOTOR 1 OPENING LIMIT SWITCH |
| 2 | PARTIAL START | 10 | MOTOR 1 CLOSING LIMIT SWITCH |
| 3 | STOP | 11 | MOTOR 2 OPENING LIMIT SWITCH |
| 4 | PHOTOCELL 1 | 12 | MOTOR 2 CLOSING LIMIT SWITCH |
| 5 | PHOTOCELL 2 | 13 | E1/D1 (DATA M1) (*) |
| 6 | SAFETY EDGE 1 | 14 | E2/D2 (DATA M2) (*) |
| 7 | SAFETY EDGE 2 | 15 | GP1 (*) |
| 8 | NOT IN USE | 16 | GP2 (*) |

* *INPUTS AVAILABLE ONLY IF THE SLOWDOWN LIMIT SWITCHES ARE CONNECTED*

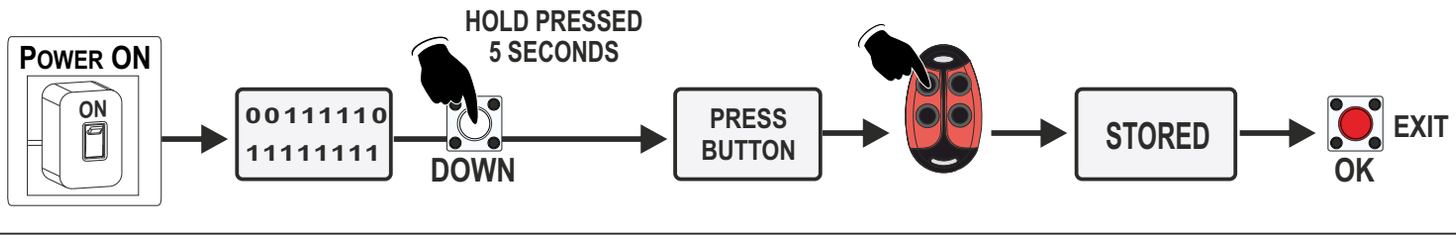
***FOR MORE DETAILS, SEE THE FULL TECHNICAL MANUAL***




**START AND PARTIAL START MUST BE N.O. (0) - ALL OTHER CONTACTS MUST BE N.C. (1)**

# 12 - «START» COMMAND ON TRANSMITTER QUICK LEARNING

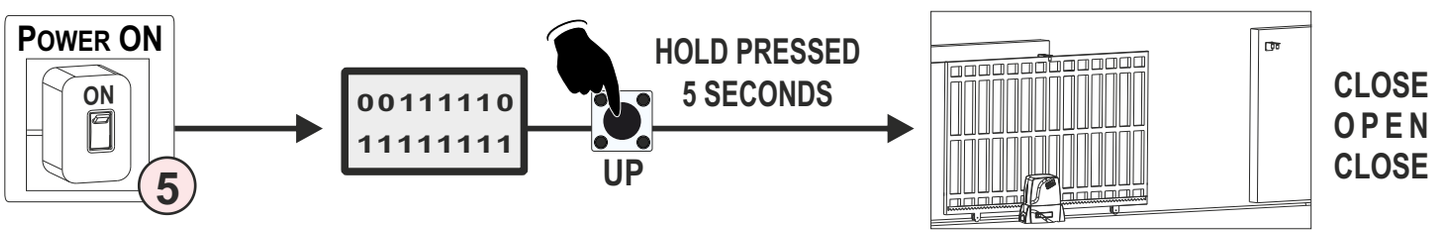



# 13 - WORKING TIMES LEARNING

**DANGER!**

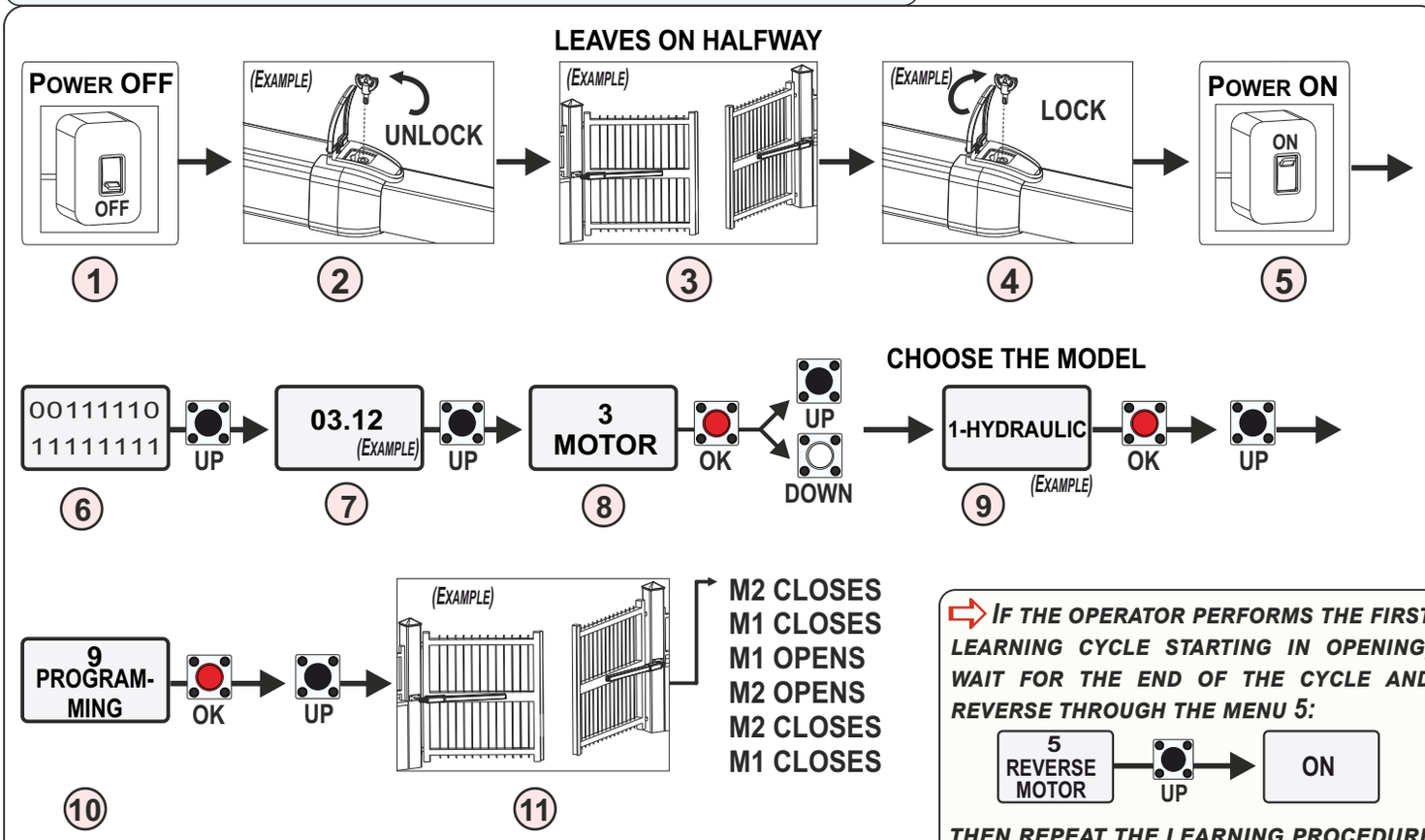
*HAVE A QUALIFIED SERVICE PERSON TO CARRY OUT THE OPERATIONS IN SAFE CONDITIONS*

## QUICK START - *ONLY FOR SEA SLIDING OPERATORS*




*MOVE THE GATE ON ITS HALFWAY BEFORE STARTING! SEE FROM POINT (1) TO POINT (5) OF THE PROCEDURE BELOW*

## PROCEDURE - *MORE DETAILS IN THE FULL TECHNICAL MANUAL*




*IF THE OPERATOR PERFORMS THE FIRST LEARNING CYCLE STARTING IN OPENING, WAIT FOR THE END OF THE CYCLE AND REVERSE THROUGH THE MENU 5:*




