QC600

0,75 kW

QC600S

2,20 kW

QC600W

3,00 kW

MULTIFUNCTION CONTROL UNIT WITH INVERTER

Ver PCB 7-0104 R1021
Ver SW 29/31

IMPORTANT SAFETY INSTRUCTIONS

Specific use

The control unit is specifically for doors moved with a motor.
Safe operation is only guaranteed with normal specific use. The motor must be protected against rain, weather and aggressive environmental conditions.
No liability is accepted for damage caused by other applications or failure to observe the information in the manual.
No modifications are permitted, otherwise the declaration of conformity will be deemed void.

Safety information

Installation and commissioning must be carried out by trained personnel.
Only technically trained electricians are authorised to work on electrical equipment. They must be able to assess the tasks assigned to them, recognise potential danger zones and be able to implement appropriate safety measures.
Installation must be carried out after disconnecting the general power supply.
Observe existing regulations.
Cover and protect the devices.
Only use with cover and protection devices installed.
Ensure that the seals are correctly positioned and that the cable glands are properly tightened.

Attention: it is highly recommended to activate the impulsive mode only after having finished programming the control unit. In particular during adjustment of the mechanical limit switches, use the dead man mode.
When adjusting the encoder limit switches, the control unit will only allow operation in dead man's mode.

Spare Parts

Use only original spare parts.

NEVER TOUCH THE INTERNAL ELEMENTS WITHIN 15 MINUTES AFTER POWER OFF. WHAIT TILL IT IS COMPLETELY DISCHARGED.

DIRECTIVES

Directives – EMC Directive 2014/30/EU	EN 61000-6-3 (2007) + A1:2011 Emission – Residential EN 61000-6-1 (2007) Immunity – Residential EN 61000-6-4 (2007) Emission – Industry EN 61000-6-2 (2005) Immunity – Industry EN 61000-4-3 (2006) +A1(2008) +A2(2010) RF-field immunity EN 60335-1 (2012)/AC:2014 Safety – Part 1: General requirements
Directive – Low Voltage Directive LVD 2014/35/EU	EN 60335-1 (2012)/AC:2014 Safety of Household and similar electrical appliance/ Part 1. EN335-2-103:2015
TÜV type tested according to:	EN 12453 (2017) Industrial, Commercial and garage doors and gates. Safety in use. EN ISO 13849-1:2015 Safety of machinery

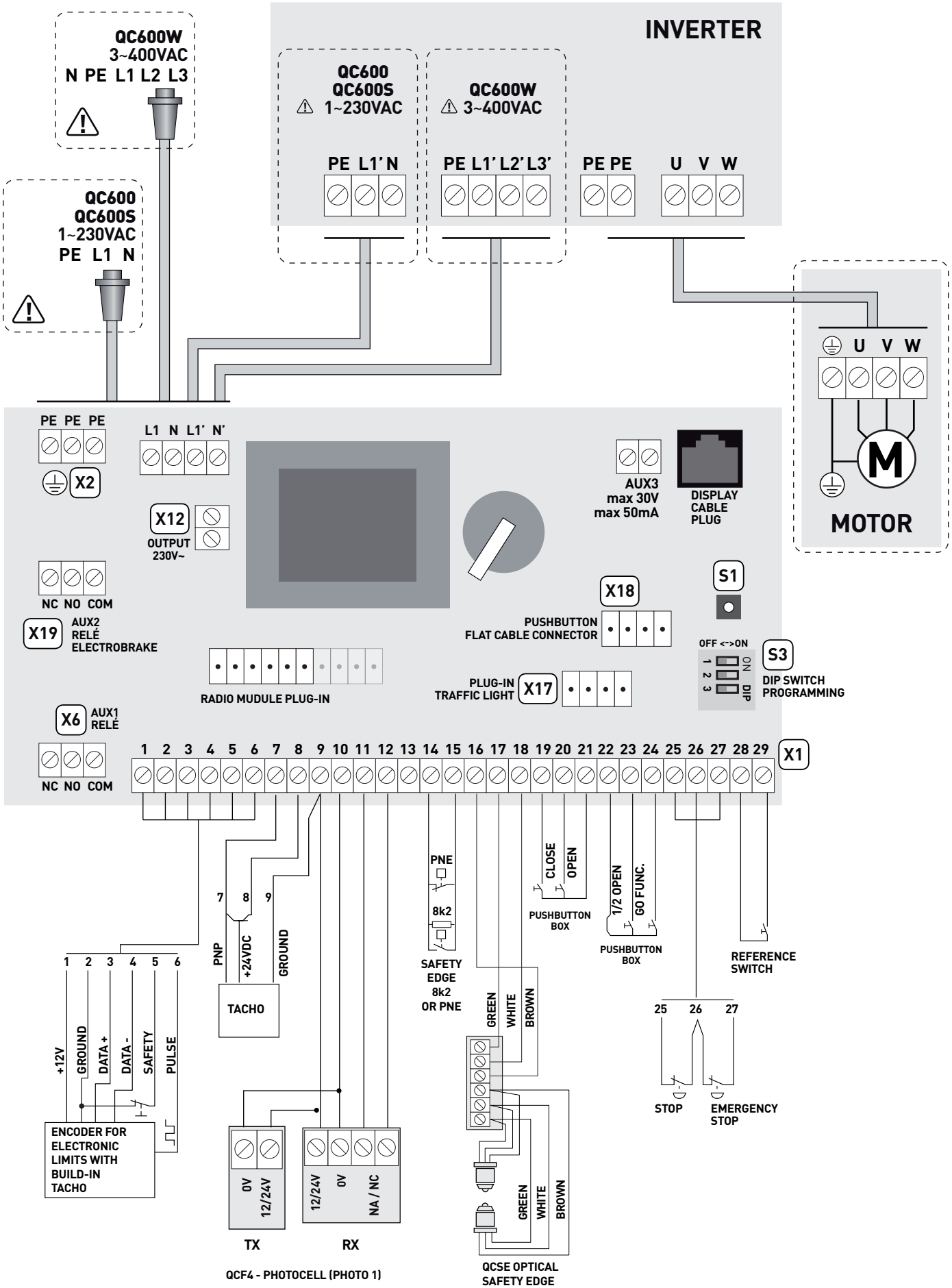
TECHNICAL DETAILS

Installation	Vertical on a vibration free and flat wall
Temperature range (operating)	-10...+50°C
Humidity	Up to 93% RH non-condensing.
Vibration	Low-vibration installation, wall mounted.
Dimension	445 x 215 x 150 mm
Supply voltage:	**QC600/QC600S**: 1~230VAC; 50/60 Hz; ± 10% [L1, N, GROUND] **QC600W**: 3~400VAC; 50/60 Hz; ± 10% [L1, L2, L3, N, GROUND] Mains fuse max: 3 x 10A Rated insulation voltage Ui = 400V
Transformer	Max 13 VA , VDE 0570/EN61558 **QC600/S**: Primary 230VAC winding is thermal protected by built-in thermal transformer fuse. **QC600W**: Primary 400VAC winding is thermal protected by built-in thermal transformer fuse. Both secondary windings are overload protected by multifuses.
Motor output	**QC600** Max motor load by 3~230VAC: 0.75kW / Max motor current: 5 A
	QC600S Max motor load by 3~230VAC: 2,2 kW / Max motor current: 10 A
	QC600W Max motor load by 3~400VAC: 3,0 kW / Max motor current: 10 A
Emergency stop, Stop, Thermo spec. door stop and Safety chain	Function as normal stop command and disconnect power to contactor coils
24VDC Output (terminals X3-18, X3-19)	24VDC ± 20% (non-regulated), Max load: 160mA (if no plug-in module is used, else there currents must be subtracted)
Safety edge input	PNE/air switch Electric type - 8k2 termination ± 10% Optical type Performance level C, Category 2
Optical safety edge	Input voltage high (green): 2.5 - 5.0 Volt. Input voltage low (green): < 0.5 Volt. Input frequency range (green): 250 – 2000 Hz (50% duty-cycle) Pulse interval maximum (green): 7.0 mS (when not 50% dutycycle)
Photo input	X1 Teminals 9,10,11,12, 13 for 2 couple external photo, 24VDC (e.g. self contain photo cell) Performance level C, Category 2
Electronic limits	RS385, Data+ Data-, terminated with 120 Ohm
Relé (AUX1)	Max 230 Vac / 5 A (X6)
Relé (AUX2)	Electrobrake relé - NO / NC - 230V~/5A (X6)
Relé (AUX3)	Solid state relé - NO - max 30V/50mA

INVERTER FEATURES

	QC600	QC600S	QC600W
Rated motor power	max 0.75 kW	max 2.20 kW	max 3.00 kW
Rated motor voltage	3~230V	3~230V	3~400V
Rated motor current	5 A	10 A	10 A
Rated motor speed	500 - 4000 rpm		
Rated motor frequency	10 - 100 Hz		

Inverter UP Direction		Inverter DOWN Direction	
High frequency	20 - 100 Hz	High frequency	10 - 100 Hz
Low frequency	20 - 100 Hz	Low frequency	10 - 100 Hz
Acceleration time	0.1 - 10 sec	Acceleration time	0.1 - 10 sec
Dec. time full to low	0.1 - 10 sec	Dec. time full to low	0.1 - 10 sec
Dec. time full to STOP	0.1 - 10 sec	Dec. time full to STOP	0.1 - 10 sec
Low speed setpoint before UP limit	5 - 50 % of run range	Low speed setpoint before DOWN limit	5 - 50 % of run range


INVERTER
QC600W
3~400VAC
N PE L1 L2 L3
QC600
QC600S
1~230VAC
PE L1 N
QC600
QC600S
⚠ 1~230VAC
PE L1' N
QC600W
⚠ 3~400VAC
PE L1' L2' L3'
PE PE
U V W
U V W
M
MOTOR
PE PE PE
X2
L1 N L1' N'
X12
OUTPUT
230V~
AUX3
max 30V
max 50mA
DISPLAY
CABLE
PLUG
NC NO COM
X19
AUX2
RELÉ
ELECTROBRAKE
X18
PUSHBUTTON
FLAT CABLE CONNECTOR
S1
OFF <->ON
S3
DIP SWITCH
PROGRAMMING
RADIO MUDULE PLUG-IN
PLUG-IN
TRAFFIC LIGHT
X17
X6
AUX1
RELÉ
NC NO COM
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
X1
PNE
8k2
SAFETY
EDGE
8k2
OR PNE
CLOSE
OPEN
PUSHBUTTON
BOX
1/2 OPEN
GO FUNC.
PUSHBUTTON
BOX
REFERENCE
SWITCH
7 8 9
PNP
+24VDC
GROUND
TACHO
1 2 3 4 5 6
+12V
GROUND
DATA +
DATA -
SAFETY
PULSE
ENCODER FOR
ELECTRONIC
LIMITS WITH
BUILD-IN
TACHO
GREEN
WHITE
BROWN
25 26 27
STOP
EMERGENCY
STOP
0V
12/24V
12/24V
0V
NA / NC
TX
RX
QCF4 - PHOTOCELL (PHOTO 1)
GREEN
WHITE
BROWN
QCSE OPTICAL
SAFETY EDGE

1_ ENCLOSURE INSTALLATION

For a correct installation:
- Install where the control unit can be protected from rain or adverse weather conditions
- Mounting must be vertical
- The surface has to be checked for flatness, slope and freedom from vibrations
- Do not install in an area of potential risk of condensation
- It is important that the door can be clearly seen from the position of the control through its travel
- Install in an area not accessible to children or unauthorized persons
- Do not perform any electrical connections before the enclosure installation is completely accomplished

2_ ELECTRICAL OPERATING INSTRUCTIONS **(Read carefully and respect the connection's sequence)**

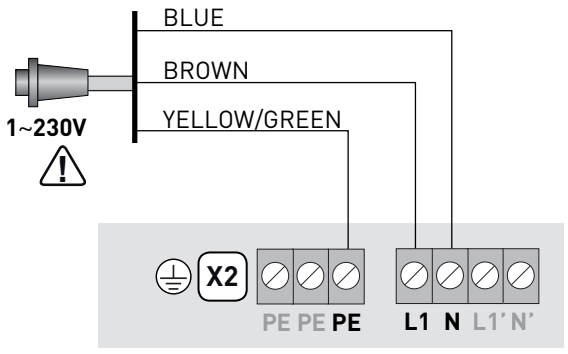
IMPORTANT! All the connection operations must be performed only after the main power supply has been disconnected. TURN OFF THE MAIN POWER SWITCH BEFORE ANY OTHER OPERATION!

