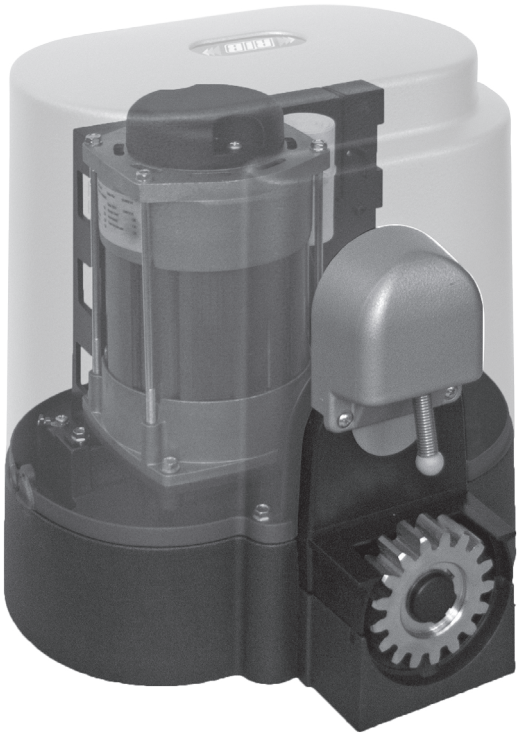
K800 - K1400

K2200 con / avec / with / mit K-CRX



K FCE

K FCM

Operatore Opérateur Operator Torantrieb Operador		Alimentazione Alimentation Power Supply Stromspannung Alimentacion	Peso max cancello Poids maxi portail Max gate weight Max Torgewicht Peso máx verja	Spinta max Poussée maxi Max Thrust Max Schubkraft Max Empuje	Coppia max Couple maxi Max torque Max. Drehmoment Coppia max	Codice Code Code Code Codigo
K800	FCE	230V 50/60Hz	800 kg / 1766 lbs	60 kg / 132 lbs	20,4 Nm	AA30039
	FCM					AA31110
	FCE	120V 60Hz		51,4 kg / 113 lbs	17,5 Nm	AA30042
K1400	FCE	230V 50/60Hz	1400 kg / 3090 lbs	79 kg / 173,8 lbs	27 Nm	AA30044
	FCM					AA31115
	FCE	120V 60Hz		88 kg / 193,6 lbs	30 Nm	AA30047
K2200	FCE	230V 50/60Hz	2200 kg / 4856 lbs	115 kg / 253 lbs	39 Nm	AA30049
	FCM					AA31120
	FCE	120V 60Hz		117,5 kg / 258,5 lbs	40 Nm	AA30052