*THEN REPEAT THE LEARNING PROCEDURE*

*THE WORKING TIMES LEARNING COULD REQUIRE THE INSTALLATION OF LIMIT SWITCHES OR ENCODER OR POTENTIOMETER; FOR THE NECESSARY SETTINGS, CONSULT THE FULL TECHNICAL MANUAL*

# MENU FUNCTIONS TABLE - UNIGATE

**LEGEND**
**INVERTER - FUNCTION AVAILABLE ON MODEL UNIGATE WITH "FV" INVERTER MODULE (1I - 2I - 1I BIG - 2I BIG)**
**2PM - FUNCTION AVAILABLE ON MODEL UNIGATE WITH 2PM MODULE**
**24V - FUNCTION AVAILABLE ON MODEL UNIGATE WITH 24V MODULE**
**BR - FUNCTION AVAILABLE ON MODEL UNIGATE WITH BR MODULE**
**ALL - COMMON FUNCTIONS - AVAILABLE ON ALL UNIGATE MODELS**

| MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **1** | LANGUAGE | *Italiano* | Italian | *ALL* | *English* | |
| | | *English* | English | | | |
| | | *Français* | French | | | |
| | | *Español* | Spanish | | | |
| | | *Dutch* | Dutch | | | |
| **2** | TRANSMITTERS | *Start* | Start | *ALL* | *Start* | |
| | | *Partial opening* | Partial opening | | *Partial openin g* | |
| | | *External module* | External module | | | |
| | | *Stop* | Stop | | | |
| | | *Relay 1* | To Activate Relay 1 for 3 seconds. This function requires menu "Relay 1" set on "TX Relay" | | | |
| | | *Relay 2* | To Activate Relay 2 for 3 seconds. This function requires menu "Relay 2" set on "TX Relay" | | | |
| | | *Bistable Stop* | Pressed once, it stops the gate.<br>Pressed twice, it reactivates the START input | | | |
| | | *Latch opening* | One impulse opens and keep open.<br>A second impulse restore the movement | | | |
| | | *Latch closing* | One impulse closes and keep closed.<br>A second impulse restore the movement | | | |
| | | *Unlock* | To store a command for unlocking the electric brake | | | |
| | | *Delete a transmitter* | To delete a single transmitter (TX) | | | |
| | | *Move to EEP* | To transfer the transmitters stored on the control unit to the external EEPROM (MEM), if connected | | | |
| | | *Clear memory* | To delete the full TX memory on the receiver | | | |
| | | *End* | To exit the menu "transmitters" | | | |
| **3** | MOTOR | ***1-** Hydraulic* | Hydraulic operators - Series I ***(INVERTER)*** | ***INVERTER 2PM*** | *Hydraulic* | |
| | | ***2-** Sliding* | Sliding operators - Series I ***(INVERTER)*** | | | |
| | | ***3-** Reversible Sliding* | Reversible sliding operators - Series I ***(INVERTER)*** | | | |
| | | ***4-** Electromechanic swing* | Electromechanic swing operators - Series I ***(INVERTER)*** | | | |
| | | ***5-** Three-phase - Bollards* | Three-phase operators and Bollards<br>Series I BIG ***(INVERTER with BIG module)*** | | | |
| | | ***7-** Barrier* | Barriers - Series I ***(INVERTER)*** | ***INVERTER*** | | |
| | | ***8-** BIG Fast<br>BIG Super Fast 4LS* | Sliding operators - Series I BIG<br>***(INVERTER with BIG module)*** | | | |
| | | ***9-** BIG* | Sliding operators - Series I BIG<br>***(INVERTER with BIG module)*** | | | |
| | | ***10-** JOINT 4LS* | Hydraulic operator with 4 limit switch<br>***Series I (INVERTER)*** | | | |
| | | ***60-** BIG RS 485* | Sliding operators - Series I BIG<br>***(INVERTER with BIG module)*** | | | |
| | | ***61-** SEAGEAR RS 485* | Sliding operators - Series I BIG ***(INVERTER with BIG module)*** | | | |
| | | ***62-** RAPID DOOR* | Electromechanic operator - Series I ***(INVERTER)*** | | | |
| | | ***64-** LEPUS FAST ** | Sliding operators - Series I (INVERTER) | | | |

*continues…*

| MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| 3 | MOTOR | ***32-** ORION BOX FAST* | 24Vdc electromechanic operator | ***24V*** | *SURF* | |
| | | ***35-** SURF* | 24Vdc electromechanic operator | | | |
| | | ***39-** HT 270/390 24VDC* | 24Vdc hydraulic operator | | | |
| | | ***43-** SURF FAST* | 24Vdc electromechanic operator | | | |
| | | ***65** KITE LS* | 24Vdc electromechanic operator | | | |
| | | ***50-** HALF TANK BR* | Hydraulic operator - Series BR ***(BRUSHLESS)*** | ***BR*** | *HALF TANK BR* | |
| | | ***51-** SURF BR* | Electromechanic swing operator - Series BR ***(BRUSHLESS)*** | | | |
| | | ***52-** SATURN BR* | Electromechanic operator - Series BR ***(BRUSHLESS)*** | | | |
| | | ***54-** SPRINT BR* | Hydraulic barrier - Series BR ***(BRUSHLESS)*** | | | |
| | | ***55** KITE LS BR* | Operatore elettromeccanico - *Serie BR* ***(BRUSHLESS)*** | | | |
| | | ***56-** COMPACT BR* | Hydraulic operator - Series BR ***(BRUSHLESS)*** | | | |
| | | ***57-** JOINT BR* | Operatore idraulico - Serie BR ***(BRUSHLESS)*** | | | |
| | | ***58-** LEPUS BR (ABC)* | Scorrevole con Encoder ABC - Serie BR ***(BRUSHLESS)*** | | | |
| **** Only for LEPUS FAST 220V. In case of LEPUS FAST 110V, choose the option 2-Sliding*** | | | | | | |
| 4 | GATES NUMBER | *From 1 to 2* | To set the number of motors to be managed | ***INVERTER 24V - BR*** | *1* | |
| | | *From 1 to 4* | | ***2PM*** | *2* | |
| 5 | REVERSE MOTOR | *On* | To reverse the opening with the closing or vice-versa ***(both motors and limit-switches are reversed)*** | *ALL* | *Off* | |
| | | *Off* | Off | | | |
| 6 | LOGIC | *Automatic* | Automatic | *ALL* | *Auto-matic* | |
| | | *Open-stop-close-stop-open* | Step by step type 1 | | | |
| | | *Open-stop-close-open* | Step by step type 2 | | | |
| | | *2 button* | Two buttons | | | |
| | | *Safety* | Safety | | | |
| | | *Dead man* | Dead man | | | |
| 7 | PAUSE TIME | *Off* | Semi-automatic logic - ***(a START command opens and another START closes - automatic closing disabled)*** | *ALL* | *Off* | |
| | | *1 240* | Setting from 1 second to 4 minutes | | | |
| 8 | START IN PAUSE | *Off* | The Start command is not accepted during pause | *ALL* | *Off* | |
| | | *On* | The Start command is accepted during pause | | | |
| 9 | PROGRAMMING | *Off On* | To start the working times self-learning | *ALL* | *Off* | |
| | | *Choose direction* | ***This menu is shown only if an Encoder RS 485 is connected*** - it allows to program one or two operators with RS 485 Encoder, in automatic or manual mode | ***INVERTER 24V BR*** | | |
| 10 | TEST START | *Off On* | To give a Start command for testing the automation | *ALL* | *Off* | |
| 11 | BEAM LENGTH | *3m - 4m - 5m - 6m 7m - 7,5m - 8m* | This menu will be shown only if the option **7-Barrier is set in the menu 3-MOTORS**. It allows to choose the beam length ***(values in meters)*** | ***INVERTER BR*** | - - - - | |
| 12 | SLOWDOWN LIMIT SWITCH | *Off On* | This menu will be shown only if the option **5-Threephase/Bollards is set in the menu 3-MOTORS.** It allows to activate the slowdown limit switch on bollards | ***INVERTER*** | *Off* | |
| 13 | LATCH PAUSE | *Off On* | If "ON" the operator complies with the pause time set when the function "LATCH OPENING" is disabled. When "OFF" the pause time set is not respected | ***INVERTER 24V BR*** | *Off* | |

| MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **14** | RESET | A count-down of 5 seconds will start by holding the UP button; at its end "INIT" will appear on the display as confirmation of the control board reset | | | | |
| **192** | MOVE GATE 1 * | Allows the movement of the gate in a temporary "dead man" mode<br>*(for example to test the correct running of the motor)*<br>HOLD **UP** PRESSED = THE GATE OPENS<br>HOLD **DOWN** PRESSED = THE GATE CLOSES |  | ***INVERTER 24V BR*** | - - - - | |
| **193** | MOVE GATE 2 * | Allows the movement of the gate in a temporary "dead man" mode<br>*(for example to test the correct running of the motor)*<br>HOLD **UP** PRESSED = THE GATE OPENS<br>HOLD **DOWN** PRESSED = THE GATE CLOSES |  | ***INVERTER 24V BR*** | - - - - | |
| **** The command is accepted only at the end of the cycle or after a STOP; it is not accepted during the cycle and during the pause*** | | | | | | |
| **15** | END | *Press OK to return to the display of the firmware version and to the one of inputs state* | | | | |
| **16** | SPECIAL MENU | *Press OK to enter the special menu* | | | | |

# SPECIAL MENU


**PRESS AT THE SAME TIME FOR 5 SECONDS TO ENTER OR TO EXIT THE SPECIAL MENU**

**LEGEND**
**INVERTER - FUNCTION AVAILABLE ON MODEL UNIGATE WITH "FV" INVERTER MODULE (1I - 2I - 1I BIG - 2I BIG)**
**2PM - FUNCTION AVAILABLE ON MODEL UNIGATE WITH 2PM MODULE**
**24V - FUNCTION AVAILABLE ON MODEL UNIGATE WITH 24V MODULE**
**BR - FUNCTION AVAILABLE ON MODEL UNIGATE WITH BR MODULE**
**ALL - COMMON FUNCTIONS - AVAILABLE ON ALL UNIGATE MODELS**