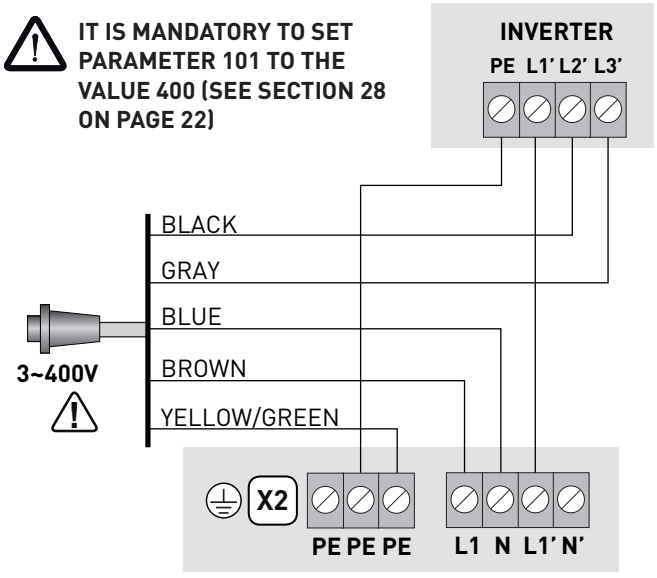
2.1_ CONTROL UNIT POWER SUPPLY

WARNING! The installation must include an automatic cut off switch with minimum distance between the contacts of at least 3 mm.

WARNING: if you power a motor with a power mode other than that for which it is set you can damage the motor and the control unit and put at risk the safety of the installer.

QC600 / QC600S	QC600W
1~230V	3~400V



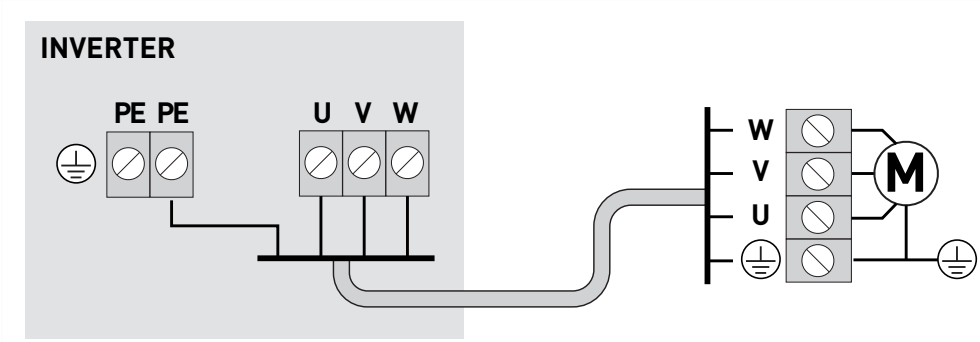


If you need to disconnect the power cable and then to reconnect it or change the control unit wiring sequence, you HAVE TO connect the wires properly, restoring the original configuration.
Take care to connect the ground wire to the X2 terminal.

WARNING: if you connect the wires differently from what is shown in the diagrams you can damage the motor and the control unit and endanger the safety of the installer.

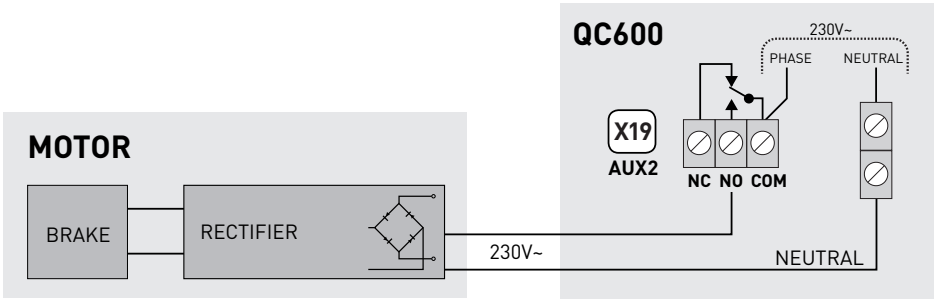
2.2_ CONNECTING THE CONTROL TO THE MOTOR

IMPORTANT! All the connection operations must be performed only after the main power supply has been disconnected.
TURN OFF THE MAIN POWER SWITCH BEFORE ANY OPERATION!
Here below you will find the power supply diagram:

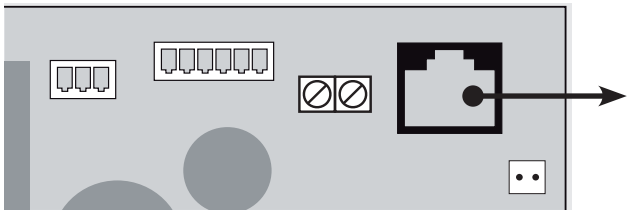


2.3 ELECTROBRAKE CONNECTION

Connect one of the terminals of the electric brake wire to neutral connection straightener (flying clamp) and the other Terminal to the Terminal AUX2 the terminal box X6:



3_ INTEGRATED PUSHBUTTON

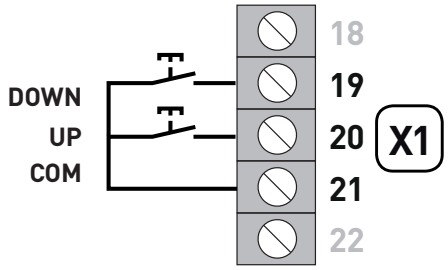


The integrated pushbutton on the cover of the control unit is connected to "DISPLAY RS385" connector

3.1_ ADDITIONAL CONTROL PUSHBUTTONS

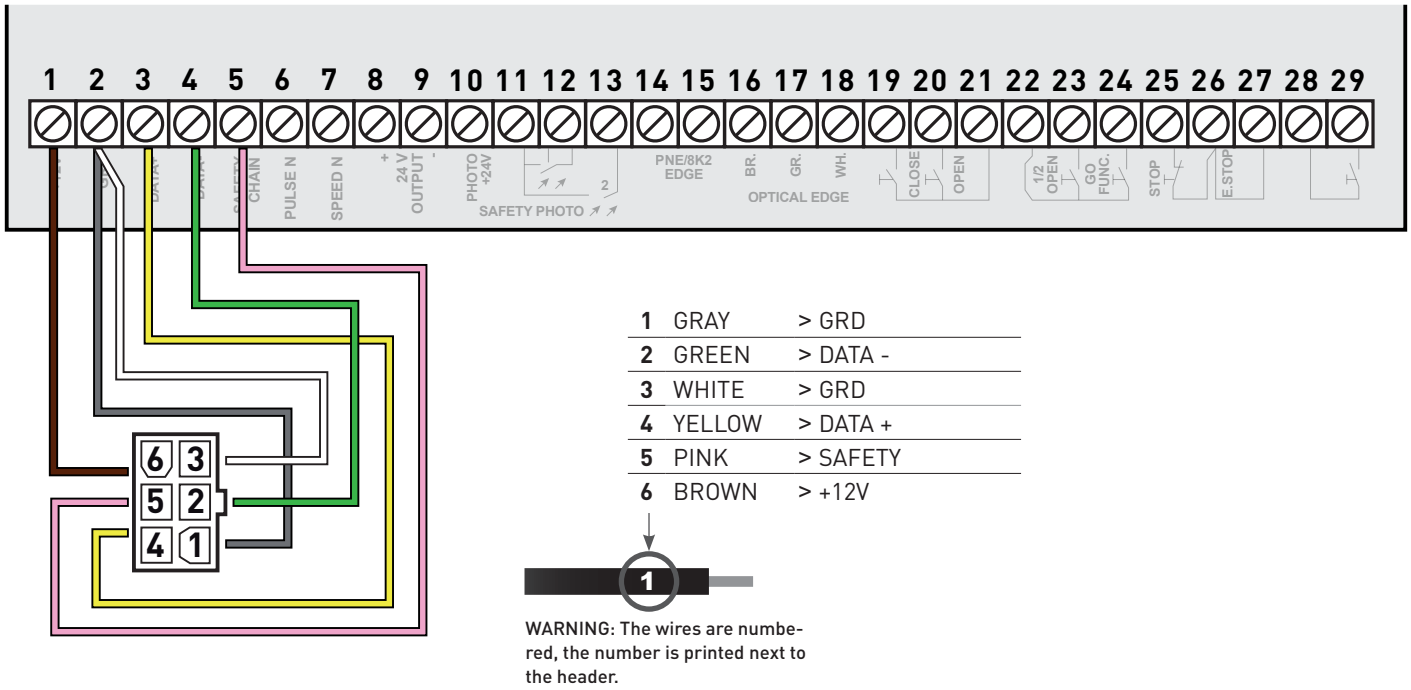
You can connect additional control pushbuttons through the terminals from 19 to 21 of X1 connector.
1. connect a normally open button to the contacts [21] and [20] for the UP command;
2. connect a normally open button to the contacts [21] and [19] for the DOWN command

PAY ATTENTION AT THE CONNECTIONS! No line voltage (230V~ or other external devices) can be connected to the buttons otherwise the unit is damaged.



4_ ELECTRONIC LIMITS WITH ENCODER

The encoder limits switch wires are connected according to the diagram of fig. 3.
ATTENTION: if you connect a control unit pre-set for mechanical limits to a motor with encoder limits, the motor does not perform correctly. In particular, the motor will not find the limit positions and this could put at risk the safety of people and/or things.



1	GRAY	> GRD
2	GREEN	> DATA -
3	WHITE	> GRD
4	YELLOW	> DATA +
5	PINK	> SAFETY
6	BROWN	> +12V

WARNING: The wires are numbered, the number is printed next to the header.

6_ CONTROL UNIT SET-UP

The set-up must be performed with the motor off. Follow carefully the steps as described in the procedures, DO NOT activate any safety, hand controls or radio controls unless specifically requested by the procedure.

Basically the set-up of the control and the right coupling control/motor must be performed by the installer.

6.1_ SET-UP MODE ACTIVATION

To enter the control unit programming mode place the DIP1 of the switch (S3) in ON.
During set-up the control unit will work only in dead man mode.
To return to the normal operating mode, place the DIP1 of the switch (S3) in OFF.

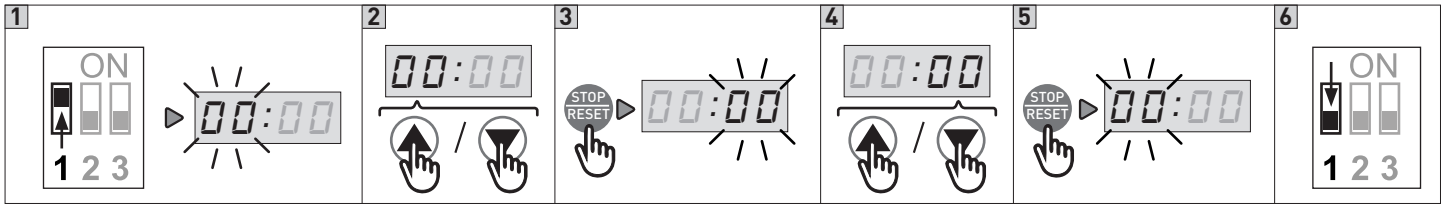
6.2_ BASIC PROGRAMMING

The control unit is supplied with a basic setting performed at the factory which can be restored at any time with the reset procedure (see paragraph 7.