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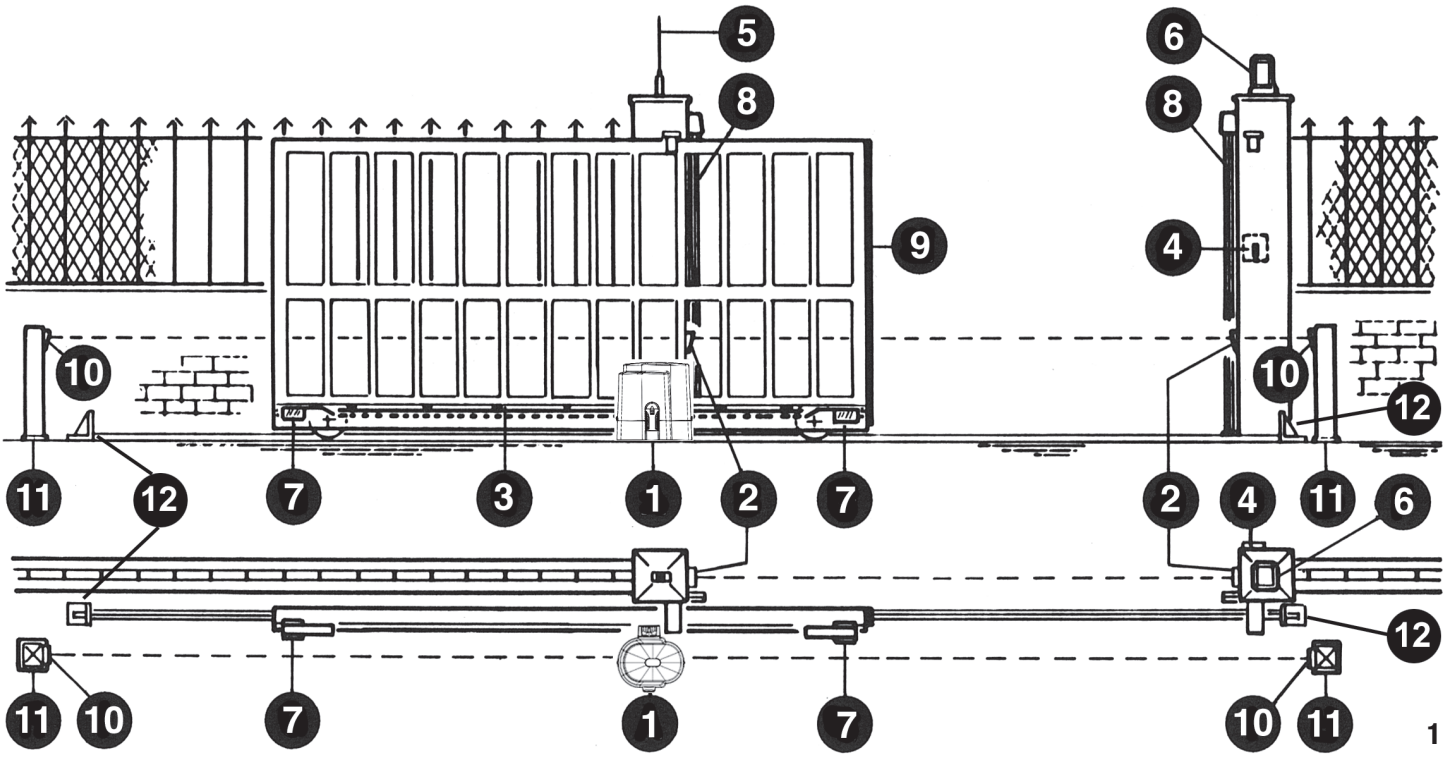
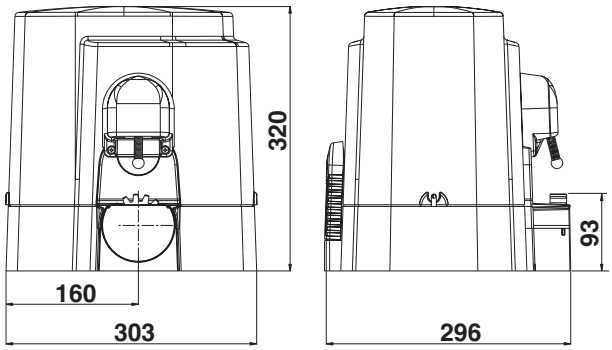


1

1 - K operating device
2 - External photocells
3 - Rack of Module 4
4 - Key selector
5 - Radio antenna
6 - Blinker
7 - Limit switch plate (cams)
8 - Mechanical strip
9 - Pneumatic strip or Fotocosta
10 - Internal Photocells
11 - Photocell columns
12 - Mechanical stops

TECHNICAL FEATURES

Irreversible operating devices for sliding gates with a maximum weight of 2.200 kg / 4900 lbs.
The irreversibility of this operating device allows you to avoid using any electric lock for an effective closing of the gate. The motor is protected by an heat probe, that temporary interrupts the operating cycle in case of prolonged use.



Measurements in mm

TECHNICAL DATA		K800	K1400	K2200
Max. leaf weight	kg	800	1400	2200
Operating speed	m/s.	0,155/0,18		
Rack		4		
EEC Power supply		**230V~ 50/60Hz**		
Thrust force to constant turns	N	600	790	1150
Max. torque	Nm	20,4	27	39
Motor capacity	W	287/262	257/314	247/311
Power absorbed	A	1,38/1,19	1,18/1,44	1,1/1,62
Capacitor	µF	12,5	12,5	16
Power supply		**120V~ 60Hz**		
Thrust force to constant turns	N	514	880	1175
Max. torque	Nm	17,5	30	40
Motor capacity	W	242	322	295
Power absorbed	A	2,15	2,9	2,85
Capacitor	µF	80	60	60
Normative cycles 230V	n°	7 - 38s/2s	8 - 64s/2s	12/7 - 64s/2s
Normative cycles 120V	n°	10 - 38s/2s	7 - 64s/2s	12 - 64s/2s
Daily operations suggested	n°	300	400	500
Service		50%	70%	70%
Guaranteed consecutive cycles	n°	8/6m	15/10m	15/10m
Grease		COMLUBE LHITGREASE EP/GR.2		
Weight of electroreducer	kg	10,5	12,3	14
Noise	db	<70		
Working temperature	°C	-10 ÷ +55°C		
Protection	IP	44		

INSTALLATION K

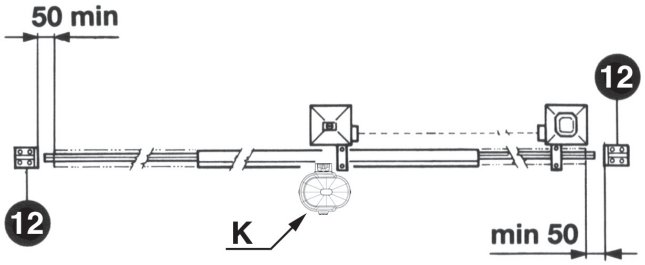
CHECKING BEFORE THE INSTALLATION

!! THE GATE SHALL MOVE FRICTIONLESS !!