| | SPECIAL MENU | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **17** | OPENING SPEED 1 | *10 100* | Speed in opening Motor 1 | ***INVERTER*** | *80* | |
| | | *20 100* | | ***24V*** | | |
| | | *30 100* | | ***BR*** | | |
| **18** | CLOSING SPEED 1 | *10 100* | Speed in closing Motor 1 | ***INVERTER*** | *80* | |
| | | *20 100* | | ***24V*** | | |
| | | *30 100* | | ***BR*** | | |
| **19** | OPENING SPEED 2 | *10 100* | Speed in opening Motor 2 | ***INVERTER*** | *80* | |
| | | *20 100* | | ***24V*** | | |
| | | *30 100* | | ***BR*** | | |
| **20** | CLOSING SPEED 2 | *10 100* | Speed in closing Motor 2 | ***INVERTER*** | *80* | |
| | | *20 100* | | ***24V*** | | |
| | | *30 100* | | ***BR*** | | |
| **21** | SLOWDOWN SPEED IN OPENING 1 | *From 10% to 60% of the maximum speed* | slowdown speed in opening Motor 1 | ***INVERTER 24V - BR*** | *30* | |
| **22** | SLOWDOWN SPEED IN CLOSING 1 | *From 10% to 60% of the maximum speed* | slowdown speed in closing Motor 1 | ***INVERTER 24V - BR*** | *30* | |
| **23** | SLOWDOWN SPEED IN OPENING 2 | *From 10% to 60% of the maximum speed* | slowdown speed in opening Motor 2 | ***INVERTER 24V - BR*** | *30* | |
| **24** | SLOWDOWN SPEED IN CLOSING 2 | *From 10% to 60% of the maximum speed* | slowdown speed in closing Motor 2 | ***INVERTER 24V - BR*** | *30* | |
| **25** | LEARNING SPEED | *10% 100 %* | To adjust the time self-learning speed. This parameter can change according to the motor type set | ***INVERTER*** | *50* | |
| | | *20% 100 %* | | ***24V BR*** | | |
| ***NOTE: The range of values that can be set in all the SPEED menus may vary according to the operator model*** | | | | | | |
| **26** | LEAF DELAY IN OPENING | *Off 6 Total* | Adjustable from Off to 6 seconds to "Total" ***(if on "Total" the Motor2 will start opening only after the Motor1 has completed the movement)*** | ***INVERTER 24V BR*** | *1,5* | |
| | | *Off 6* | Adjustable from OFF *(disabled)* to 6 seconds | ***2PM*** | | |
| **27** | LEAF DELAY IN CLOSING | *Off 20 Total* | Adjustable from Off to 20 seconds to "Total" ***(if on "Total" the Motor1 will start closing only after the Motor2 has completed the movement)*** | ***INVERTER 24V BR*** | *2,5** | |
| | | *Off 20* | Adjustable from OFF *(disabled)* to 20 seconds | ***2PM*** | | |
| **28** | OPENING TORQUE 1 | *50% 100 %* | **Motor 1 opening torque:** by increasing the torque, more strength will be required to execute the inversion in case of obstacle | ***INVERTER 2PM*** | *100%* | |
| | | *10% 100 %* | | ***24V*** | | |
| | | *5% 100 %* | | ***BR*** | | |
| **29** | CLOSING TORQUE 1 | *50% 100 %* | **Motor 1 closing torque:** by increasing the torque, more strength will be required to execute the inversion in case of obstacle | ***INVERTER 2PM*** | *100%* | |
| | | *10% 100 %* | | ***24V*** | | |
| | | *5% 100 %* | | ***BR*** | | |
| **30** | OPENING TORQUE 2 | *50% 100 %* | **Motor 2 opening torque:** by increasing the torque, more strength will be required to execute the inversion in case of obstacle | ***INVERTER 2PM*** | *100%* | |
| | | *10% 100 %* | | ***24V*** | | |
| | | *5% 100 %* | | ***BR*** | | |
| **31** | CLOSING TORQUE 2 | *50% 100 %* | **Motor 2 closing torque:** by increasing the torque, more strength will be required to execute the inversion in case of obstacle | ***INVERTER 2PM*** | *100%* | |
| | | *10% 100 %* | | ***24V*** | | |
| | | *5% 100 %* | | ***BR*** | | |
| ***NOTE: The range of values that can be set in all the TORQUE menus may vary according to the operator model*** | | | | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **32** | ENCODER | *On* | **ON** = Encoder enabled<br>**OFF** = Encoder disabled<br>***(when OFF, the working times learnt are only shown)*** | *ALL* | *It depends on motor* | |
| | | *Enc ABC* | To enable the rotary Encoder for the management of the brushless operator and its position | ***BR*** | *It depends on motor* | |
| | **47** ENCODER PAR.1 | *xxx.* | Impulses read by Encoder during operation ***(Motor1)*** | | | |
| | **48** ENCODER TOT. 1 | *xxx.* | Impulses stored during programming ***(Motor 1)*** | | | |
| | **49** ENCODER PAR.1 | *xxx.* | Impulses read by Encoder during operation ***(Motor2)*** | | | |
| | **50** ENCODER TOT. 2 | *xxx.* | Impulses stored during programming ***(Motor 2)*** | | | |
| **32** | ENCODER | *Potentiometer* | To enable the reading of the potentiometer | *ALL* | *Off* | |
| | | *Absolute* | To enable the reading of the absolute Encoder | ***INVERTER BR*** | | |
| | | *RS 485* | To enable the reading of the absolute rotative Encoder | ***INVERTER 24V - BR*** | | |
| | **51** I.PAR.M1 * | - - - - - - - - | To show the current position of the potentiometer on the leaf moved by **Motor 1**. This parameter is useful to see if the potentiometer is correctly read | | | |
| | **52** I.AP.M1 | From the value learnt to ± 100 pulses | To show the impulses stored by the control unit when the leaf moved by **Motor 1** is fully open | | | |
| | **53** I.CH.M1 | From the value learnt to ± 100 pulses | To show the impulses stored by the control unit when the leaf moved by **Motor 1** is fully close | | | |
| | **54** I.PAR.M2 * | - - - - - - - - | To show the current position of the potentiometer on the leaf moved by **Motor 2**. This parameter is useful to see if the potentiometer is correctly read | | | |
| | **55** I.AP.M2 | From the value learnt to ± 100 pulses | To show the impulses stored by the control unit when the leaf moved by **Motor 2** is fully open | | | |
| | **56** I.CH.M2 | From the value learnt to ± 100 pulses | To show the impulses stored by the control unit when the leaf moved by **Motor 2** is fully close | | | |
| **** While the partial impulses are displayed, it is possible to OPEN (by pressing UP) or CLOSE (by pressing DOWN) the corrsponding operator to verify the correct reading of the potentiometer after installation or simply for checking*** | | | | | | |
| **32** | ENCODER | *Off* | **ON** = Encoder enabled<br>**OFF** = Encoder disabled<br>***(when OFF, the working times learnt are only shown)*** | *ALL* | *Off* | |
| | **65** OPENING TIME M1 | *xxx.s* | To display the learnt value during the working times self learning, in opening and closing **(Motor 1)**. With UP or DOWN it is possible to increase or reduce the working times | | | |
| | **66** CLOSING TIME M1 | *xxx.s* | | | | |
| | **67** OPENING TIME M2 | *xxx.s* | To display the learnt value during the working times self learning, in opening and closing **(Motor 2)**. With UP or DOWN it is possible to increase or reduce the working times | | | |
| | **68** CLOSING TIME M2 | *xxx.s* | | | | |
| **33** | OPENING SENSITIVITY MOTOR 1 | *10% (Fast intervention)*<br>*99% (Slow intervention)* | To adjust the Encoder or Potentiometer intervention time on Motor 1 in opening | *ALL* | *Off* | |
| | | *Off (Intervention excluded)* | Disabled | | | |
| **34** | CLOSING SENSITIVITY MOTOR 1 | *10% (Fast intervention)*<br>*99% (Slow intervention)* | To adjust the Encoder or Potentiometer intervention time on Motor 1 in closing | *ALL* | *Off* | |
| | | *Off (Intervention excluded)* | Disabled | | | |
| **35** | OPENING SENSITIVITY MOTOR 2 | *10% (Fast intervention)*<br>*99% (Slow intervention)* | To adjust the Encoder or Potentiometer intervention time on Motor 2 in opening | *ALL* | *Off* | |
| | | *Off (Intervention excluded)* | Disabled | | | |
| **36** | CLOSING SENSITIVITY MOTOR 2 | *10% (Fast intervention)*<br>*99% (Slow intervention)* | To adjust the Encoder or Potentiometer intervention time on Motor 2 in closing | *ALL* | *Off* | |
| | | *Off (Intervention excluded)* | Disabled | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **37** | SLOWDOWN SENSITIVITY MOTOR | *10% (Fast intervention)*<br>*99% (Slow intervention)* | To adjust the amperometric sensitivity in slowdown<br>***Function available only on electro-mechanic operators*** | *ALL* | *Off* | |
| | | *With potentiometer* | To set the inversion time in slow-down from 0 to 5 seconds ***(= 99%) - Only with potentiometer enabled*** | | *30%* | |
| **38** | POTENTIOMETER 1 THRESHOLD IN OPENING | *1 1000*<br>***(only if the Menu 32 is set on "Potentiometer")*** | To adjust the threshold of the potentiometer intervention. This parameter self-determines during the working times learning but can also be adjusted later, on the condition that the set value is higher than the value shown in VP1 or VP2 (instantaneous speed values which can be shown by accessing the DEBUG menu).<br>***NOTE: The lower the threshold value, the slower will be the response of the potentiometer.*** | *ALL* | - - - - | |
| **39** | POTENTIOMETER 1 THRESHOLD IN CLOSING | | | | | |
| **40** | POTENTIOMETER 2 THRESHOLD IN OPENING | | | | | |
| **41** | POTENTIOMETER 2 THRESHOLD IN CLOSING | | | | | |
| **42** | POTENTIOMETER 1 OPENING SLOW DOWN THRESHOLD | *1 100*<br>***(only if the Menu 32 is set on "Potentiometer")*** | To adjust the threshold of the potentiometer intervention in slowdown. By default this value is set on 10. but can be manually increased on the condition that the set value is higher than the value shown in VP1 or VP2 ***(instantaneous speed values which can be shown by accessing the DEBUG menu)*** | *ALL* | *15* | |
| **43** | POTENTIOMETER 1 CLOSING SLOW DOWN THRESHOLD | | | | | |
| **44** | POTENTIOMETER 2 OPENING SLOW DOWN THRESHOLD | | | | | |
| **45** | POTENTIOMETER 2 CLOSING SLOW DOWN THRESHOLD | | | | | |
| **46** | CLOSING INVERSION | *Total* | In case of obstacle or safety edge it totally reverses the movement during closing. If active, the automatic reclosing will be attempted for 5 times | *ALL* | *Total* | |
| | | *Partial* | In case of obstacle, safety edge or potentiometer, it partially reverses direction ***(of about 30 cm)*** then stops | | | |
| ***For menu 47 and 50 see menu 32-Encoder = On*** | | | | | | |
| ***For menu from 51 to 56 see menu 32-Encoder = Potentiometer*** | | | | | | |
| **57** | WORKING CURRENT 1 | *..... Ampere* | To display the absorbed current during Motor 1 working | ***INVERTER 24V BR*** | - - - - | |