Before beginning the programming procedure:
1. Open the cover of the unit
2. Make sure all the connections have been made correctly and that the emergency stop or other safety devices are not activated. Otherwise the display shows the stop symbol active [- - -] :
3. Find the buttons UP - DOWN - STOP and the 3 switches (S3) on the board
4. Ensure that the LED D10 is not flashing (in case it flashes, check again point 2)

6.3_ PARAMETER EXPLANATION

PARAMETER digits VALUE digits

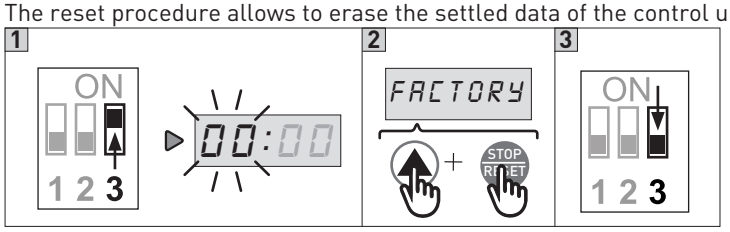


STOP button: to switch from PARAMETER field to VALUE field.
UP / DOWN buttons: to increase or decrease the size of the fields PARAMETER and VALUE

1. Put DIP switch 1 (S3) in ON position, PARAMETER digits start blinking
2. Select by UP / DOWN buttons the number desired
3. Confirm by STOP button the PARAMETER selected. The VALUE digits start blinking
4. Select by UP / DOWN buttons the number desired
5. To confirm the VALUE selected and return to PARAMETER field press STOP button
6. **To leave the set-up mode, place the DIP1 in OFF.**

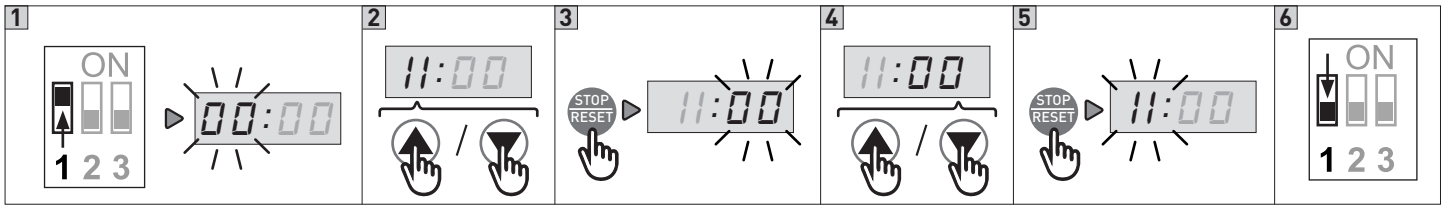
7_ RESET PROCEDURE

The reset procedure allows to erase the settled data of the control unit memory and to return to the default programming.



1. Put DIP 3 (S3) to ON position
2. Within 2 seconds press simultaneously the STOP / UP buttons
   Display will shows FAC blinking and the control unit software version number.
3. **To leave the set-up mode, place the DIP3 in OFF.**

8_ SELECTION OF THE DIGITAL LIMIT SWITCH WITH ENCODER (PARAMETER 11):



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Select by UP / DOWN buttons the number 11
3. Confirm by STOP button the PARAMETER selected. The VALUE digits start blinking
4. Depending on the engine GAPOSA used, select by UP / DOWN buttons the VALUE:
   - VALUE 00: Not in use
   - VALUE 01: Not in use
   - VALUE 02: Not in use
   - VALUE 03: Not in use
   - VALUE 04: Not in use
   - **Value 05: Encoder limits - clockwise rotation (considering the standard phase connection sequence)**
     BRD18012 / 25012T / 25012M
     RAPIDO 50180/40130/60130/6090/7045
     BHS/BBS 50/70/100/120
   - **Value 06: Encoder limits - anticlockwise rotation (considering the standard phase connection sequence)**
     SIDONE MIDI LP40014/55012/65012/25060/45035 / SIDONE MAXXI 75015/100010/14008/18006
     RAPIDO 9090/12045/120140/18090
5. To confirm the VALUE selected and return to PARAMETER digits press STOP button
6. **To leave the set-up mode, place the DIP1 in OFF.**

WARNING: after selecting the type of digital limit switch with encoder it is necessary to cut off the power supply (by disconnecting the plug or by turning OFF the main switch) and then to connect it once again in order to allow the communication between the encoder and the control unit.

IMPORTANT NOTES

Please follow the installation requirements of the GAPOSA motors. For example, if an encoded motor is installed in a way which the encoder direction is reversed, it will not run correctly and may put at risk things and/or people.
GAPOSA disclaims any responsibility from the consequences of an installation not accomplished according to this policy.

After the selection of the encoder limit switch, it is necessary to proceed with the limit switches adjustment (see section 9.1).

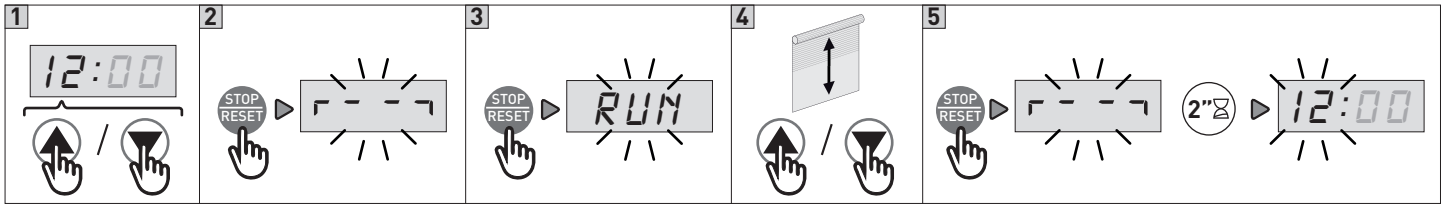
9_ ENCODER LIMIT SWITCH

Check that motor and control unit are connected as shown in section 5.
By following the instructions in section 8.1, select the parameter 11 to the value 05 or 06 **depending on the engine GAPOSA used**.

In this case the D15 LED will flash 2 times until both limit switches are not set.
In case the LED D15 blinks only one time, it is necessary to check the correct connection between encoder and control unit and that the correct limit switch type selecting procedure has been accomplished as shown in paragraph 6.2 including the shutdown of the unit after the selecting step in the case of standard GAPOSA encoder.

Note:
- **the INTERMEDIATE POSITION function cannot be activated during programming (parameter 16) - Paragraph 16;**
- **the additional photocell on the door frame cannot be active during programming (parameter 31);**
- When you change the limit switch positions the operating time (parameter 51) will be reset to the factory default settings.

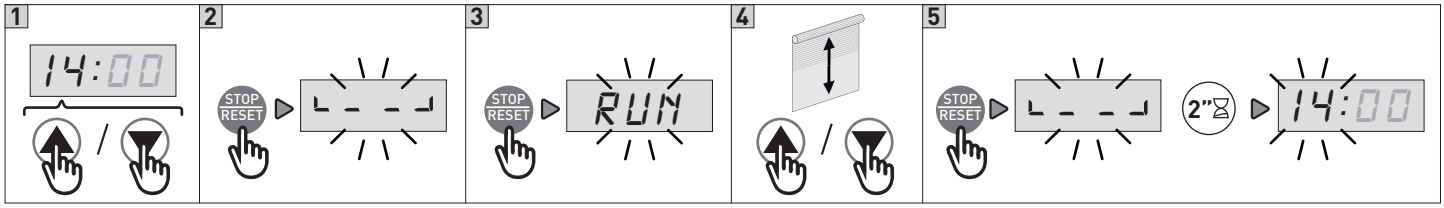
9.1_ UP LIMIT SWITCH ADJUSTMENT (PARAMETER 12)



1. Following the PARAMETERS and VALUES management procedure described in Section 6.3, select the PARAMETER 12
2. Using the buttons UP and DOWN select the PARAMETER 12
3. Access the field VALUE pressing STOP. The field VALUE shows the flashing symbol ⌜- - -⌝
4. Press button STOP once again and the unit, showing the message RUN , is ready to move the door
5. Use buttons UP and DOWN to reach the exact UP limit position.
6. Press the STOP button (S1) to confirm the position. The display will show the symbol ⌜- - -⌝ for 2 seconds and then the PARAMETER field will start flashing again (showing the number 12).

To leave the set-up mode, place the DIP1 in OFF.

9.2_ DOWN LIMIT SWITCH ADJUSTMENT (PARAMETER 14)



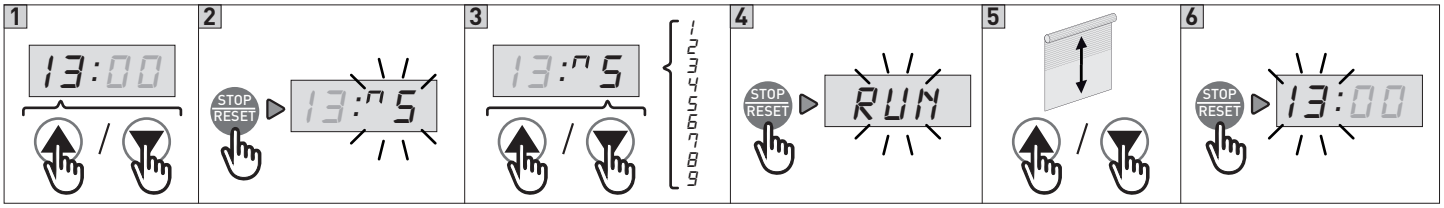
1. Following the PARAMETERS and VALUES management procedure described in Section 6.3, select the PARAMETER 12
1. With the DIP1 of the S3 switch in ON and the PARAMETER field still blinking
2. Select by UP / DOWN buttons the parameter 14
3. Access the field VALUE pressing STOP. The field VALUE shows the flashing symbol ⌞_ _ _⌟
4. Press button STOP once again and the unit, showing the message RUN , is ready to move the door
5. Use buttons UP and DOWN to reach the exact DOWN limit position.
6. Press the STOP button (S1) to confirm the position. The display will show the symbol ⌞_ _ _⌟ for 2 seconds and then the PARAMETER field will start flashing again (showing the number 14).

To leave the set-up mode, place the DIP1 in OFF.

Once the programming phase is correctly accomplished, the LED D15 stops flashing.
If the LED D15 continues flashings with a sequence of 2 flashes the limit switches are not duly set.
Once the limits are set, to tune only one of the two limit positions go to the single parameter 12 or 14 as previously explained.

If the LED D15 shows a sequence of 4 flashes it means that an incorrect encoder direction of rotation has been entered in parameter 11. Change the value of parameter 11 by choosing the opposite direction of rotation according to paragraph 6. Once the value changed, start with the limit switch adjustment procedure once again.

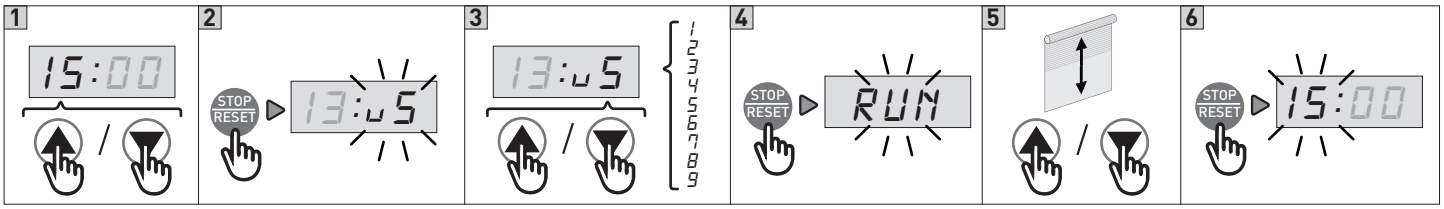
9.3_ UP LIMIT SWITCH POSITION TUNING (PARAMETER 13)



1. Following the PARAMETERS and VALUES management procedure described in Section 6.3, select the PARAMETER 13
2. Select parameter 13 using the buttons UP and DOWN
3. Access the field VALUE pressing STOP. In the field VALUE symbol n5 flashes
4. Using the buttons UP and DOWN vary the value:
   Value from 4 to 1: progressively decrease the UP position
   Value from 6 to 9: progressively increase the UP position.
   The adjustment range is max ± 0.8% of the travel of the door.
   If the value in not to be changed you can return to the field PARAMETER pressing the STOP button (S1)
   After modifying the VALUE press the STOP button (S1) to confirm: the display will show RUN
5. You can test the varied position of the door by moving it through the buttons UP and DOWN.
6. Press the STOP button (S1) once again to confirm the tuning and return to the PARAMETER field.

To leave the set-up mode, place the DIP1 in OFF.

