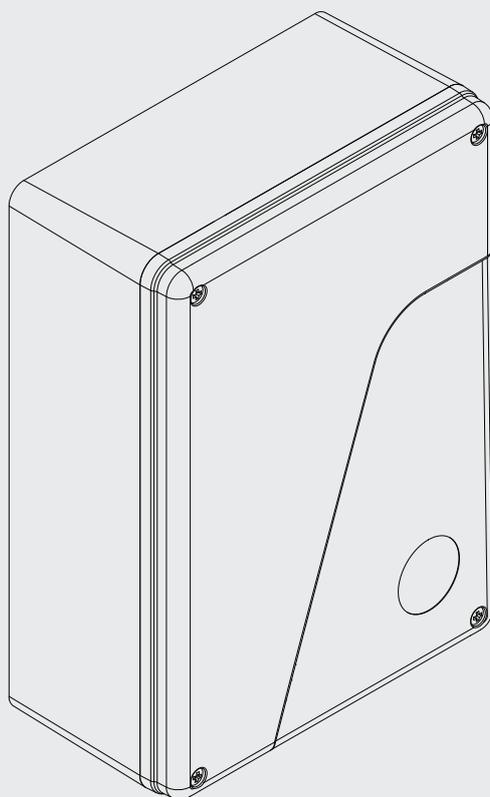


HEADY 24 3B



BENINCA[®]
TECHNOLOGY TO OPEN



EC Declaration of conformity

Declaration pursuant to Directives 2004/108/EC(EMC); 2006/95/EC(LVD)

Manufacturer:

Automatismi Benincà SpA

Address:

Via Capitello, 45 - 36066 Sandrigo (VI) - Italy

Declares that the product:

Command central for 1 24Vdc motor, for single or sliding doors: HEADY 24 3B

is compliant with the conditions of the following EC Directives:

• **DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL** of December 15 2004 regarding the approximation of the legislations of the member States relative to electromagnetic compatibility and that repeals directive 89/336/CEE, according to the following concurred norms:

EN 61000-6-2:2005, EN 61000-6-3:2007.

• **DIRECTIVE 2006/95/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL** of December 12 2006 concerning the approximation of the legislations of the member States relative to electrical material destined to be used within certain voltage limits, according to the following concurred regulations:

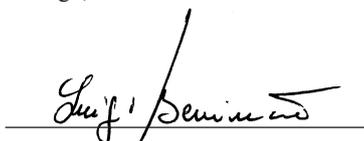
EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006 + A2:2006 + A13:2008; EN 60335-2-103:2003.

if applicable :

• **DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL** of March 9 1999 regarding radio devices and terminal and telecommunications devices and the reciprocal recognisances of their conformity, according to the following concurred regulations: ETSI EN 301 489-3 V1.4.1 (2002) + ETSI EN 301 489-1 V1.4.1 (2002) + ETSI EN 300 220-3 V1.1.1 (2000) + EN 60950-1 (2001)

Benincà Luigi, Legal manager.

Sandrigo, 02/11/2010.



WARNINGS

This manual has been especially written to be use by qualified fitters.

None of the information provide in this manual can be considered as being of interest for the end users.

Preserve this manual for future needs.

The technician has to furnish all the information related to the step by step function, the manual and the emergency function of the operator, and to deliver the manual to the final user.



Foresee on the supply net an onnipolar switch or selector with distance of the contacts equal or superior to 3 mms.

Verify that of the electrical system there is an awry differential interrupter and overcurrent protection.

Some typologies of installation require the connection of the shutter to be link at a conductive mass of the ground according to the regulations in force.

The electrical installation and the operating logic must comply with the regulations in force.

The leads fed with different voltages must be physically separate, or they must be suitably insulated with additional insulation of at least 1 mm.

The leads must be secured with an additional fixture near the terminals.

During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts

Check all the connections again before switching on the power.

The unused N.C. inputs must be bridged.

The descriptions and the present illustrations in this manual are not binding. Leaving the essential characteristics of the product unchanged, the manufacturer reserves himself the right to bring any change of technical, constructive or commercial character without undertaking himself to update the present publication.

HEADY 24 3B CONTROL UNIT

AUTOSET FUNCTION

IMPORTANT: The control unit is equipped with the Autoset function to automatically set the main functioning values based on the type of installation.

The AUTOSET function must be repeated at every function parameter change or upon change of automation conditions. See the AUTO menu for further information.