| **58** | WORKING CURRENT 2 | *..... Ampere* | To display the absorbed current during Motor 2 working | ***INVERTER 24V BR*** | - - - - | |
| **59** | OPENING SLOWDOWN 1 | *0 50* | From 0% to 50% of the stroke<br>***(0% = slowdown excluded)*** | *ALL* | *30* | |
| **60** | CLOSING SLOWDOWN 1 | *0 50* | From 0% to 50% of the stroke<br>***(0% = slowdown excluded)*** | *ALL* | *30* | |
| **61** | OPENING SLOWDOWN 2 | *0 50* | From 0% to 50% of the stroke<br>***(0% = slowdown excluded)*** | *ALL* | *30* | |
| **62** | CLOSING SLOWDOWN 2 | *0 50* | From 0% to 50% of the stroke<br>***(0% = slowdown excluded)*** | *ALL* | *30* | |
| **63** | DECELERATION | *0 %*<br>*100%*  | To adjust the change from normal speed to slowdown speed | *ALL* | *It depends on motor* | |
| **64** | ACCELERATION | *0,1 s*<br>*5 s*  | Acceleration ramp.<br>To adjust the motor start | *ALL* | *It depends on motor* | |
| ***For menu from 65 to 68 see menu 32-Encoder = Off (They are visible even with 32-Encoder set ON)*** | | | | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **69** | ANTI OVERLAP | *Off* | To disable the anti-overlapping control of the leaves allowing their separate control | *ALL* | *Off* | |
| | | *On* | To enable the anti-overlapping control of the leaves | | | |
| **70** | OPENING POSITION RECOVERY | *0 20 seconds* ***(only if 32-Encoder is OFF)*** | To retrieve the inertia of the motor in opening after the Stop or the reversing | *ALL* | *It depends on motor* | |
| **71** | CLOSING POSITION RECOVERY | *0 20 seconds* ***(only if 32-Encoder is OFF)*** | To retrieve the inertia of the motor in closing after the Stop or the reversing | *ALL* | *It depends on motor* | |
| **72** | OPENING TOLE-RANCE MOTOR 1 | *0% 100%* | To adjust the Motor 1 tolerance between the stop and the obstacle, in opening | *ALL* | *20%* | |
| **73** | CLOSING TOLE-RANCE MOTOR 1 | *0% 100%* | To adjust the Motor 1 tolerance between the stop and the obstacle, in closing | *ALL* | *20%* | |
| **74** | OPENING TOLE-RANCE MOTOR 2 | *0% 100%* | To adjust the Motor 2 tolerance between the stop and the obstacle, in opening | *ALL* | *20%* | |
| **75** | CLOSING TOLE-RANCE MOTOR 2 | *0% 100%* | To adjust the Motor 2 tolerance between the stop and the obstacle, in closing | *ALL* | *20%* | |
| **76** | PUSHING STROKE | *Time Pushing Stroke Off - 3 sec* | Before opening, the motor starts in closing for the time set, in order to simplify the lock release | *ALL* | *Off* | |
| | | *Repeat Lock Release Off – On* | If **ON**, the lock will be released both before and after the pushing stroke | | | |
| | | *End* | | | | |
| **77** | LOCK TIME | *Off 5* | To adjust the lock release time from 0 to 5 seconds | *ALL* | *3* | |
| **78** | LOCK | *Only opening* | Lock enabled only before opening | *ALL* | *Only opening* | |
| | | *Only closing* | Lock enabled only before closing | | | |
| | | *Opening and closing* | Lock enabled before opening and closing | | | |
| **79** | ANTI INTRUSION | *Only opening* | If the gate is forced manually, the control unit starts the motor and restores the state of the gate before forcing ***(function only available if limit switches are installed)*** | *ALL* | *Off* | |
| | | *Only closing* | | | | |
| | | *Opening and closing* | | | | |
| | | *Off* | | | | |
| **80** | PUSHOVER | *Off* | The gate leaf makes an extra movement at the maximum torque to ensure the tightening of the gate | *ALL* | *Off* | |
| | | *Opening and closing* | | | | |
| | | *Only closing* | | | | |
| | | *Only opening* | | | | |
| **81** | PERIODICAL PUSHOVER | *Off 8h* ***(only if 80-Pushover is ON)*** | To activate the repetition of the pushover function at a distance of time adjustable from 0 to 8 hours, at hourly intervals | *ALL* | *Off* | |
| **82** | MOTOR RELEASE | *Opening 1 Off - 3 s* | If different from OFF, the operator slightly reverses its direction at the end of the cycle | *ALL* | *It depends on motor* | |
| | | *Closing 1 Off - 3 s* | | | | |
| | | *Opening 2 Off - 3 s* | | | | |
| | | *Closing 2 Off - 3 s* | | | | |
| | | *End* | | | | |
| **83** | EXTRA TIME | *Opening1 Off - 10s* | If the limit switches are installed, it is possible to add an extra time ***(max. 10 seconds)*** to the movement of the operators after the reading of the limit switches | ***INVERTER 24V BR*** | *1.0 s* | |
| | | *Closing 1 Off - 10s* | | | | |
| | | *Opening2 Off - 10s* | | | | |
| | | *Closing 2 Off - 10s* | | | | |
| | | *EXIT* | | | | |
| | | *0.0 s 10 s* | | ***2PM*** | | |
| **85** | PRE-FLASHING | *Only closing* | To enable the pre-flashing only before closing ***(to access: push DOWN button when 0.0 value is shown)*** | *ALL* | *0.0 s* | |
| | | *0.0 5.0 s* | To set the pre-flashing duration | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **86** | FLASHING LIGHT | *Normal* | Normal | *ALL* | *Normal* | |
| | | *Light* | Warning lamp function | | | |
| | | *Always* | Always ON | | | |
| | | *Buzzer* | Buzzer | | | |
| **87** | FLASHING LIGHT AND TIMER | *Off* | The flashing light will be OFF with enabled timer and open gate | *ALL* | *Off* | |
| | | *On* | The flashing light will be ON with enabled timer and open gate | | | |
| **88** | COURTESY LIGHT | *Off* | Disabled | *ALL* | *In cycle* | |
| | | *1 240* | Adjustable from 1 second to 4 minutes | | | |
| | | *In cycle* | Courtesy light only in cycle | | | |
| **89** | TRAFFIC LIGHT RESERVATION | *Off On* | To get the priority in entry or exit. ***Available by the use of the partial opening contact*** | *ALL* | *Off* | |
| **90** | PARTIAL OPENING | *5% 100%* | Adjustable from 5% to 100% | *ALL* | *50%* | |
| **91** | PARTIAL PAUSE | *= Start* | The pause in partial opening is the same as in total opening | *ALL* | *= Start* | |
| | | *Off* | Disabled | | | |
| | | *1 240* | Adjustable from 1 second to 4 minutes | | | |
| **92** | TIMER | *Off* | To turn the selected input into an input to which connect an external clock | *ALL* | *Off* | |
| | | *On photo2* | | | | |
| | | *On partial input* | | | | |
| | | *Clock* | | | | |
| **93** | FIRE SWITCH | *Off* | Disabled | *ALL* | *Off* | |
| | | *On Photo2* | Function enabled on the Photocell 2 input | | | |
| | | *On partial input* | Function enabled on the partial opening Start input | | | |
| **94** | 24V AUX ***(Max. 500 mA)*** | *Always* | AUX output always powered | *ALL* | *Always* | |
| | | *In cycle* | AUX output powered only during cycle | | | |
| | | *Opening* | AUX output powered only during opening | | | |
| | | *Closing* | AUX output powered only during closing | | | |
| | | *In pause* | AUX output powered only during pause | | | |
| | | *Phototest* | AUX output powered for safety devices testing | | | |
| | | *In cycle and phototest* | AUX output powered during cycle only and for safety devices testing | | | |
| | | *In cycle and pause* | AUX output powered during cycle and during pause | | | |
| | | *Courtesy light* ***(connected via relay)*** | To connect an additional courtesy light via relay. Management according to the Menu-88 settings | | | |
| | | *Barrier and Bollard LED lights* | **Closed operator** - the light is switched-on<br>**Open operator** - the light is switched-off<br>**Moving operator** - the light blinks | | | |
| | | *Open gate warning light* ***(connected via relay)*** | **1 flash per second** during opening<br>**2 flashes per second** during closing<br>**Steady lit** in "Stop" or "Open" status | | | |
| | | *Fan* ***(connected via relay)*** | AUX output powered during cycle and for 2 additional minutes after the end of the cycle | ***INVERTER*** | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **95** | PHOTO-TEST | *Photo 1* | Self-test enabled only on photocell 1 | *ALL* | *Off* | |
| | | *Photo 2* | Self-test enabled only on photocell 2 | | | |
| | | *Photo 1 and 2* | Self-test enabled on photocells 1 and 2 | | | |
| | | *Off* | Disabled | | | |
| **96** | SAFETY EDGE SELF-TEST | *Edge 1* | Self-test enabled only on safety edge 1 | *ALL* | *Off* | |
| | | *Edge 2* | Self-test enabled only on safety edge 2 | | | |
| | | *Edges 1 and 2* | Self-test enabled on safety edges 1 and 2 | | | |
| | | *Off* | Disabled | | | |
| **97** | PHOTOCELL 1 | *Closing* | If the photocell is occupied during closing, the gate reverses the movement; If the photocell is occupied during the pause, it prevents the gate reclosing | *ALL* | *Closing* | |
| | | *Opening and closing* | If the photocell is occupied during opening or closing, it stops the gate movement; when the photocell is released, the movement continues | | | |
| | | *Stop* | If the photocell is occupied before the Start input, the Start will be ignored. If the photocell is occupied after the Start input, the photocell will be ignored. If the photocell is occupied during closing, the gate will reopen | | | |
| | | *Stop and close* | If the photocell is occupied during closing, it stops the gate movement; when released, the closing movement continues | | | |
| | | *Close* | The photocell stops the gate until it is occupied in both opening and closing; when released, the photocell gives a closing command ***(the gate closes one second after the photocell release)*** | | | |
| | | *Closing Pause reloading* | If the photocell is occupied during the pause, it reloads the same pause time set. If the photocell is occupied in closing, it reverses the gate movement | | | |
| | | *Opening and Closing Pause reloading* | If the photocell is occupied during the pause, it reloads the pause time set. If the photocell is occupied during the closing, it reverses the gate movement; If the photocell is occupied during the opening, it stops the gate and when released, the opening movement continues | | | |
| | | *Shadow loop* ***** | When the gate is open, the shadow loop prevents the reclosing until it is occupied. The Shadow loop is switched off during closing | | | |
| | | *Delete pause time* | If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time set | | | |
| | | *Shadow loop PR* ***(pause reloading)*** * | When the gate is open, the shadow loop prevents the reclosing until it is occupied. When released, the gate repeats the pause time set, then it closes. The Shadow loop is switched off during closing | | | |