9.4_ DOWN LIMIT SWITCH POSITION TUNING (PARAMETER 15)

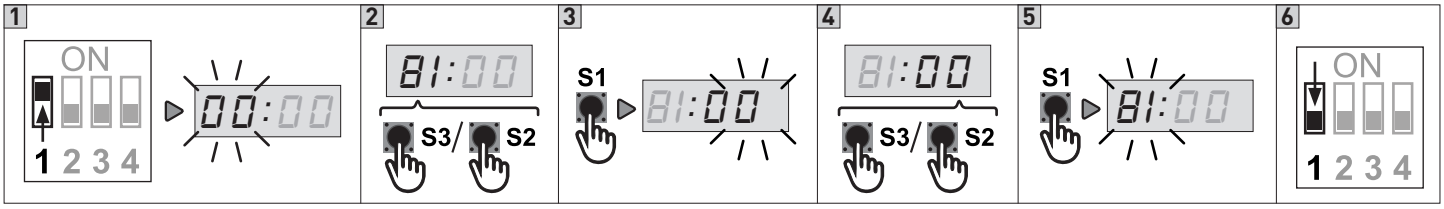


1. Following the PARAMETERS and VALUES management procedure described in Section 6.3, select the PARAMETER 15
2. Select parameter 15 using the buttons UP and DOWN
3. Access the field VALUE pressing STOP. In the field VALUE symbol u5 flashes
4. Using the buttons UP and DOWN vary the value:
   value from 4 to 1: progressively decreases the DOWN position
   value of 6 to 9: progressively increases the DOWN position.
   The adjustment range is max ± 0.8% of the travel of the door.
   If the value in not to be changed you can return to the field PARAMETER pressing the STOP button (S1)
5. After modifying the VALUE press the STOP button (S1) to confirm: the display will show RUN
6. You can test the varied position of the door by moving it through the buttons UP and DOWN.
7. Press the STOP button (S1) once again to confirm the tuning and return to the PARAMETER field.

To leave the set-up mode, place the DIP1 in OFF.

9.5_ DELAY TIME INDICATION OF MISSING ENCODER POSITION (PARAMETER 81)

Display shows E:09 after pre-set operation time without change of encoder position.
Failure can be reset by hold-to-run steps to find both end limits or relearning of limits



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Select by UP / DOWN buttons the number 81
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: 1 sec.
   - Value 01: 2 sec.
   - Value 02: 4 sec.
   - Value 03: 4 sec. After operation without change of encoder position the door will stop and error code E:09 will be automatically reset. ATTENTION: no limit monitoring by selecting value 03
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

10_ OPERATION MODE (PARAMETER 01)

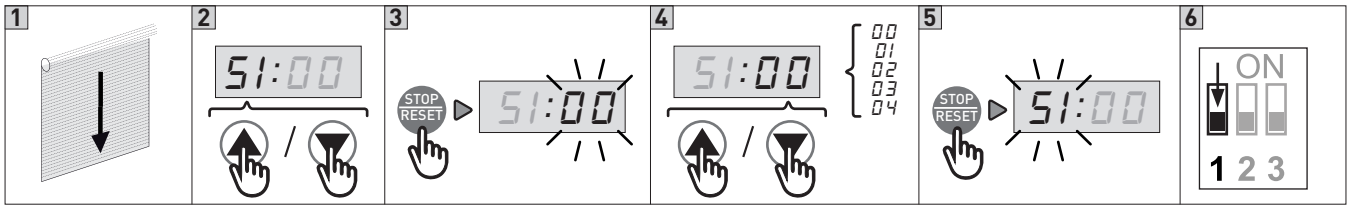
The control unit is pre-set in dead-man control mode (PARAMETER 01, VALUE 01).
It is possible, however, to define different working modes by modifying the value of PARAMETER 01:

01:01	Hold-to-run UP Hold-to-run DOWN (Put a bridge in X3 terminal 23-24 when there is no safety device)
01:02	Impulsive UP Hold-to-run DOWN (Put a bridge in X3 terminal 23-24 when there is no safety device)
01:03	Impulsive UP; Impulsive DOWN. REQUIRED WITH RADIO MODULE QCMR500-OPTIONAL.
01:04	Not in use

Warning: it is highly recommended to activate the impulsive mode only after having completed the set-up and adjustments of the control unit. In particular, during the mechanical limit switches adjustment select always the dead-man operation mode. During the encoder limit switches set-up the control unit will only allow the dead-man working mode.

11_ WORKING TIME SET-UP (PARAMETER 51)

PARAMETER 51 defines the working time of the door. WARNING! The default parameter is the 51:02 that is to say a working time of 40 seconds. To turn off or modify the working time, follow this procedure:

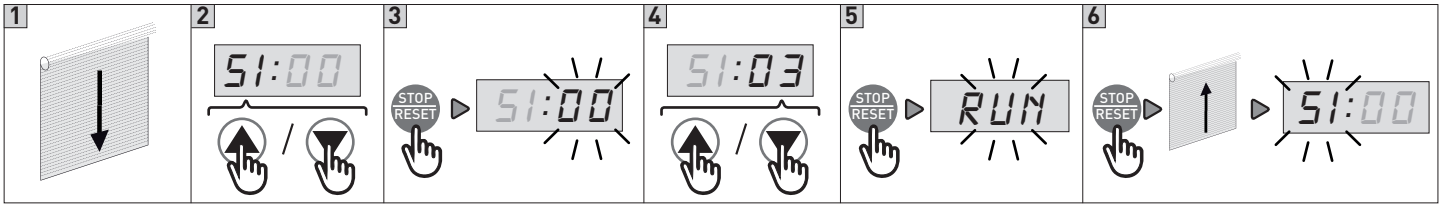


1. Close the door and stop at the DOWN limit position.
2. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
3. Using the buttons UP and DOWN select the parameter 51
4. Access the field VALUE pressing STOP
5. Using the buttons UP and DOWN vary the value
   - value 00: Function inactive
   - value 01: Working time 20 seconds
   - value 02: Working time 40 seconds (default)
   - **value 03: Activate the self learning function to determine the working time.**
     Caution: In order to use this function the limit switches must be already adjusted.
   - value 04: Working time 60 seconds
6. **Place the DIP1 again in OFF to be out of the set-up mode**

By selecting a working time, the control unit verify if the door moving time exceeds the predetermined value: if this happens the door will stop and the display will shows the error code E:03.

11.1_ RUN TIME CONTROL - AUTOMATIC LEARNING

Both limits must be set before selecting automatic run time

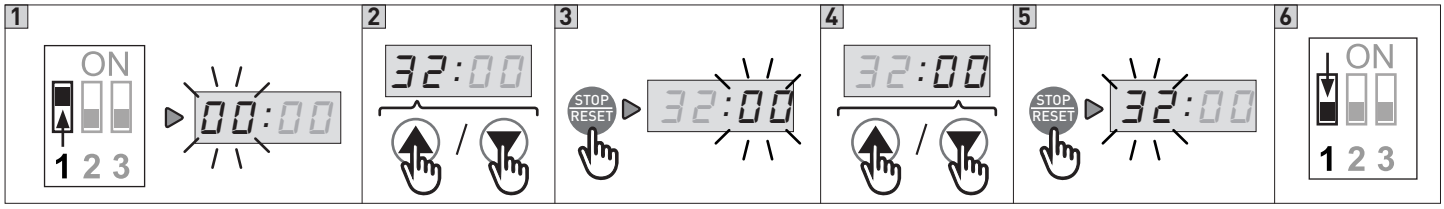


1. Close the door and stop at the DOWN limit position.
2. Following the PARAMETERS and VALUES management procedure described in Section 6.3, select the PARAMETER 51
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN select the value 03
5. Press STOP to confirm. The control unit, showing RUN is ready to move the door
6. Using the UP button move the door from the closed position to the open position without interruptions.
   Once the UP limit switch is reached, the door stops, RUN stops flashing and the display will automatically return to field PARAMETER.

To leave the set-up mode, place the DIP1 in OFF.

12_ AUTOMATIC CLOSING (PARAMETER 32)

Parameter 32 allows the selection of the door automatic closing after a selectable period of time.
Important: parameter 32 is visible and accessible only if parameter 01 has been set in impulsive mode

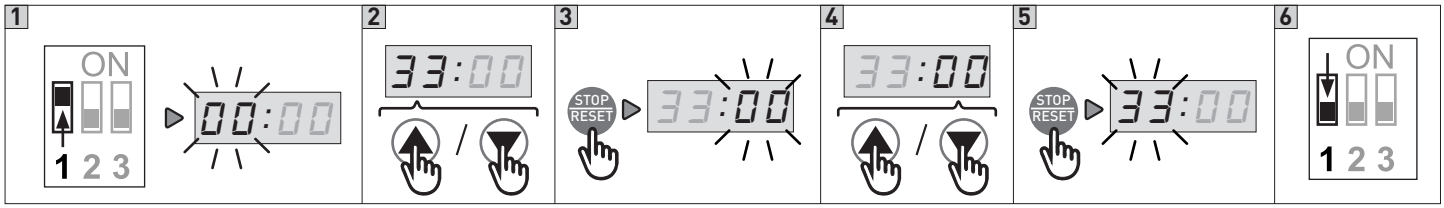


1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 32
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - The value 00 in the field VALUE inhibits the automatic closing;
   - A value greater than 0, from 1 to 990, indicates the number of seconds to wait before the activation of the automatic closing:
   NOTE: From 0 to 99 the change is made every second by using the buttons UP and DOWN.
   Over 99 the change is made every 10 seconds and the value will flash quickly: for example, the VALUE 18 corresponds to 180 seconds, the value 19 to 190 seconds ...
   If you keep the UP button pressed you will get a fast increase of the value
5. Press STOP to confirm
6. **To leave the set-up mode, place the DIP1 in OFF.**

Warning: the interlock function prevents the automatic closing when activated. For details see section 11 (INTERLOCK)

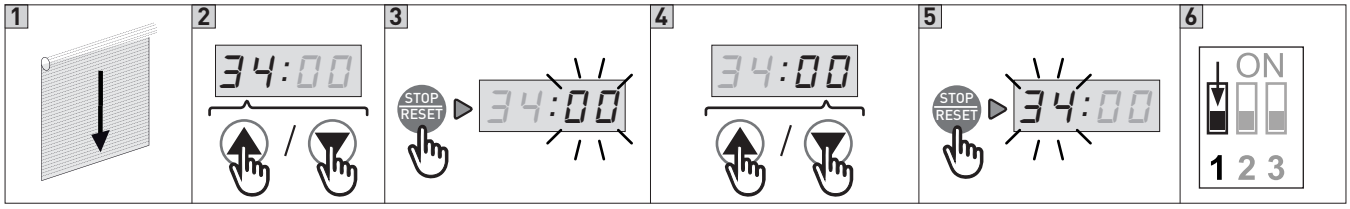
13_ CAR WASH FUNCTION (PARAMETER 33)

Count down of auto closing time starts, only if photo has been activated more than "photo active time". Door shall be complete closed before start of a new cycle.



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 33
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: No car wash function
   - Value 01: Photo active time in 0,1 sec. Units (e. g. 15 = 1,5 sec.) (Adjustable 1 – 30 units – 0,1 sec. to 3,0 sec.)
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

14_ "FORCED" CLOSING (PARAMETER 34) Only when car wash function is selected in parameter 33



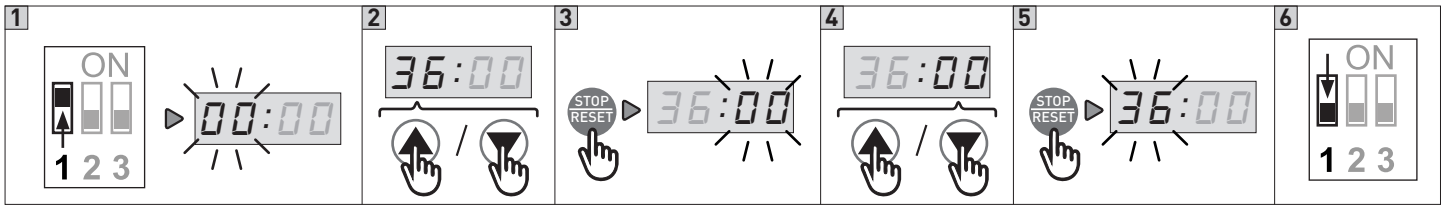
1. Close the door and stop at the DOWN limit position.
2. Following the PARAMETERS and VALUES management procedure described in Section 6.3, select the PARAMETER 34
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
   Using the buttons UP and DOWN vary the value
   - Value 00: No forced closing
   - Value 01: Forced closing after 2 min. (even though photo has not been activated)
   - Value 02: Forced closing after 5 min. (even though photo has not been activated)
   - Value 03: Forced closing after 10 min. (even though photo has not been activated)
   - Value 04: Forced closing after 20 min. (even though photo has not been activated)
4. Press the STOP button to confirm the tuning and return to the PARAMETER field.