WIRE DIAGRAM

Wire connections shown in Fig. 1 are described hereunder:

Terminal No.	Function	Description
1-2	Motor 1	Connection, motor 1: 24VDC 2.5A max
3-4	Motor 2	Connection, motor 2: 24VDC 2.55A max
5-6	Flashing light	Connection, flashing light 24VDC 15W max.
9-10	SCA/ PHOTO TEST/ 2 CH	Normally Open, voltage-free contact, configurable as open gate indicator light, photocell test or second radio channel (see Fig. 4). For use as "Open gate indicator" the TEST1 and TEST2 logics must be OFF For use as photocell test it is sufficient to activate one or both TEST logics and connect the photocells as indicated in Fig.3.
11-12	24 Vac/dc	Output, accessory power supply, 24VAC/0.5A max. IMPORTANT: If the battery charger board is installed, the output (without mains power connected) has a 24Vdc polarised voltage. Make sure the devices are correctly connected (i.e. 11:+24Vdc / 12:-0Vdc).
13-25	COM/ENC+	Common for limit switch and all the command inlets or encoder power supply.
14	SWO1/ENC1	Motor 1 OPEN limit switch input (N.C. contact) or Motor 1 Encoder connection.
15	SWC1	Motor 1 CLOSE limit switch input, (N.C. Contact)
16	SWO2/ENC2	Motor 2 OPEN limit switch input, (N.C. Contact) or Motor 2 Encoder connection.
17	SWC2	Motor 2 CLOSE limit switch input, (N.C. Contact)
18	PHOTO/BAR	Input, photocell activated in both opening and closing phases As an alternative, the PHOTO input can be used to connect a safety edge (see BAR logics).
19	PHOTC	Input, photocell activated in closing phase only (Normally closed contact)
20	STOP	Input, STOP push-button (Normally closed contact)
23	PED	Input, pedestrian push-button (N.O. (Normally Open) contact). It controls the total opening, motor 1.
24	Step-by-Step	Input, step-by-step push button (Normally open contact)
26	ENC-	Input for GND Encoder connection (see Fig.2).
31-32	Antenna	Connection to the built-in radio receiver card (31-signal/32-screen).
+ / -	24VAC/dc	Input, 24VAC/24VDC power supply. In case of use of plug batteries connect the battery charging card as indicated in the specific installation instructions.
U11	CONFIGURATION MEMORY	Extractable Eprom Memory. Contains all the control unit configurations (logics, parameters, etc.), including the radiotransmitters. In case of faults it is possible to extract Eprom and insert it into a different control unit, avoiding reprogramming.

ENCODER WIRING

In case the motor is with Encoder and one wished to connect it to the control unit, carry out the connections indicated in Fig.2, in this case the SWO1 and SWO2 inputs may not be used as Limit switch inputs.

It is not possible to use the Encoder and the closure Limit switch simultaneously.

Leave SWC1 and SWC2 shorted.

TO CHECK CONNECTIONS

- 1) Cut-off power supply.
- 2) Manually release the wings, move them to approx. half-stroke and lock them again.
- 3) Reset power supply.
- 4) Send a step-by-step control signal by pressing the <-> push-button.

5) The leeaves must move in OPENING.

In case this does not happen, it is sufficient to invert among them the motor run wires. (1<>2 for M1 motor, and 3<>4 for M2 motor) and, if used, the relative Limit switch inputs (14<>15 for M1 motor, and 16<>17 for M2 motor).

PROGRAMMING

The programming of the various functions of the control unit is carried out using the LCD display on the control unit and setting the desired values in the programming menus described below.

The parameters menu allows you to assign a numerical value to a function, in the same way as a regulating trimmer.

The logic menu allows you to activate or deactivate a function, in the same way as setting a dip-switch.

Other special functions follow the parameters and logic menus and may vary depending on the type of control unit or the software release.

TO ACCESS PROGRAMMING:

- 1 - Press the button <PG>, the display goes to the first menu, Parameters "PAR".
- 2 - With the <+> or <-> button, select the menu you want (PAR>LOG>RAD>NMAN>MACI>RES>AUTO>CODE).
- 3- Press the button <PG>, the display shows the first function available on the menu.
- 4 - With the <+> or <-> button, select the function you want.
- 5 - Press the button <PG>, the display shows the value currently set for the function selected.
- 6 - With the <+> or <-> button, select the value you intend to assign to the function.
- 7 - Press the button <PG>, the display shows the signal "PRG" which indicates that programming has been completed.