**** If the module 2PM is in use, the shadow loop does not enable when the menu-121 is seto to "Photo 1 10K"***

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **98** | PHOTOCELL 2 | *Closing* | If the photocell is occupied during closing, the gate reverses the movement; If the photocell is occupied during the pause, it prevents the gate reclosing | *ALL* | *Opening and closing* | |
| | | *Opening and closing* | If the photocell is occupied during opening or closing, it stops the gate movement; when the photocell is released, the movement continues | | | |
| | | *Stop* | If the photocell is occupied before the Start input, the Start will be ignored. If the photocell is occupied after the Start input, the photocell will be ignored. If the photocell is occupied during closing, the gate reopens | | | |
| | | *Stop and close* | If the photocell is occupied during closing, it stops the gate; when released, the closing movement continues | | | |
| | | *Close* | The photocell stops the gate until it is occupied in both opening and closing; when released, the photocell gives a closing command ***(the gate closes one second after the photocell release)*** | | | |
| | | *Opening Pause reloading* | If the photocell is occupied during the pause, it recharges the same pause time set. If the photocell is occupied during the opening, the gate stops and when released, the movement continues | | | |
| | | *Pause reload Photo closing* | If the photocell is occupied during the pause, it reloads the pause time set. If the photocell is occupied during closing, the gate reverses the movement | | | |
| | | *Opening and Closing Pause reloading* | If the photocell is occupied during the pause, it reloads the pause time set. If the photocell is occupied during the closing, it reverses the movement; If the photocell is occupied during the opening, it stops the gate and when released, the opening continues | | | |
| | | *Shadow loop* ***** | When the gate is open, the shadow loop prevents the reclosing until it is occupied. The Shadow loop is switched off during closing | | | |
| | | *Delete pause time* | If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time set | | | |
| | | *Shadow loop PR* ***(pause reloading)*** * | When the gate is open, the shadow loop prevents the reclosing until it is occupied. When released, the gate repeats the pause time set, then it closes. The Shadow loop is switched off during closing | | | |
| | | *Stop and open* | If the photocell is occupied during opening, the gate stops; when released, the gate continues the opening movement. The photocell is ignored during closing | | | |
| **** If the module 2PM is in use, the shadow loop does not enable when the menu-121 is seto to "Photo 1 10K"*** | | | | | | |
| **99** | PHOTO OFF IN CLOSING | *0% 50%* | In closing, this function excludes the photocell reading for the space percentage set | ***INVERTER 24V*** | *0%* | |
| **100** | SAFETY EDGE 1 | *Normal* | Normal N.C. contact | *ALL* | *Normal* | |
| | | *8K2 N.C.* | Safety edge protected by a 8K2 resistor enabled | | | |
| | | *8K2 N.C. Double* | Two safety edges protected by 8K2 resistor enabled | | | |
| | | *8K2 RES* | Resistive edge protected by 8K2 resistor enabled | | | |
| | | *8K2 RES Double* | Two resistive edges protected by 8K2 RES enabled | | | |
| **101** | SAFETY EDGE 2 | *Normal* | Normal N.C. contact | *ALL* | *Normal* | |
| | | *8K2 N.C.* | Safety edge protected by a 8K2 resistor enabled | | | |
| | | *8K2 N.C. Double* | Two safety edges protected by 8K2 resistor enabled | | | |
| | | *8K2 RES* | Resistive edge protected by 8K2 resistor enabled | | | |
| | | *8K2 RES Double* | Two resistive edges protected by 8K2 RES enabled | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **102** | SAFETY EDGE 1 DIRECTION | *Opening and closing* | Safety edge enabled in opening and closing | *ALL* | *Opening and Closing* | |
| | | *Only opening* | Safety edge enabled only in opening | | | |
| | | *Only closing* | Safety edge enabled only in closing | | | |
| **103** | SAFETY EDGE 2 DIRECTION | *Opening and closing* | Safety edge enabled in opening and closing | *ALL* | *Opening and Closing* | |
| | | *Only opening* | Safety edge enabled only in opening | | | |
| | | *Only closing* | Safety edge enabled only in closing | | | |
| **104** | SELECT LIMIT SWITCH | *N. C.* | Limit switch type N.C. ***(Normally Closed)*** ***Example: inductive limit switch or with lever*** | ***INVERTER 24V*** | *N.C.* | |
| | | *Ext* | Limit switch connected on the external interface ***for 4 cams limit switches*** | | | |
| | | *N.O.* | Limit switch type N.O. ***(Normally Open)*** ***Example: magnetic limit switch*** | | | |
| | | *Automatic* | Automatic detection of the limit switch | ***2PM*** | *Automatic* | |
| | | *Opening only* | Limit switch enabled only in opening | | | |
| | | *Closing only* | Limit switch enabled only in closing | | | |
| | | *Ext* | Limit switch connected on the external interface ***for 4 cams limit switches*** | | | |
| | | *Motor internal* | To be enabled if the operator is equipped with an inner limit switch that stops the motor phase | | | |
| **105** | PRIMARY/SECONDARY *(MASTER/SLAVE)* | *Primary* | To set the control unit as PRIMARY on applications with two operators in primary/secondary mode | ***INVERTER BR*** | *Off* | |
| | | *Secondary* | To set the control unit as SECONDARY on applications with two operators in primary/secondary mode | | | |
| | | *Off* | Disabled | | | |
| **106** | DIAGNOSTICS | *1 10* | To display the last event ***(See alarms table)*** | *ALL* | - - - - | |
| **107** | MAINTENANCE CYCLES | *100 240000* | Adjustable from 100 to 240000 cycles | *ALL* | *100000* | |
| **108** | PERFORMED CYCLES | *0 240000* | To display the executed cycles. ***Hold pressed OK to reset the cycles*** | *ALL* | *0* | |
| **109** | THERMOMETER | *xx °C (xx °C )* | To display the temperature if a probe is connected on GP1 or GP2 (and the menus 130 and 131 are set on "Thermometer") The connection of up to two temperature probes is allowed; ***(display will show both temperatures detected)*** | *ALL* | *Off* | |
| **110** | LOWER THRESHOLD TEMPERATURE | *From -20° to +50°* | To adjust the temperature threshold of the oil heater probe activation ***(This menu is shown only if the menu 109-Thermometer is set to ON)*** | *ALL* | *-10°* | |
| **111** | UPPER THRESHOLD TEMPERATURE | *From -20° to +50°* | To adjust the temperature threshold of the oil heater probe deactivation ***(This menu is shown only if the menu 109-Thermometer is set to ON)*** | *ALL* | *0°* | |
| **112** | PASSWORD | ***Note: "0000" setting is not allowed*** | To enter a password for blocking the control unit parameters modification | *ALL* | - - - - | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **113** | EMERGENCY | *Off* | Disabled | *ALL* | *Off* | |
| | | *Emergency* | In case of power failure and with batteries connected and charged, the gate opens completely and remains open until the power is restored | | | |
| | | *Last opening* | In case of power failure, as soon as the battery charge drops below 22V, the gate opens one last time and remains open until the power is restored | | | |
| | | *Last closing* | In case of power failure, as soon as the battery charge drops below 22V, the gate closes one last time and remains closed until the power is restored | | | |
| **115** | DECELERATION RAMP | 0,1 s 5s | Deceleration management in case of inversion or Stop command | ***INVERTER 24V BR*** | *0,5 s* | |
| **116** | REPEAT LEAF DELAY | *On Off* | In case of a STOP command when the gate is on its halfway, the leaves will repeat the "leaf delay" set on menus 26-27 | *ALL* | *On* | |
| **117** | ALWAYS CLOSE | *Off 240 seconds* | In case of power failure, if the gate has been manually open, it closes only after the set time has elapsed ***(from 0 to 240 seconds)*** as soon as the power is restored | *ALL* | *Off* | |
| **118** | LATCH | *Off* | Disabled | *ALL* | *Off* | |
| | | *Opening* | The gate opens and stay open till a new Start input. ***The latch function uses the "Safety Edge 1" N.O. input (Safety Edge 1 function is so disabled)*** | | | |
| | | *Closing* | The gate closes and stay closed till a new Start input. ***The latch function uses the "Safety Edge 2" N.O. input (Safety Edge 2 function is so disabled)*** | | | |
| | | *Opening and closing* | To enables both the opening and closing functions above described. ***The latch function uses the "Safety Edge 1" and "Safety Edge 2" N.O. inputs (both safety edges are so disabled)*** | | | |
| **119** | DISPLAY WRITING SPEED | *From 30% to 100%* | See Note 2 at the end of the table | *ALL* | *80%* | |
| **120** | BASIC MENU | Press OK to exit the special menu. The special menu switches off automatically after 20 minutes | | | | |
| **121** | PHOTO 1 TYPE | *Normal* | Standard photocell without 10K control | *ALL* | *Normal* | |
| | | *Photo 1 10K* | Photocell with 10K control | | | |
| | | *Photo 1 10K DOUBLE* | Double photocell with 10K control | ***2PM*** | | |
| **122** | PHOTO 2 TYPE | *Normal* | Standard photocell without 10K control | *ALL* | *Normal* | |
| | | *Photo 2 10K* | Photocell with 10K control | | | |
| | | *Photo 2 10K DOUBLE* | Double photocell with 10K control | ***2PM*** | | |
| **123** | DATE AND TIME | *Mon - Sun dd/mm/yyyy Time* | To set the day, the date and the time for the management of the programmed openings. ***(Only with full charge buffer battery)*** | *ALL* | - - - - | |
| **124** | CLOCK 1 | *Opening time* | To set a first time band in which keeping the gate open. It is possible to set, in order: opening time, closing time and the days on which you want to open and keep the gate open | *ALL* | *Off* | |
| | | *Closing time* | | | | |
| | | *Days* | | | | |
| | | *Modify* | To modify the pre-set time and day | | | |
| | | *Exit* | Exit from menu | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **125** | CLOCK 2 | *Opening time* | To set a second time band in which keeping the gate open. It is possible to set, in order: opening time, closing time and the days on which you want to open and keep the gate open | *ALL* | *Off* | |