To leave the set-up mode, place the DIP1 in OFF.

15_ INTERLOCK (PARAMETER 36)

The Interlock function stops the automatic closing if activated, to prevent a closing of the door.
The countdown on the display shows the value of the pre-set waiting time. To activate the Interlock function, with the door in its UP limit position, hold the STOP button or the emergency stop button for more than 5 seconds.
To deactivate the interlock mode press DOWN button. In case you want to disable the interlock function, choose the value 00 in parameter 36.

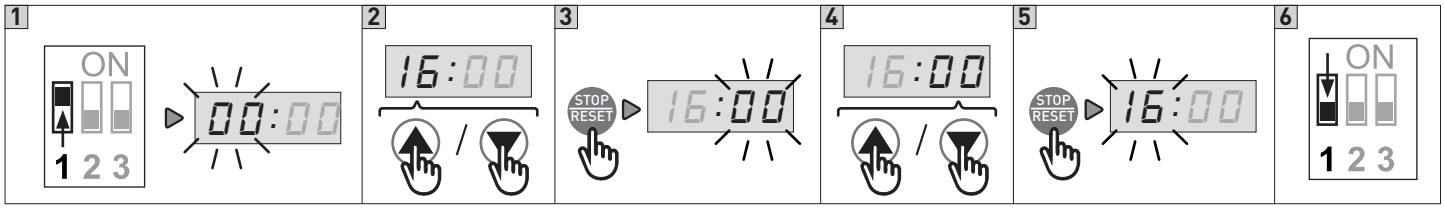
ATTENTION! Parameter 36 is visible and selectable only if the automatic closing has been selected in parameter 32.
To enable the Interlock function:



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 36
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: interlock function OFF;
   - Value 01: interlock function ON;
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

16_ INTERMEDIATE POSITION (PARAMETER 16)

It is possible to set an intermediate position of the door through the parameter 16.
In this case the PARAMETER 16 must be selected at VALUE 00.
If you are using a selector, this one must be connected to terminals 15 and 16 of X3.
If you open the contact of the selector, the use of the intermediate position is inhibited.
If you close the contact of the selector, pressing the UP button, the door stops at the intermediate position.
The intermediate position can be adjusted by setting the PARAMETER 16 at values from 02 to 07 with a progressive change of the intermediate position from 50% to 75% of the travel.



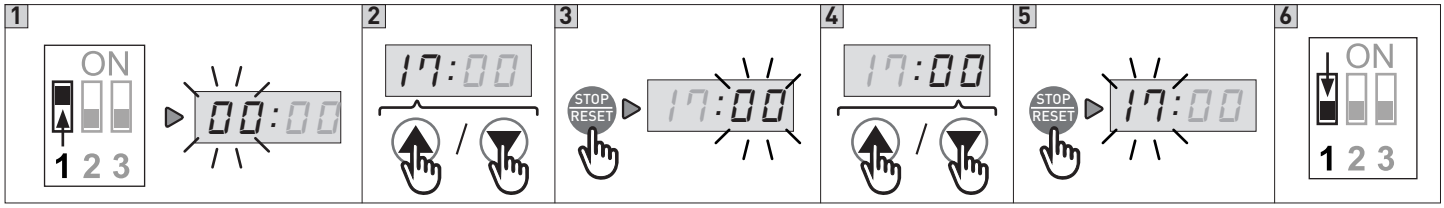
1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the parameter 16
3. Access the field VALUE pressing STOP
4. Using the buttons UP and DOWN vary the value
   - VALUE 02: Intermediate position at 50% of the travel
   - VALUE 03: Intermediate position at 55% of the travel
   - VALUE 04: Intermediate position at 60% of the travel
   - VALUE 05: Intermediate position at 65% of the travel
   - VALUE 06: Intermediate position at 70% of the travel
   - VALUE 07: Intermediate position at 75% of the travel
5. Press STOP to confirm
6. **To leave the set-up mode, place the DIP1 in OFF.**

If you are using an additional button, this one must be connected to terminals 15 and 16 of X3.
In this case the UP button allows the opening of the door up to the UP limit position.
While, to move the door to the intermediate position you have to press the additional button.
The intermediate position can be determined by setting the PARAMETER 16 with values from 08 to 13 with a progressive change of the intermediate position from 50% to 75% of the travel:

- VALUE 08: Intermediate position at 50% of the travel
- VALUE 09: Intermediate position at 55% of the travel
- VALUE 10: Intermediate position at 60% of the travel
- VALUE 11: Intermediate position at 65% of the travel
- VALUE 12: Intermediate position at 70% of the travel
- VALUE 13: Intermediate position at 75% of the travel

16.1_ AUTOMATIC CLOSING FROM INTERMEDIATE POSITION (PARAMETER 17)

You can set the automatic closing even from the intermediate position setting the PARAMETER 17.



Activate the automatic closing function (paragraph 12)

1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 17
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: Automatic closing (from intermediate position) OFF
   - Value 01: Automatic closing (from intermediate position) ON
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

17_ SAFETY DEVICES

17.1_ SAFETY BEAMS (PARAMETER 31)

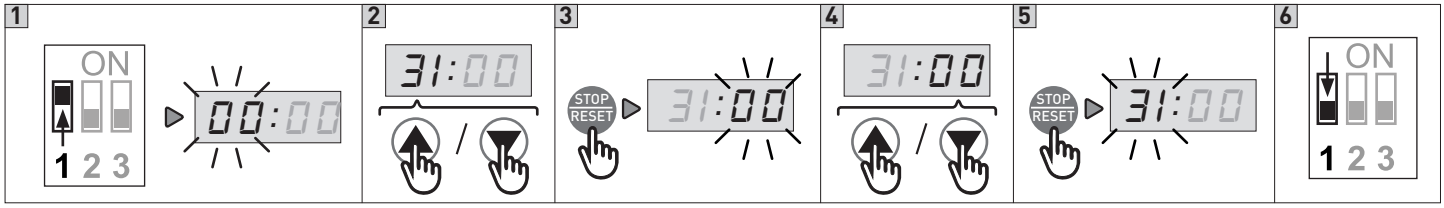
Refer to the safety beams instructions for the DC supply.
A 24V DC supply for the safety beams is available:
- Terminal 20 of X3 for the positive
- Terminal 19 of X3 for the mass.

ATTENTION! Both the transmitter and the receiver of the safety beams must be connected to the same terminals.

Caution: Do not connect the power supply at the 24V terminal 18 instead of at the terminal 20 of the X3 dedicated to safety beams, otherwise the safety beams test cycle will fails showing on the display the error code E:05 and preventing the control unit working. In case of an incorrect connection, restore the correct connections and press stop to start a new test cycle.

As for the signals, the wires (normally closed) of the receiver must be connected to the terminals 21 and 22 of X3.

Through parameter 31 you can conform the control unit to the type of connection that you are going to select, in order to activate the corresponding test functions.
This test allows the control unit to constantly check of short circuits or malfunctions that could compromise the safety of the device.
The test thus allows to ensure the safety even in case of single failure as required by the standards EN13241-1 and EN-12453.



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 31
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: No safety beams connected
   - Value 01: Connection PHOTO 1 on X12
   - Value 02: Connection PHOTO 2 on X3
   - Value 03: Connection PHOTO 1 and 2
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

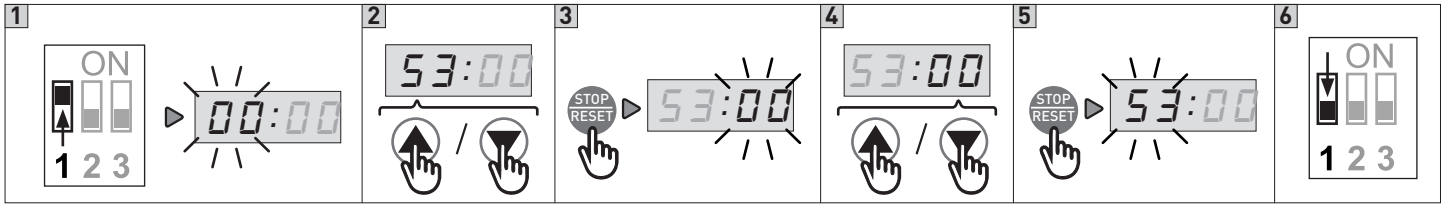
17.1.1_ ADDITIONAL PHOTO MOUNTED IN THE DOOR FRAME (ONLY POSSIBLE WITH ELECTRONIC LIMITS).

After selecting the right parameter value run mode is available by pressing stop. Location of photo will now be learned by running from close to open position. The door will stop when the photo is no longer blocked and the control unit will change back to parameter number automatically

Using the buttons UP and DOWN vary the value:
- Value 04: Photo 1 connected and mounted in the door frame
- Value 05: Photo 2 connected and mounted in the door frame
- Value 06: Photo 1 and 2 connected and photo 1 mounted in the door frame
- Value 07: Photo 1 and 2 connected and photo 2 mounted in the door frame

Install additional safety photo cells in the door track to protect the photo cells from the sun and knocks. After the installation the photo cells will automatically be disabled when the door passes the photo beam.
Avoid mounting the photo receiver on the door side where the sun is shining directly on the sensor when the sun is low!

17.1.2_ REVERSE TIME - Photo (PARAMETER 53)



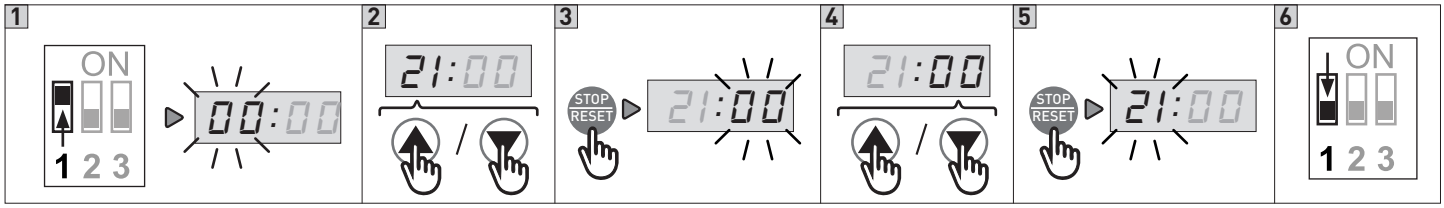
1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 53
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value ...: Reverse time of Photo in 1/100 seconds. 0.05 – 0.99 sec. Example: 30 = 0.30 sec.
   This reverse time is also used as force reversing time.
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

17.2_ SAFETY EDGE (PARAMETER 21)

Safety edge connection: in case of resistive safety edges type 8k2 ohm or pneumatic safety edges, connect the wires to the terminals 23 and 24 of X3;
In case of optoelectronic safety edge, connect the wires to the terminals 25, 26 and 27 of X3 (respecting the color order).

Warning:
- **if you choose the optical safety edge (VALUE 03) the terminals 23 and 24 DO NOT have to be connected by a jumper.**
- **if you DO NOT want to use a safety edge, select the VALUE 01 and connect the terminals 23 and 24 with a jumper. The terminals 25, 26 and 27 of X3 must not be connected.**
- **the safety edge must be connected before the selection of PARAMETER 21, but do not activated them. If this happens, the control unit shows an error signal on the display the code ERR . The same happens if you choose a parameter that does not match with the connected terminals.**

Through PARAMETER 21 you can select the type of safety edge.