NOTES:

Simultaneously pressing <+> and <-> from inside a function menu allows you to return to the previous menu without making any changes. Hold down the <+> key or the <-> key to accelerate the increase/decrease of the values. After waiting 120s the control unit quits programming mode and switches off the display. When the board is switched on, the software version is displayed for around 5 sec Hold down the <+> key or the <-> key to accelerate the increase/decrease of the values.

PARAMETERS, LOGIC AND SPECIAL FUNCTIONS

The tables below describe the individual functions available in the control unit.

PARAMETERS (PAR)			
MENU	FUNCTION	MIN-MAX-(Default)	MEMO
<i>tCR</i>	Automatic closing time. Active only with logic "TCA"=ON. At the end of the set time the control unit orders a closing manoeuvre.	1-240-(40s)	
<i>tN1</i>	Operating time, motor 1. The operating time is adjusted at normal speed during motor 1 opening and closing phases. See Paragraph "Adjustment of the gate leaf speed". By setting the value to 0, the operation is performed with around 2 seconds of pick-up and then the movement is carried on at reduced speed for the entire stroke.	0-99-(5s)	
<i>tN2</i>	Operating time, motor 2. The operating time is adjusted at normal speed during motor 2 opening and closing phases. See Paragraph "Adjustment of the gate leaf speed". By setting the value to 0, the operation is performed with around 2 seconds of pick-up and then the movement is carried on at reduced speed for the entire stroke.	0-99-(5s)	
<i>PNo1</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the opening phase, at normal speed - Motor 1.	1-99-(20%)**	
<i>PNc1</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the closing phase, at normal speed - Motor 1.	1-99-(20%)**	
<i>PNo2</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the opening phase, at normal speed - Motor 2.	1-99-(20%)**	
<i>PNc2</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the closing phase, at normal speed - Motor 2.	1-99-(20%)**	
<i>tdNo</i>	Mot.2 opening delay time. Regulates the delay time of motor 2 on opening with respect to motor 1	0-15-(2s)	
<i>tdNc</i>	Mot.1 closing delay time Regulates the delay time of motor 1 on closing with respect to motor 2	0-40-(3s)	
<i>SLd1</i>	Adjusts motor 1 speed during slowing phases. Value expressed in percentage of normal functioning speed.	30-70 (50%)	
<i>SLd2</i>	Adjusts motor 2 speed during slowing phases. Value expressed in percentage of normal functioning speed.	30-70 (50%)	
<i>SPd1</i>	Adjusts motor 1 speed during normal speed phase. Value expressed in percentage.	30-99 (99%)	
<i>SPd2</i>	Adjusts motor 2 speed during normal speed phase. Value expressed in percentage.	30-99 (99%)	
<i>PSo1</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the opening phase, at reduced speed - Motor 1.	1-99-(20%)**	
<i>PSc1</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the closing phase, at reduced speed - Motor 1.	1-99-(20%)**	
<i>PSo2</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the opening phase, at reduced speed - Motor 2.	1-99-(20%)**	
<i>PSc2</i>	The anti-crash device* (amperometric sensor) operation is adjusted in the closing phase, at reduced speed - Motor 2.	1-99-(20%)**	
<i>SEAU</i>	The intervention threshold of the anti-crashing device (Encoder) during the phase at normal speed is adjusted.* 0:Off-1:minimum sensitivity - 99: maximum sensitivity	0-99-(0%)	

SEAr	The intervention threshold of the anti-crashing device (Encoder) during braking is adjusted *. 0:Off-1:minimum sensitivity - 99: maximum sensitivity	0-99-(0%)	
t Inc	This parameter is enabled only for motors equipped with Encoder. The encoder inhibition is regulated near the opening and closing mechanical stoppers. 1: minimum distance – 250: maximum distance	1-250-(250)	
<p>* WARNING: AN INCORRECT SETTING OF THESE PARAMETERS MAY RESULT IN AN HAZARD. COMPLY WITH REGULATIONS IN FORCE!</p> <p>With motors without limit switch and/or encoder it adjusts the sensitivity of the sensor which causes arrest during slowing phase.</p> <p>** 1: minimum force/torque - 99: maximum force/torque</p>			