| | | *Closing time* | | | | |
| | | *Days* | | | | |
| | | *Modify* | To modify the pre-set time and day | | | |
| | | *Exit* | Exit from menu | | | |
| **126** | CLOCK 3 | *Opening time* | To set a third time band in which keeping the gate open. It is possible to set, in order: opening time, closing time and the days on which you want to open and keep the gate open | *ALL* | *Off* | |
| | | *Closing time* | | | | |
| | | *Days* | | | | |
| | | *Modify* | To modify the pre-set time and day | | | |
| | | *Exit* | Exit from menu | | | |
| **127** | CLOCK 4 | *Opening time* | To set a fourth time band in which keeping the gate open. It is possible to set, in order: opening time, closing time and the days on which you want to open and keep the gate open | *ALL* | *Off* | |
| | | *Closing time* | | | | |
| | | *Days* | | | | |
| | | *Modify* | To modify the pre-set time and day | | | |
| | | *Exit* | Exit from menu | | | |
| **130** | GP1 | *Off* | Disabled | *ALL* | *Off* | |
| | | *Open* | To connect an opening button that allows the automation operating in "Dead Man" logic. The button will only work when the gate is closed or after a Stop command | | | |
| | | *Emergency open* | To connect an opening button that allows the automation operating in "Dead Man" logic. The button will only work in case of safety devices failure or in case of stuck Start button | | | |
| | | *Thermometer* | To connect a temperature probe for the detection of an external temperature which will be shown on the display by accessing menu 109-THERMOMETER ***(i.e. probe for detection of hydraulic motor oil temperature)*** | | | |
| | | *Cage* | To control the Motor 1 only if the Motor 2 is closed | ***INVERTER 24V*** | | |
| **131** | GP2 | *Off* | Disabled | *ALL* | *Off* | |
| | | *Close* | To connect a closing button that allows the automation operating in "Dead Man" logic. The button will only work when the gate is closed or after a Stop command | | | |
| | | *Emergency close* | To connect an closing button that allows the automation operating in "Dead Man" logic. The button will only work in case of safety devices failure or in case of stuck Start button | | | |
| | | *Thermometer* | To connect a temperature probe for the detection of an external temperature which will be shown on the display by accessing menu 109-THERMOMETER ***(i.e. probe for detection of hydraulic motor oil temperature)*** | | | |
| | | *Cage* | To control the Motor 2 only if the Motor 1 is closed | ***INVERTER 24V*** | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **132** | RELAY 1 | *Off* | Disabled | *ALL* | *Off* | |
| | | *Start 3s* | To enable the Relay 1 for 3 seconds at every Start or reopening command | | | |
| | | *Traffic light 1* | Traffic light management: the green light is switched-on only when the gate is open | | | |
| | | *Traffic light in entrance* | By a Start command the traffic light in entrance turns green and the access priority is acquired while the traffic light in exit turns red. ***(with menu 89-TRAFFIC LIGHT BY RESERVATION in ON)*** | | | |
| | | *Traffic light in exit* | By a Start command the traffic light in exit turns green and the access priority is acquired while the traffic light in entrance turns red. ***(with menu 89-TRAFFIC LIGHT BY RESERVATION in ON)*** | | | |
| | | *Lock copy* | The Relay 1 will be ON for the time set on 78-LOCK menu | | | |
| | | *Flashing light copy* | The Relay 1 repeats the flashing-light functions | | | |
| | | *Courtesy light copy* | The Relay 1 will be ON for the time set on 88-COURTESY LIGHT menu | | | |
| | | *Fire-switch copy* | The Relay 1 repeats the menu 93-fireswitch functions | | | |
| | | *Opening 1 limit switch* | The Relay 1 will be ON if the motor 1 opening limit switch is activated or if the motor 1 is in "Open" status | | | |
| | | *Closing 1 limit switch* | The Relay 1 will be ON if the motor 1 closing limit switch is activated or if the motor 1 is in "Closed" status | | | |
| | | *Opening 2 limit switch* | The Relay 1 will be ON if the motor 2 opening limit switch is activated or if motor 2 is in "Open" status | | | |
| | | *Closing 2 limit switch* | The Relay 1 will be ON if the motor 2 closing limit switch is activated or if the motor 2 is in "Closed" status | | | |
| | | *Tx Relay* | It is possible to activate the Relay 1 for 3 seconds by giving an impulse from the remote control | | | |
| | | *Negative brake and Photocell 1 management* | The negative electric-brake is not active on the photocell intervention | | | |
| | | *Negative brake 1 management* | Negative electric-brake ***(in ON with the gate in cycle and 1 second before the Start input)*** | | | |
| | | *Positive brake 1 management* | Positive electric-brake ***(in ON with stationary gate)*** | | | |
| | | *Opening electric-valve* | The Relay 1 is active during opening | | | |
| | | *Closing electric-valve* | The Relay 1 is active during closing | | | |
| | | *Clock 1 and 2* | The Relay will be active in the same time band set on menus 124 e 125 | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **133** | RELAY 2 | *Off* | Disabled | *ALL* | *Off* | |
| | | *Start 3s* | To enable the Relay 2 for 3 seconds at every Start or reopening command | | | |
| | | *Traffic light 1* | Traffic light management: the green light is switched-on only when the gate is open | | | |
| | | *Traffic light in entrance* | By a Start command the traffic light in entrance turns green and the access priority is acquired while the traffic light in exit turns red. ***(with menu 89-TRAFFIC LIGHT BY RESERVATION in ON)*** | | | |
| | | *Traffic light in exit* | By a Start command the traffic light in exit turns green and the access priority is acquired while the traffic light in entrance turns red. ***(with menu 89-TRAFFIC LIGHT BY RESERVATION in ON)*** | | | |
| | | *Lock copy* | The Relay 2 will be ON for the time set on 78-LOCK menu | | | |
| | | *Flashing light copy* | The Relay 2 repeats the flashing-light functions | | | |
| | | *Courtesy light copy* | The Relay 2 will be ON for the time set on 88-COURTESY LIGHT menu | | | |
| | | *Fire-switch copy* | The Relay 2 repeats the menu 93-fireswitch functions | | | |
| | | *Opening 1 limit switch* | The Relay 2 will be ON if the motor 1 opening limit switch is activated or if the motor 1 is in "Open" status | | | |
| | | *Closing 1 limit switch* | The Relay 2 will be ON if the motor 1 closing limit switch is activated or if the motor 1 is in "Closed" status | | | |
| | | *Opening 2 limit switch* | The Relay 2 will be ON if the motor 2 opening limit switch is activated or if motor 2 is in "Open" status | | | |
| | | *Closing 2 limit switch* | The Relay 2 will be ON if the motor 2 closing limit switch is activated or if the motor 2 is in "Closed" status | | | |
| | | *Tx Relay* | It is possible to activate the Relay 2 for 3 seconds by giving an impulse from the remote control | | | |
| | | *Negative brake and Photocell 2 management* | The negative electric-brake is not active on the photocell intervention | | | |
| | | *Negative brake 2 management* | Negative electric-brake ***(in ON with the gate in cycle and 1 second before the Start input)*** | | | |
| | | *Positive brake 2 management* | Positive electric-brake ***(in ON with stationary gate)*** | | | |
| | | *Opening electric-valve* | The relay 2 is active during opening | | | |
| | | *Closing electric-valve* | The relay 2 is active during closing | | | |
| | | *Clock 3 and 4* | The relay will be active in the same time band set on menus 126 e 127 | | | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **134** | RELAY FV 1 ***(Relay on the FV MODULE 1)*** | *Off* | Disabled | ***INVERTER*** | *It depends on motor* | |
| | | *Positive brake management* | Positive electric-brake ***(The relay FV1 will be ON only with stopped gate)*** | | | |
| | | *Negative brake management* | Negative electric-brake ***(The relay FV1 will be ON only during operator cycle, 1 second before start and in case of photocell intervention )*** | | | |
| | | *Negative brake management and Photocell* | Negative electric-brake ***(The relay FV1 will be ON only during operator cycle and 1 second before start, except in case of photocell intervention )*** | | | |
| | | *Fan* | The relay on FV MODULE will activate for the whole cycle duration plus 2 further minutes | | | |
| | | *Tail Gate* | The Relay FV 1 will enable only if the gate is closed | | | |
| | | *Copy Start* | The Relay FV 1 will enable at every START command | | | |
| **135** | RELAY FV 2 ***(Relay on the FV MODULE 2)*** | *Off* | Disabled | ***INVERTER*** | *It depends on motor* | |
| | | *Positive brake management* | Positive electric-brake ***(The relay FV2 will be ON only with stopped gate)*** | | | |
| | | *Negative brake management* | Negative electric-brake ***(The relay FV2 will be ON only during operator cycle, 1 second before start and in case of photocell intervention)*** | | | |
| | | *Negative brake management and Photocell* | Negative electric-brake ***(The relay FV2 will be ON only during operator cycle and 1 second before start, except in case of photocell intervention)*** | | | |
| | | *Fan* | The relay on FV MODULE will activate for the whole cycle duration plus 2 further minutes | | | |
| | | *Tail Gate* | The Relay FV 2 will enable only if the gate is closed | | | |
| | | *Copy Start* | The Relay FV 2 will enable at every START command | | | |
| **136** | EFO | *0% 100%* | **EFO function will be visible only with menu 3-MOTORS set on "5-Threephase/Bollards"** This function generates an emergency closing with a higher speed than the set percentage and without considering the safety devices connected. **It works only with BOLLARDS** and through a command on the PEDESTRIAN START input | ***INVERTER*** | *50%* | |
| **137** | COMIS | *0 350 mA* | It shows the absorption of the accessories connected on input 20 ***(it only works if an accessory is connected at least)*** | *ALL* | - - - - | |
| **138** | COMIS THRESHOLD | *Off 350mA* | Allows to set a maximum absorption threshold over which an error message appears ***(error message appears also when over 350 mA)*** | *ALL* | *Off* | |