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 21
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 01: PNE / DW pneumatic
   - Value 02: Safety edge with resistive contact 8k2 ohm
   - Value 03: Optoelectronic edge
   - Value 04: Special LP / DW pneumatic

- Value 05: Wireless edge with test function on X20 s.out
- Value 06: Light curtain with OSE output

5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

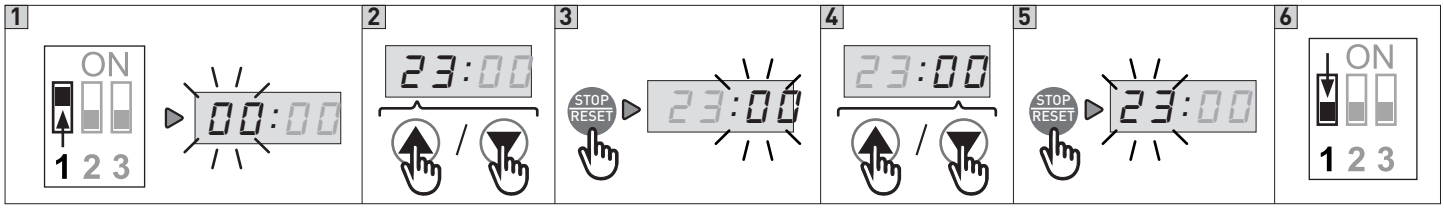
Note:

- **that actual edge must be connected but not activated before this setup. If the controller has observed a wrong edge select, the display will show ERR .**
- **that nothing must be connected to X3 terminal 23-24 when parameter value 03 or 06 has been chosen.**

17.3_ EXTRA SAFETY EDGE OR WICKET DOOR/SLACK ROPE CIRCUIT (PARAMETER 23)

Connection of the secondary safety contact strip: in the case of a resistive 8k2 ohm or pneumatic type contact strip, connect the conductors of the contact strip to terminals 3 and 4 of connector X20;
Caution: the moving rib must be connected before PARAMETER 23 is selected. If this happens, the control unit returns an error signal by showing the code ERR on the display. The same happens if a parameter is selected which does not correspond to the connected terminals.

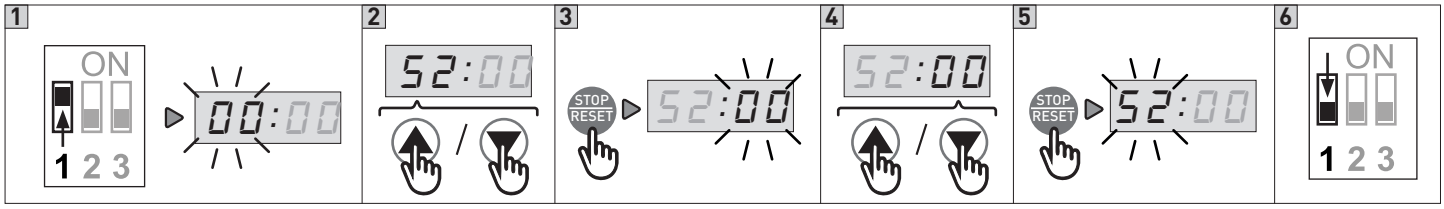
By means of PARAMETER 23, it is possible to determine the type of secondary moving rib used on the door.



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 23
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: No extra safety edge list
   - Value 01: Extra safety edge list works parallel with primary safety edge list*/**
   - Value 02: Extra safety list stops door in opening direction*
   - Value 03: Extra safety list stops door and reverse a little in opening direction*
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

* Extra safety list shall be PNE/air switch or 8k2 type and the same type as primary safety edge list
If parameter 88:03 (lock function), it is not possible to mount extra safety edge.
** For the anti-shear function, connect a photocell instead of the moving rib.

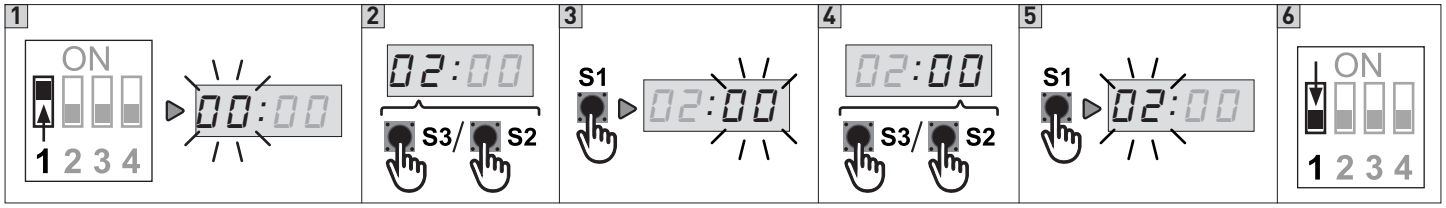
17.3.1_ REVERSE TIME - Safety edge (PARAMETER 52)



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 52
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: reverse time is set to minimum 0.004 sec
   - Reverse time of safety edge in 1/100 seconds. 0.00 – 0.99 sec. Example: 01 = 0.01 sec.
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

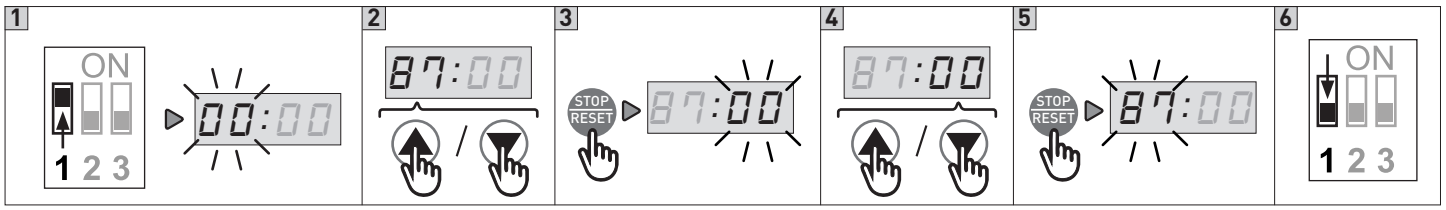
18_ REACTION – FAILURE ON PHOTO OR SAFETY EDGE LIST (PARAMETER 02)

By means of PARAMETER 02, it is possible to determine the behaviour of the damper as a result of an error in the photocell or moving rib.



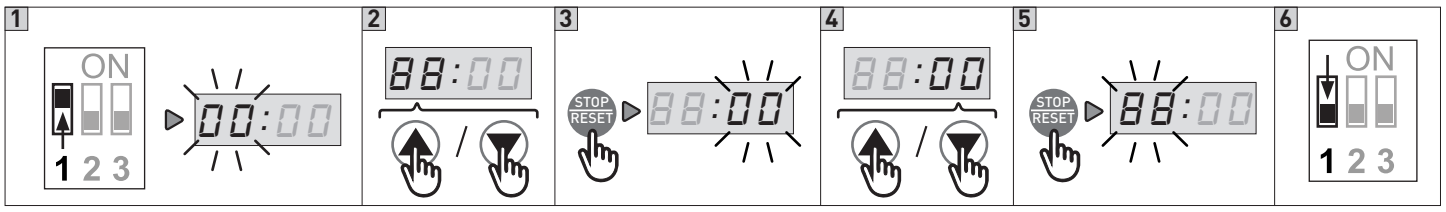
1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 02
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: Hold to run operation not possible when failure on photo or safety edge list.
     NOTE. The door cannot close when there is an error on photo or safety edge. By a special code the door can close one time in hold to run mode. Press and hold STOP when pressing 222111 (2 = DOWN push button and 1 = UP push button).
   - Value 01: Hold to run possible when failure on photo or safety edge list.
     ATTENTION: DO NOT USE 01 WHEN A DEVICE WITH CONSTANT DOWN SIGNAL IS MOUNTED.
     USAGE OF 01 IS ON CUSTOMERS OWN RISK.
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

19_ Relay AUX 1 (NO/NC - max. 230V/5A) (PARAMETER 87)



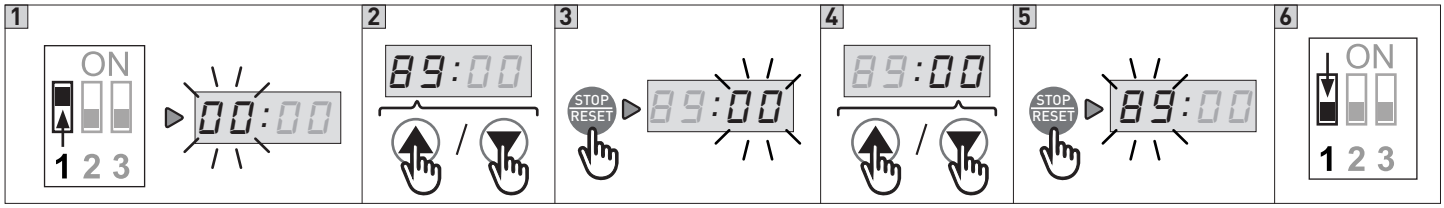
1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 87
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value:
   - Value 00: Relay active when door is running
   - Value 01: Relay active when the door is closed
   - Value 02: Relay active when the door is open
   - Value 03: Relay used for electric lock (ref. sw. input used for lock open check)
   - Value 04: Relay used for wireless edge test signal. (automatic selected when parameter 21 = 5).
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

20_ Relay AUX 2 (NO/NC - max. 230V/5A) (PARAMETER 88)



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 87
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value:
   - Value 00: Relay active when door is running
   - Value 01: Relay active when the door is closed
   - Value 02: Relay active when the door is open
   - Value 03: Relay used for electric lock (ref. sw. input used for lock open check)
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

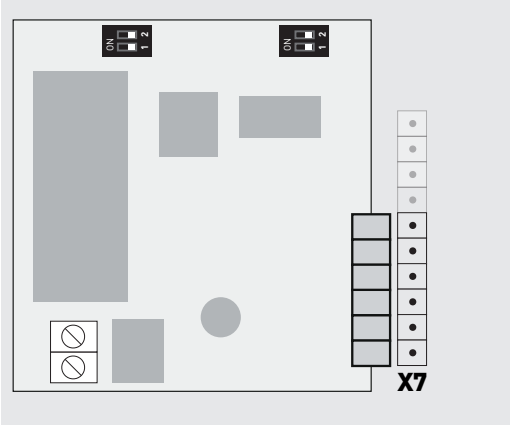
21_ Relay AUX 3 (Relay stato solido) (PARAMETER 89)



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the parameter 89
3. Access the field VALUE pressing STOP
4. Select the preferred value by pressing buttons S2 and S3:
   - VALUE 00: active relé while the door is moving
   - VALUE 01: active relé while the door is in the DOWN limit switch position
   - VALUE 02: active relé while the door is in the UP limit switch position
   - VALUE 03: the relé is used for the electric closure: it activates for one second during the opening and ONLY if the door is closed
5. Press STOP to confirm
6. To leave the set-up mode, place the DIP1 in OFF

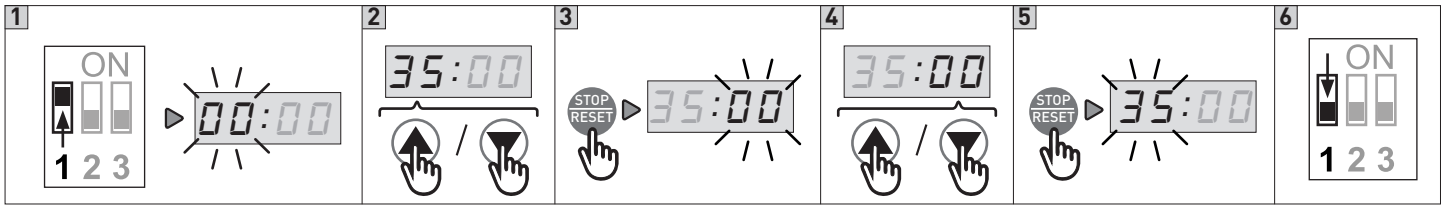
22_ ADDITIONAL RADIO RECEIVER SLOT QCMR500 (OPTIONAL) - "GO FUNTION"

WARNING: The QCMR500 in conjunction with the QC600 inhibits the use of the second photocell on terminal block X12 input PHOTO1



The control unit can be radio operated thanks to the QCTE transmitter that allows the storage of 1997 radio codes. The QCTE transmitter must be matched to the QCMR500 radio receiver slot, already connected to slot X7 (see page 6).
Please look at the instructions attached to the QCMR500 slot in order to connect it to the control unit and to match it to the transmitter.