LOGIC (LoG)			
MENU	FUNCTION	ON-OFF-(Default)	MEMO
t cA	Enables or disables automatic closing On: automatic closing enabled Off: automatic closing disabled	(ON)	
ibl	Enables or disables condominium function. On: condominium function enabled. The step-by-step impulse or transmitter impulse has no effect during the opening phase. Off: condominium function disabled.	(OFF)	
Scl	Enables or disables rapid closing On: rapid closure is enabled. With open gate, or in the opening phase, the activation of the photocell causes the automatic closure 3sec after the total opening of the gate. It is activated only with TCA:ON Off: rapid closing disabled.	(OFF)	
PP	Selects the operating mode of the "Step by step button" and of the transmitter. On: Operation: OPEN > CLOSE > OPEN > Off: Operation: OPEN > STOP > CLOSE > STOP >	(OFF)	
PrE	Enables or disables pre-blinking. On: Pre-blinking enabled. Blinking is activated 3s before the motor starts. Off: Pre-blinking disabled.	(OFF)	
blco	Enables or disables the block function in opening. On: Block function enabled. To use only with motors equipped with Limit switch. After the intervention of the opening Limit switch the control unit delays arrest by about 0.5s, so to allow a better strike of the shutter on the stop locks. Off: Block function disabled	(OFF)	
blcc	Enables or disables the block function in closing. On: Block function enabled. To use only with motors equipped with Limit switch. After the intervention of the opening Limit switch the control unit delays arrest by about 0.5s, so to allow a better strike of the shutter on the stop locks. Off: Block function disabled.	(OFF)	
inot	The operating mode with 1 or 2 motors is selected: On: The motor operation is synchronised. This function must be used in the following cases: - for each single motor, connect it to M1: Terminals 1/2. - for two synchronised motors (e.g. balancing doors), connect one motor to M1: terminals 1/2 and the other to M2: terminals 3/4. Adjust the parameters related to motor 1, the M2 limit switch inputs are deactivated. TDMO and TDMC must be 0. Off: For two non-synchronised motors, e.g. overlapping gate leaves, adjust TDMO and TDMC on the desired values.	(OFF)	
cuAr	The code programmable transmitters is enabled or disabled. On: Radio receiver enabled only for rolling-code transmitters. Off: Receiver enabled for rolling-code and programmable code transmitters (self-learning and Dip Switch).	(OFF)	
oPcL	PP input as OPEN and PED input as CLOSED are enabled or disabled. On: PP input is enabled as OPEN and PED input is enabled as CLOSED. Off: PP and PED inputs are enabled with their function.	(OFF)	
2ch	Enables or disables the second radio channel on terminals 9/10. On: Exit configured with function as second radio channel. Off: Exit takes on function of service light (see Fig.3).	(OFF)	

SErL	The service light function is enabled or disabled on the 9/10 output (see Fig.3). On: This output has the function of service light. At each operation, the output supplies 24VAC for around 90 sec. The counting of the TLS time starts when the motor start. Use an auxiliary relay to control the light. Off: The output features the SCA function, open gate light: light off with closed gate, flashing light with moving gate, light on with open gate. See wire diagram.	(OFF)	
bAr	The operating mode of input 13/18 (PHOTO) is selected. On: Input for the connection of the mechanical safety edge (Normally Closed (N..C.) contact), activated in both opening and closing phases. The activation of the safety edge causes the gate stop and its movement reversion for around 3 seconds. The logics TST1 must be OFF: Off: Input for the connection of the photocell (N.C. contact), activated in both opening and closing phases. When the photocell switches on (open contact), the gate movement will stop. When the photocell switches off (closed contact), the control unit will always send an opening control signal to the system, even if the photocell was activated during closure.	(OFF)	
tSt 1	Enables or disables checking of photocells on PHOTO input, active both in closing and in opening. On: Check enabled. If the check has a negative result, no manoeuvre is commanded. See Fig.4 - "PHOTO TEST". Off: Checking of photocells disabled at each manoeuvre.	(OFF)	
tSt 2	Enables or disables checking of photocells on PHOTC inputs, active only in closing. On: Check enabled. If the check has a negative result, no manoeuvre is commanded. See Fig.4 - "PHOTO TEST". Off: Checking of photocells disabled at each manoeuvre.	(OFF)	
tSt n	Enables or disables motors check. On: Check enabled. If the check has a negative result, no manoeuvre is commanded. Off: Check disabled.	(OFF)	
rEn	(Enables or disables remote radiotransmitters learning, as indicated in the paragraph "Remote transmitters learning". On: Remote learning enabled. Off: Remote learning not enabled.	(OFF)	

RADIO (rAd i)