| SPECIAL MENU | | SET | DESCRIPTION | MODEL | DEFAULT | NOTE |
|---|---|---|---|---|---|---|
| **140** | THRESHOLD A OPENING 1 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 1 in opening ***(over the set threshold motor will detect an obstacle)*** | ***INVERTER*** | *It depends on motor* | |
| **141** | THRESHOLD A CLOSING 1 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 1 in closing ***(over the set threshold motor will detect an obstacle)*** | ***INVERTER*** | *It depends on motor* | |
| **142** | THRESHOLD A OPENING 2 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 2 in opening ***(over the set threshold motor will detect an obstacle)*** | ***INVERTER*** | *It depends on motor* | |
| **143** | THRESHOLD A CLOSING 2 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 2 in closing ***(over the set threshold the motor will detect an obstacle)*** | ***INVERTER*** | *It depends on motor* | |
| **144** | THRESHOLD A OPENING SLOWDOWN 1 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 1 in slowdown during opening | ***INVERTER*** | *It depends on motor* | |
| **145** | THRESHOLD A CLOSING SLOWDOWN 1 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 1 in slowdown during closing | ***INVERTER*** | *It depends on motor* | |
| **146** | THRESHOLD A OPENING SLOWDOWN 2 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 2 in slowdown during opening | ***INVERTER*** | *It depends on motor* | |
| **147** | THRESHOLD A CLOSING SLOWDOWN 2 | *1 10 Ampere* | Adjusts the amperometric intervention threshold of motor 2 in slowdown during closing | ***INVERTER*** | *It depends on motor* | |
| **190** | BASIC MENU | Press OK to exit the special menu.<br>The special menu switches off automatically after 20 minutes | | | | |

**Note 1:** after initialization, the parameters set on menu **3 - MOTOR** and **104 - SELECT LIMIT SWITCH** always remain set to the value chosen during the programming operation

**Note 2:** if the menu **119 - DISPLAY WRITING SPEED** is set to the minimum value of 30%, the display writing speed will be low. On the contrary, if it is set to the maximum value of 100%, the writing speed will be very high
***Please note: the writing speed will not change on the JOLLY 3 programmer***

Automatic Gate Openers

International registered trademark n. 804888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