NOTE: Set working mode: 01:03 Impulsive UP; Impulsive DOWN. **REQUIRED WITH RADIO MODULE QCMR500-OPTIONAL.**
Once the QCMR500 slot is inserted, you can set up its operation mode through PARAMETER 35 (parameter 35 is visible ONLY if the photocell is active through parameter 31):



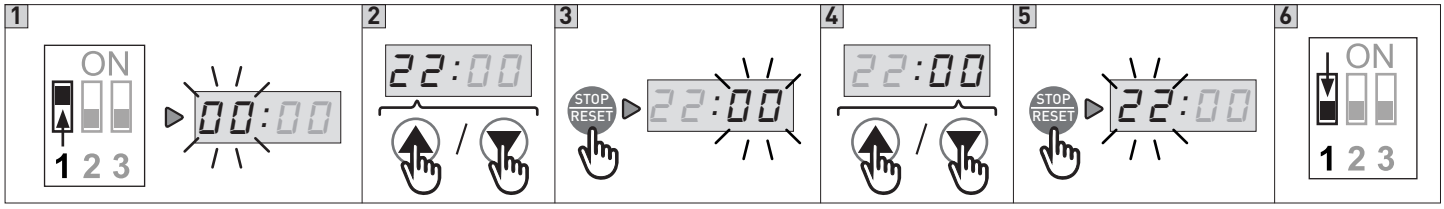
1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 35
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: **GENERAL MODE OF OPERATION**
   the signal of the transmitter always commands the opening, except when the door is already completely opened. In this case it commands the closure.
   - Value 01: **GENERAL MODE OF OPERATION + STOP**
   the signal stops the movement of the door **ONLY** while opening
   - Value 02: **MODE OF OPERATION "ONLY UPING"**
   the signal of the transmitter only activates the opening of the door. If the door is closing, the signal changes the movement till the UP limit switch position has been reached.

- Value 03: **MODE OF OPERATION "STEP BY STEP"**
  every time the signal of the transmitter is activated, it accomplishes the following commands:
  UP > STOP > DOWN > STOP sequentially.
  NOTE: if the AUTOMATIC CLOSURE has been programmed, during the pause the signal of the transmitter will extend the pause by resetting the timer of the automatic closure.
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

NOTE : the entrance "GO" (terminals 9-10 on X1) follows the same logical of functioning selected for radio receiver (parameter 35).

23_ AFTER RUN (PARAMETER 22)

Used to prevent that the door reverses when it reaches the floor before the close limit gets activated – for instance if there is dirt in the door opening or if the wires are getting longer
Monitoring of the PNE/DW air switch safety edge is only active when after run is selected parameter 22:01-50



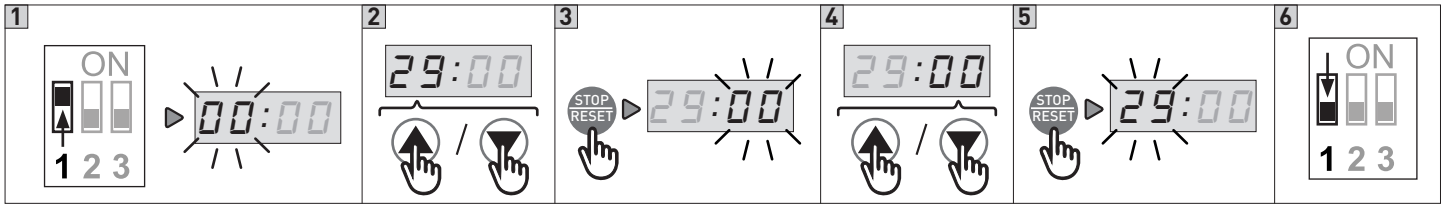
1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 22
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: No after run (Note! Value 00 = NO monitoring of PNE/DW)*
   - Value > 00: After run active – after run time 0.01 – 0.50 sec.
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

*** Monitoring of the PNE/DW air switch safety edge is only active when after run is selected parameter 22:01-50**

PROGRAMMING:
Set close limit switch about 1-3 cm over the floor. Adjust the door to the floor by setting the after run time on the right level until the door stops on PNE/DW signal from the safety list.

24_ WIRE TIGHTEN (PARAMETER 29)

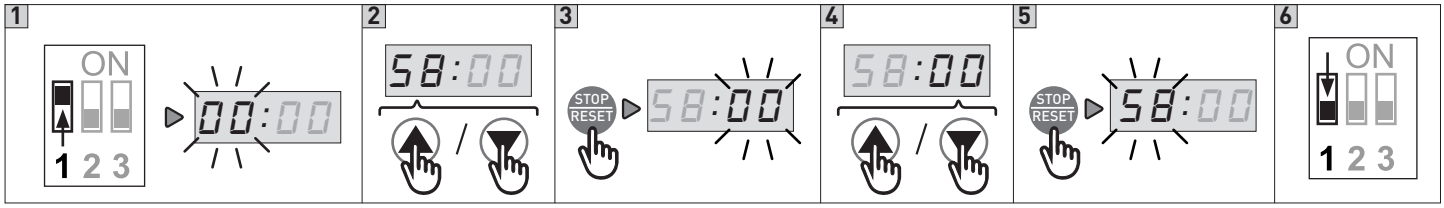
Used to prevent the wire is getting loose when the door is closed. Works as a small pull back time when the door stops on close limit



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 29
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: No wire tighten function
   - Value 01: Wire tighten 5 mS
   - Value 02: Wire tighten 10 mS
   - Value 03: Wire tighten 20 mS
   - Value 04: Wire tighten 30 mS
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

25_ SERVICE COUNTER (PARAMETER 58)

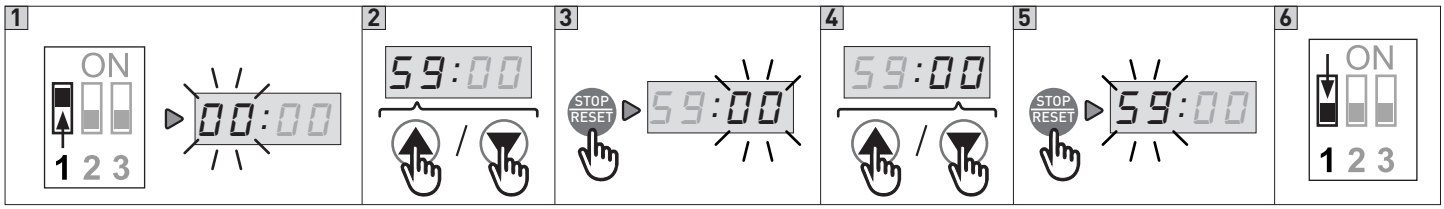
Use service counter to make service interval on doors.



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 58
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: No Service countdown
   - Value 01: 15 open cycles before service **(for test only)**
   - Value 02: 5000 open cycles before service
   - Value 03: 10000 open cycles before service
   - Value 04: 20000 open cycles before service
5. Press the STOP button (S1) once again to confirm the tuning and return to the PARAMETER field.
   NOTE: Press STOP again minimum 2 sec CLEAR is shown 2 sec. in display to confirm new countdown
6. **To leave the set-up mode, place the DIP1 in OFF.**

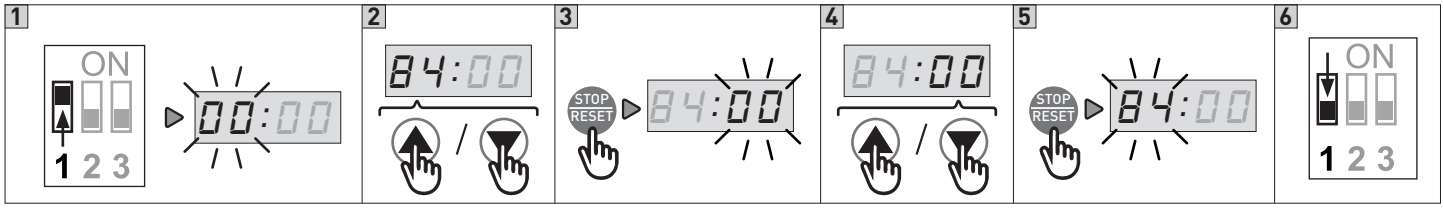
25.1_ SERVICE COUNT REACTION (PARAMETER 59)

Use to choose the default action when the chosen number of cycles is reached.



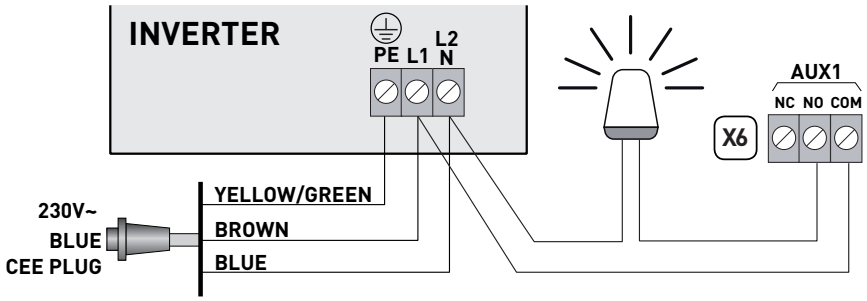
1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 59
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: Display shows E:04
   - Value 01: Switch to hold-to-run control and display shows E:04
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

26_ SPECIAL UP OR DOWN FUNCTION (PARAMETER 84)



1. Put DIP 1 (S3) in ON position, PARAMETER digits start blinking
2. Using the buttons UP and DOWN select the PARAMETER 84
3. Access the field VALUE pressing STOP. The VALUE digits start blinking
4. Using the buttons UP and DOWN vary the value
   - Value 00: Normal open function.
   - Value 01: Special open function: Open signal with high priority.
     The door will always open on a continuously open signal, even after a stop impulse. (E.g. a fire open signal)
   - Value 02: Special close function: Close signal with high priority.
     The door will always close on a continuously close signal, even after a stop impulse. (E.g. a fire close signal)
5. Press the STOP button to confirm the tuning and return to the PARAMETER field.
6. **To leave the set-up mode, place the DIP1 in OFF.**

27_ FLASHING LIGHT CONNECTION (230Vac with autolamping) / COURTESY LAMP



28_ INVERTER PARAMETER

ATTENTION! The programming of the inverter must be carried out exclusively through the integratefkeyboard.
Using the procedure for programming the parameters and values (see section 6.3) set the parameters from 100 to 109 to enter the data on the motor plate used.

100: 1.1	Nominal motor power (kW)
101: 230	rated motor Voltage (V) **[QC600/QC600S]**
101: 400	rated motor Voltage (V) **[QC600W]**
102: 5.9	nominal motor current (A)
103: 1400	motor Speed (RPM)
104: 50	nominal motor frequency (Hz)
109: 100	Maximum motor frequency (Hz)

RAPIDO motors
BRD40130 : 2800
BRD50180 : 2800
BRD6090 : 1400
BRD60130 : 2800
BRD7045 : 1400
BRD9090 : 1400
BRD12045 : 1400
BRD120140 : 2800
BRD18090 : 1400

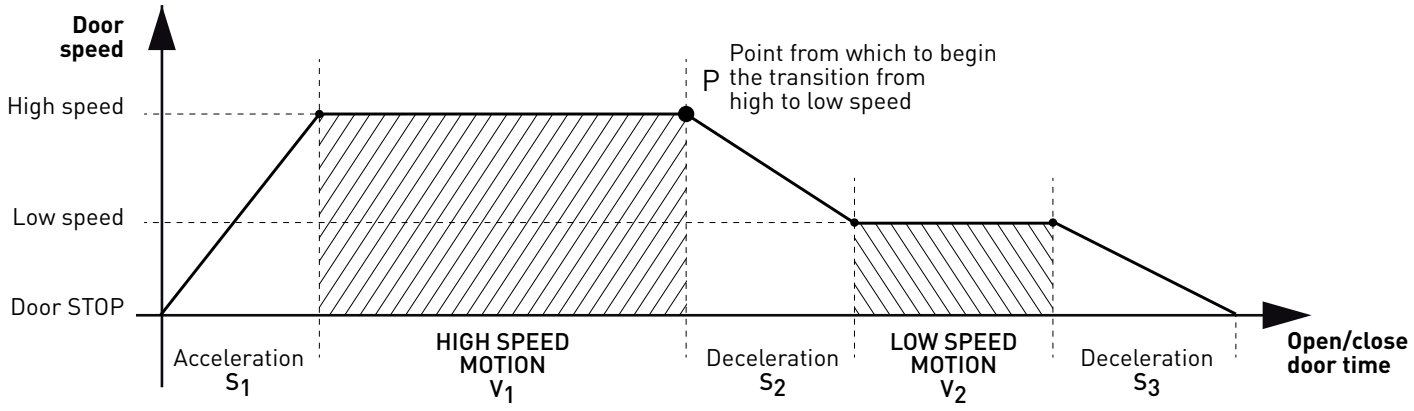
MIDI high speed motors
LP25060RME : 1400
LP45035RME : 1400

bbs / bhs motors
BBS/BHS70 : 1400
BBS/BHS70 : 1400
BHS120 : 1400
BRD140 : 1400

Set the parameters from 110 to 125 with the values you want to set the speed and acceleration of the door opening and closing:
-the speeds are set through the frequency values supplied from the INVERTER to the motor.
-Accelerations/decelerations are set through the values of time (seconds)
-the beginning of the deceleration point is shown as% of the total distance of the openin