MENU	FUNZIONE
pp	By selecting this function, the receiver goes in waiting (PUSH) for a transmitter code to assign to the step-step function. Press the key of the transmitter to assign to this function. If the code is valid, it is memorised and the message oH is displayed If the code is not valid, the message Err is displayed
2ch	By selecting this function, the receiver goes into waiting (PUSH) for a transmitter code to assign to the second radio channel. Press the key of the transmitter to assign to this function. If the code is valid, it is memorised and the oH message is displayed If the code is not valid, the message Err is displayed.
PEd	By selecting this function, the receiver goes into waiting (PUSH) for a transmitter code to assign to the pedestrian opening function. Press the key of the transmitter to assign to this function. If the code is valid, it is memorised and the oH message is displayed If the code is not valid, the message Err is displayed.
clr	By selecting this function, the receiver goes into waiting (PUSH) for a transmitter code to erase from the memory. If the code is valid, it is erased and the message oH is displayed If the code is not valid or not present in memory, the message Err is displayed
rtr	Completely erases memory of the receiver. Confirmation of the operation is requested. By selecting this function the receiver goes into waiting (PUSH) for a new PGM pressure to confirm the operation. At end of erasing the oH message is displayed

CYCLES NUMBER (nAn)

Displays the number of complete cycles (open+close) carried out by the automation.
When the <PG> button is pressed for the first time, it displays the first 4 figures, the second time it shows the last 4. Example <PG> **00 i2**
>>> <PG> **3456**: made 123.456 cycles.

RESET (rE5)

RESET of the control unit. ATTENTION!: Returns the control unit to the default values. Pressing the <PG> button for the first time causes blinking of the letters rE5, pressing the <PG> button again resets the control unit. Note: The transmitters are not erased from the receiver nor is the access password. All the logics and all the parameters are brought back to default values, it is therefore necessary to repeat the autosect procedure.

AUTOSET (Aut o)

This function must be used to set the optimal automation function values, and at the end of the procedure, it sets medium values of COUPLING, WORK TIME and SLOWING. To carry out autosect, proceed as follows:

a) Ascertain that no obstacles of any nature are present in the manoeuvre area, if necessary, block off the area in order to prevent access from people, animals, vehicles, etc.

During autosect phase, the anti-crushing function is not active.

b) Select the AUTO function and press OK.

c) Select with the <+> or <-> button the submenu, NOLS, LSW or ENC based on the presence of Limit switch and/or encoder:

NOLS: if the motor is without Limit switch and encoder

LSW: if the motor is equipped with Limit switch and without encoder

ENC: if the motor is equipped with encoder and without Limit switch

d) once selected press OK to begin the autosect phase.

The control unit carries out a series of manoeuvres for learning of the run of the leaves and for parameter configuration.

Initially both the leaves are brought to opening position, then after some opening and closing manoeuvres at different speeds, of one or both the shutters, the control unit displays the message aH. In case the operation has no positive result, the message Err is displayed.

Repeat the operation after re-checking the wiring and the eventual presence of obstacles.

In case parameters TM1/TM2 or the speed are changed, repeat the autosect procedure.

During the manoeuvres the display will show some abbreviations: OPM1/OPM2 during opening of the motor 1 or 2 and CLM1/CLM2 during closing of motor 1 or 2.

PROTECTION CODE (codE)

It allows to type in an access protection code to the programming of the control unit.

A four-character alphanumeric code can be typed in by using the numbers from 0 to 9 and the letters A-B-C-D-E-F.

The default value is 0000 (four zeros) and shows the absence of a protection code.

While typing in the code, this operation can be cancelled at any moment by pressing keys + and - simultaneously. Once the password is typed in, it is possible to act on the control unit by entering and exiting the programming mode for around 10 minutes in order to allow adjustments and tests on functions.

By replacing the 0000 code with any other code, the protection of the control unit is enabled, thus preventing the access to any other menu. If a protection code is to be typed in, proceed as follows:

- select the Code menu and press OK.

- the code 0000 is shown, also in the case a protection code has been previously typed in.

- the value of the flashing character can be changed with keys + and -.

- press OK to confirm the flashing character, then confirm the following one.

- after typing in the 4 characters, a confirmation message "CONF" appears.

- after a few seconds, the code 0000 appears again

- the previously stored protection code must be reconfirmed in order to avoid any accidental typing in.

If the code corresponds to the previous one, a confirmation message "aH" appears.

The control unit automatically exits the programming phase. To gain access to the Menus again, the stored protection code must be typed in.