N.B.: Gate features must be uniformed with the standards and laws in force. The door/gate can be automated only if it is in a good condition and its conditions comply with the EN 12604 norm.

- The door/gate leaf does not have a pedestrian door. In the opposite case it is necessary to take the appropriate steps, in accordance with EN 12453 norm (for instance; by preventing the operation of the motor when the pedestrian door is opened, by installing a safety microswitch connected with the control panel).
- Besides the electrical or mechanical limit switches available on the operators, there must be, on both ends of the installation, a fixed mechanical stopper which stop the gate in the unlikely event of ill functioning of limit swithces on the operators. For this reason the fixed mechanical stopper must be of an adeguate size to withstand the static and kinetic forces generated by the gate (12) (**2**).
- Gate columns shall have anti-derailment guides on their top (**3**), to avoid the unintentional gate release.

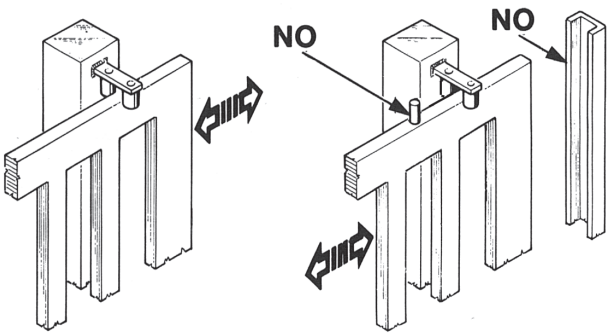
N.B.: Remove mechanical stops like the one in fig. **3**.
No mechanical stops shall be on top of the gate, since these mechanical stops are not safe enough.



2

Parts to install meeting the EN 12453 standard			
COMMAND TYPE	**USE OF THE SHUTTER**		
	Skilled persons (out of public area*)	Skilled persons (public area)	Unrestricted use
with manned operation	A	B	non possibile
with visible impulses (e.g. sensor)	C or E	C or E	C and D, or E
with not visible impulses (e.g. remote control device)	C or E	C and D, or E	C and D, or E
automatic	C and D, or E	C and D, or E	C and D, or E

* a typical example are those shutters which do not have access to any public way
A: Command button with manned operation (that is, operating as long as activated), like code ACG2013
B: Key selector with manned operation, like code ACG1010
C: Adjustable power of the motor
D: Safety strips and/or other safety devices to keep thrust force within the limits of EN12453 regulation - Appendix A.
E: Photocells, like code ACG8026 (To apply every 60÷70cm for all the height of the column of the gate up to a maximum of 2,5m - EN 12445 point 7.3.2.1)

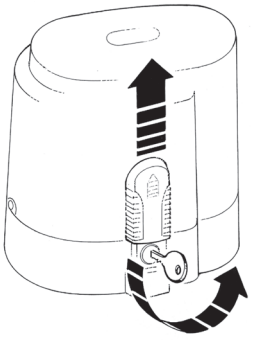


3

RELEASE

To operated after the power supply to the motor has been interrupted.
In order to work manually on the gate, you just need to insert the fitting key and rotate it 3 times counterclockwise (**4**).
In order to carry out the manual operation of the gate leaf the followings must be checked:

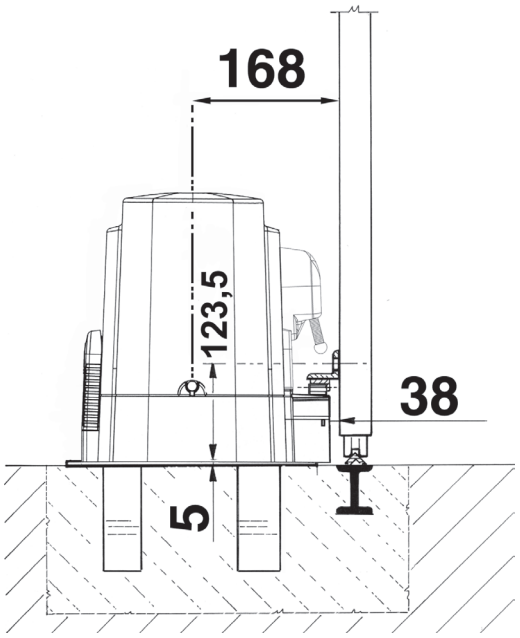
- That the gate is endowed with appropriate handles;
- That these appropriate handles are placed so to avoid safety risks for the operator;
- That the physical effort necessary to move the gate leaf should not be higher than 225 N, for doors/gates for private dwellings, and, 390N for doors/gates for commercial and industrial sites (values indicated in 5.3.5 of the EN 12453 norm) .