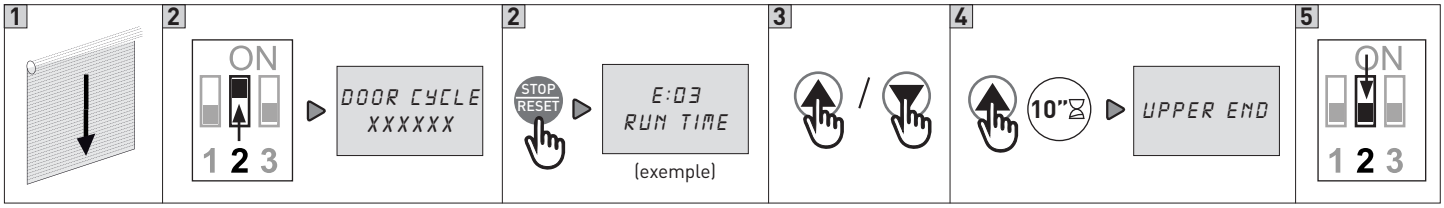
Note: values listed below are the default ones

SETTINGS UPING DIRECTION		SETTINGS CLOSING DIRECTION	
110:50	Frequency HIGH speed opening [Hz]	120:30	Frequency HIGH speed closing [Hz]
111:10	Frequency LOW speed opening [Hz]	121:10	Frequency LOW speed closing [Hz]
112:1,1	Acceleration time opening [Sec.]	122:1.0	Acceleration time closing [Sec.]
113:1,0	Deceleration time opening, high speed to low speed [Sec.]	123:2,0	Deceleration time closing, high speed to low speed [Sec.]
114:0,3	Deceleration time to stop [Sec.]	124:0,3	Deceleration time to stop [Sec.]
115:30	Low speed set point before open limit [%] of full distance.	125:30	Low speed set point before close limit [%] of full distance.



Note! All acceleration/deceleration times, are seconds from 0 Hz → max Hz / max Hz → 0 Hz. (Max Hz = parameter 109)

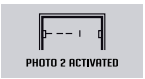
29_ ELECTRONIC COUNTER AND LAST 10 ERRORS



1. Close the door and stop at the DOWN limit position **(The door cannot be moved when display status is active)**
2. Switch DIL switch 2 to ON. The display shows the number of door cycles (openings).
3. Press STOP to see last 10 E:xx errors. If there are no errors the display will show: NO ERROR
4. Press UP to select newer error
   Press DOWN (down) to select older error
   By the end of the registered 10 errors the display will show: No newer error / No older error
5. Reset of last 10 errors by pressing UP at least 10 sec. when "upper end" is shown.
6. **To leave the set-up mode, place the DIP2 in OFF.**

30_ DISPLAY IN RUN MODE

The display will in run mode show status of limits, some inputs or error codes if they occurs.
When power up the software version is showed shortly.

	• Nothing active. (4 chairs symbol) • Door is stopped between limits and no errors are found.		GO function active (Note that the door only can be closed by GO function, when photo is installed)
	Open limit active		Photo 1 active Photo 2 is external photo cells mounted in the screw terminals X12.
	Close limit active		Photo 2 active Photo 2 is external photo cells mounted in the screw terminals X3.
	1/2 open limit active		Safety Edge active
	Stop active	SETUP ERROR	Safety list not mounted correct / wrong selection in parameter 21.
	UP push-button active		Door running up
	DOWN push-button active		Door running down

Service required	**Error code. Door is running without command** Service needed. Fatal error. Move the door manual to middle position without power. Change from normal mode to programming mode on DIP switch no. 1. This will clear the SER error. If the door is running again in 1 sec. without command when power is on then the PCB is defect.
E:01 Edge fail	**Error code. Edge monitoring** Error code Monitoring failure of safety edge if this function is activated. Check or adjust safety edge list. See chapter 1.5.

E:03 Run time	**Error code. Run time** Error code. Door is stopped on run time control. See chapter 1.10.	E:04 Service counter expired	**Error code. Service** Service counter decremented to 0 Reset for new countdown
E:05 Photo circuit fail	**Error code. Photo** Failure in photo circuit. (Test cycle after last stop failed, Press stop to start new test)	E:06 Safety Edge fail	**Error code. Safety Edge** Failure in edge circuit. (Test cycle after last stop failed, Press stop to start new test)

E:09 No Position change	**Error code. no change of encoder position, when running.** Door started, but the position is not changing. Door is stopped after delay time and E:09 failure is shown about 1 sec. Possible errors: The door is blocked, disengaged, cable connection error or the encoder magnet is not fixed on the shaft. Reset of E09: both limits shall be founded again by hold-to-run steps. (If it is not possible to find both limits, the limits must be relearned) If necessary, adjust in parameter 81 (delay time) (Parameter 81:03 = autoreset)

E:20 EEPROM fail	**Error code. EEPROM Fail** Possible error: Limits has been changed, after the force control has been learned. Reset of E20: Try deactivating force control in parameter 41 (41:00) and after this make a new power-up.	E:21 EEPROM PWR-UP fail	**Error code. EEPROM Fail** EEPROM failure of power-up. Try factory clear or change processor.

Error 12V or 24V	**Error on 24V and/or 12V voltage circuit.** 24/12V is shorted or overloaded.

31_ PARAMETER LIST (Note: **shaded** values shows factory settings)

01:00	**OPERATION MODE**
01:01	Hold-to-run UP; Hold-to-run DOWN
01:02	Impulse UP; Hold-to-run DOWN
01:03	Impulse UP; Impulse DOWN
01:04	Impulse UP; Impulse DOWN (0,5 sec reverse by stop on force control in opening direction).
02:00	**REACTION – FAILURE ON PHOTO OR SAFETY EDGE LIST**
02:00	Hold to run operation not possible
02:01	Hold to run possible
11:00	**LIMIT SWITCH**
11:00	Not in use
11:01	Not in use
11:02	Not in use
11:03	Not in use
11:04	Not in use
11:05	Encoder limit switch - clockwise direction upwards
11:06	Encoder limit switch - anti-clockwise direction upwards
12:00	**SETTING UP POSITION ELECTRONIC LIMIT SWITCH**
13:00	**ASCENT POSITION ADJUSTMENT ELECTRONIC LIMIT SWITCH**
14:00	**SETTING DOWN POSITION ELECTRONIC LIMIT SWITCH**
15:00	**ELECTRONIC LIMIT SWITCH DOWN POSITION END SETTING**
16:00	**INTERMEDIATE POSITION**
16:00	Not active
16:01	Active: by mechanical limit switch
16:02	Active: by limit switch encoder at 50% of open position
16:03	Active: by limit switch encoder at 55% of opening position
16:04	Active: from limit switch encoder to 60% of opening position
16:05	Active: from limit switch encoder to 65% of opening position
16:06	Active: from limit switch encoder to 70% of opening position
16:07	Active: from limit switch encoder to 75% of opening position
16:08	Active: from push button and with limit switch encoder at 50% of opening position
16:09	Active: from push button and with limit switch encoder at 55% of the opening position
16:10	Active: from push button and with limit switch encoder at 60% of opening position
16:11	Active: from push button and with encoder limit switch at 65% of opening position
16:12	Active: from push button and with encoder limit switch to 70% of opening position
16:13	Active: by push-button and with encoder limit switch at 75% of opening position
17:00	**AUTOMATIC CLOSING FROM INTERMEDIATE POSITION**
17:00	Not active
17:01	Active
21:00	**MOVING EDGE SELECTION**
21:01	PNE / DW air switch
21:02	Elettrica resistiva 8k2 ohm
21:03	Ottica
21:04	Special LP DW air switch
21:05	Wireless edge setting. See also parameter 87
22:00	**EXTRA RUNNING**
22:00	Not active
>00	Active: activation time from 0.01 to 0.50 seconds
23:00	**ADDITIONAL MOVING RIB**
23:00	No additional moving cost
23:01	Additional moving rib parallel to the main one
23:02	Additional moving rib in open position
23:03	Additional moving rib for slight reversal of motion
29:00	**CABLE TENSIONING**
29:00	Not active
29:01	Activation for 5 microseconds
29:02	Activation for 10 microseconds
29:03	Activation for 20 microseconds
29:04	Activation for 30 microseconds
31:00	**PHOTOCELL SETTING**
31:00	No Photo safety connected
31:01	Photo 1 connected
31:02	Photo 2 connected
31:03	Photo 1 and 2 connected
31:04	Photo 1 connected and mounted in the door frame.
31:05	Photo 2 connected and mounted in the door frame.
31:06	Photo 1 and 2 connected and photo 1 mounted in the door frame.
31:07	Photo 1 and 2 connected and photo 2 mounted in the door frame.
32:00	**AUTO CLOSE SELECT**
32:00	Not active
32:01	Seconds 1 – 990 (after 99 the changing will be in x10 of seconds and the value is flashing quickly - e.g. 18 is 180 seconds)

33:00	**CAR WASH FUNCTION**
33:00	No car wash function
33:01	Photo active time in 0,1 sec. Units (e. g. 15 = 1,5 sec.) (Adjustable 1 – 30 units – 0,1 sec. to 3,0 sec.)
34:00	**"FORCED" CLOSING**
34:00	No forced closing
34:01	Forced closing after 2 min. (even though photo has not been activated).
34:02	Forced closing after 5 min. (even though photo has not been activated).
34:03	Forced closing after 10 min. (even though photo has not been activated).
34:04	Forced closing after 20 min. (even though photo has not been activated).
35:00	**GO FUNCTION (STEP)**
35:00	Normal go function (Closing is only possible from open limit)
35:01	Special go function (stop command possible in opening direction).
35:02	Go function with open function only.
35:03	Special go function (UP –STOP – DOWN – STOP – UP . . . .)
36:00	**INTERLOCK FUNCTION**
36:00	Interlock function OFF
36:01	Interlock function ON
51:00	**RUN TIME CONTROL**
51:00	No run time control
51:01	Run time 20 sec.
51:02	Run time 40 sec.
51:03	Automatic run time - Automatic learning
51:04	Run time 60 sec.
52:00	**REVERSE TIME SAFETY EDGE**
	Reverse time of safety edge in 1/100 seconds. 0.00 – 0.99 sec.
53:00	**REVERSE TIME PHOTO**
	Reverse time of Photo in 1/100 seconds. 0.00 – 0.99 sec.
58:00	**SERVICE COUNTER**
58:00	No Service countdown
58:01	1000 open cycles before service
58:02	5000 open cycles before service
58:03	10000 open cycles before service
58:04	20000 open cycles before service
59:00	**SERVICE COUNT REACTION**
59:00	Display shows E:04
59:01	Switch to hold-to-run control and display shows E:04
81:00	**DELAY BEFORE ENCODER POSITION LOSS ALARM**
81:00	1 second
81:01	2 seconds
81:02	4 seconds
81:03	4 seconds with automatic reset

84:00	**SPECIAL UPING**
84:00	Normal function
84:01	Special open function: Open signal with high priority. The door will always open on a continuously open signal, even after a stop command. (E.g. a fire open signal)
84:02	Special close function: Close signal with high priority. The door will always close on a continuously open signal, even after a stop command. (E.g. a fire close signal) Safety devices are still active.
87:00	**RELAY AUX 1 (NO - MAX. 230V/5A)**
87:00	Relay active when door is running
87:01	Relay active when the door is closed
87:02	Relay active when the door is open
87:03	Relay used for electric lock (ref. sw. input used for lock open check)
87:04	Relay used for wireless edge test signal. (automatic selected when parameter 21 = 5).
88:00	**RELAY AUX 2 (NO - MAX. 230V/5A)**
88:00	Relay active when door is running
88:01	Relay active when the door is closed
88:02	Relay active when the door is open
88:03	Relay used for electric lock (ref. sw. input used for lock open check)
89:00	**RELAY AUX 3 (SOLID STATE NO – MAX. 30V/50MA)**
89:00	Relay no function
89:01	Relay active control failure (encoder-disengagement sw.- thermo)

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