IMPORTANT: TAKE NOTE of the protection code and KEEP IT IN A SAFE PLACE for future maintenance operations.

To remove a code from a protected control unit it is necessary to enter into programming with the password and bring the code back to the 0000 default value. IF YOU LOSE THE CODE, PLEASE CONTACT THE AUTHORISED SERVICE CENTER FOR THE TOTAL RESET OF THE CONTROL UNIT.

TRANSMITTERS REMOTE LEARNING

If an already memorised transmitter is available in the receiver it is possible to carry out remote radio learning (without needing to access the control unit).

IMPORTANT: The procedure must be carried out with leaves in opening during TCA pause or with an open gate if the TCA logic is OFF. The REM logic must be ON.

Proceed as follows:

1 Press the hidden key of the transmitter which is already memorised.

2 Press, within 5s, the key of the corresponding transmitter which is already memorised to associate to the new transmitter. The flashing light will turn on.

3 Press within 10s the hidden key of the new transmitter.

4 Press, within 5s, the key of the new transmitter to associate to the channel chosen at point 2. The flashing light will turn off.

5 The receiver memorised the new transmitter and immediately exits from programming.

FUSES

F1: Accessory power supply safety fuse.

F2: General safety fuse

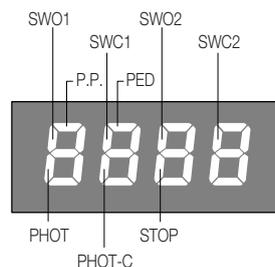
EMERGENCY BATTERY

An optional accessory is available for control unit power supply in case of absence of power.

The kit is made up of a battery charging board and two 12V rechargeable batteries, fixing clamps, screws and wiring.

For further information, refer to the instructions supplied with the accessory.

DIAGNOSTICS



One segment of the display is linked to each input. In the event of failure it switches on according to the following scheme.

N.C. inputs are represented by the vertical segments. N.O. inputs are represented by the horizontal segments.

The control unit sees the message AMP1 or AMP2 in case of anti-crushing ammeter sensor intervention.

ERROR MESSAGES

Some messages that are displayed in case of function anomalies are listed as follows:

<i>AMP 1</i>	Obstacle error motor 1/anti-crushing	Check presence of obstacles on motor 1 leaf run
<i>AMP 2</i>	Obstacle error motor 2/anti-crushing	Check presence of obstacles on motor 2 leaf run
<i>Enc 1</i>	Error, encoder 1/detection of the obstacle	Check the correct connection of motor 1 encoder to the control unit, that no obstacles are present along the gate stroke and the encoder operates correctly.
<i>Enc 2</i>	Error, encoder 2/detection of the obstacle	Check the correct connection of motor 2 encoder to the control unit, that no obstacles are present along the gate stroke and the encoder operates correctly.
<i>Err 1</i>	Motor 1 circuit checking error	Check motor 1 connections
<i>Err 2</i>	Motor 2 circuit checking error	Check motor 2 connections
<i>Err 3</i>	error/fault power circuit	Request technical assistance and eventually replace control unit.
<i>Err 4</i>	PHOTO/BAR photocell checking error	Check connections, PHOTO/BAR photocell alignment or presence of obstacles.
<i>Err 5</i>	PHOTC photocell checking error	Check connections, PHOTC photocell alignment or presence of obstacles.
<i>Err 7</i>	Error active stop (during autoset)	In autoset phase, the STOP input has intervened.
<i>Err 8</i>	Error active input (during autoset)	In autoset phase a PP/Open/Close input has intervened.
<i>thr 1</i>	Motor thermal protection intervention	Wait for motor cooling, in case reset does not take place, motor replacement may be necessary

WASTE DISPOSAL

If the product must be dismantled, it must be disposed according to regulations in force regarding the differentiated waste disposal and the recycling of components (metals, plastics, electric cables, etc.). For this operation it is advisable to call your installer or a specialised company.

TECHNICAL DATA

Control unit supply	24 Vdc
Power supply	230 Vac 50/60 Hz or 115Vac 50/60Hz according to the version
Output supply	1/2 motor 24Vdc
Maximum motor current	2.5+2.5 A
Output supply accessories	24Vdc 500mA max.
Protection level	IP54
Operating temp.	-20°C / +50°C
Radio receiver	built in 433,92 MHz configurable (rolling-code or programmable + rolling-code)
Rolling code transmitters supported	64