4

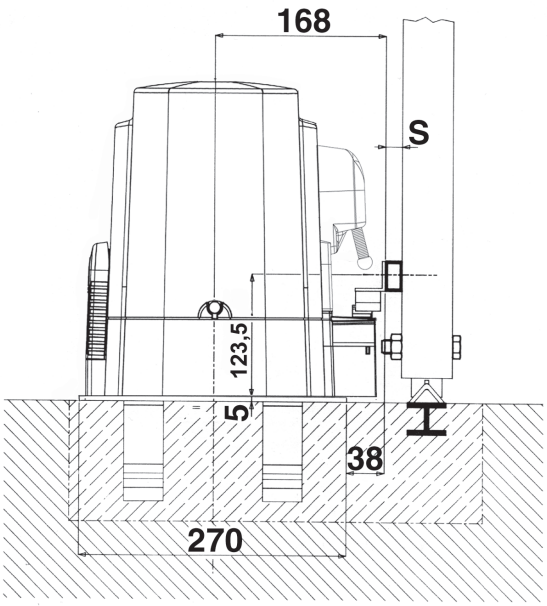
MOTOR AND RACK FITTING

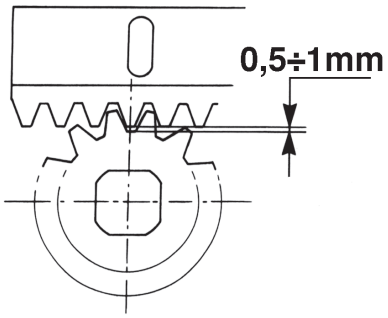
The rack shall be fitted over the motor support, at a certain distance from It.
Its height can be adjusted thanks to the holes In the rack.
The height adjusting is necessary to prevent the gate leaning on the driving gear (**5 and 6**).
To fix the rack on the gate, drill some Ø 5 mm holes and thread them using an M6 screw tap.
The driving gear needs some 1 mm clearance from the rack.



Measurements in mm

5





Measurements in mm

6

LIMIT SWITCH FITTING

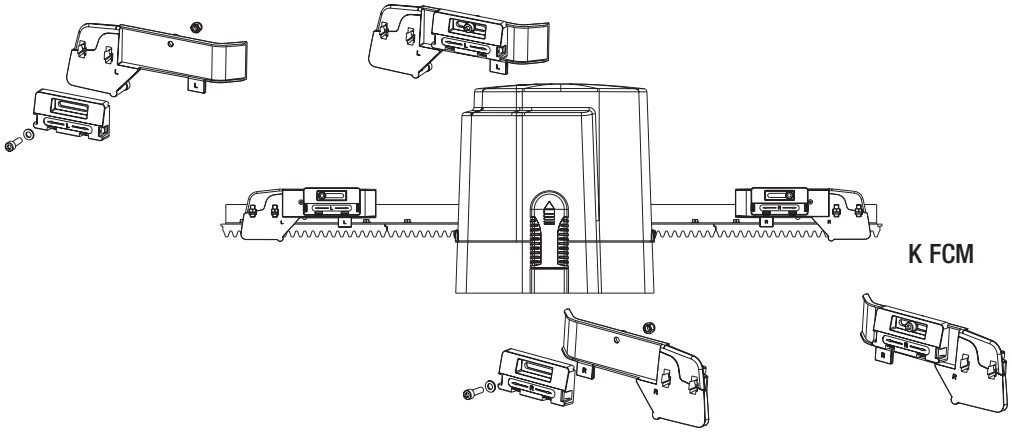
In order to determine the gate travel length, place two cams at the ends of the rack (**7-8**).
Move the cams on the rack teeth to adjust their opening and closing travel.
To fix the cams to the rack, tighten the screws issued.
N.B: In addition to the electric stop cams mentioned above, you must also install strong mechanical stops preventing the gate from sliding out from the top guides.

MAINTENANCE

To be carried out exclusively by skilled persons after the power supply to the motor has been interrupted.
Periodically, when the gate is standstill, clean and keep the guide free from stones and dirt.

K FCE

7

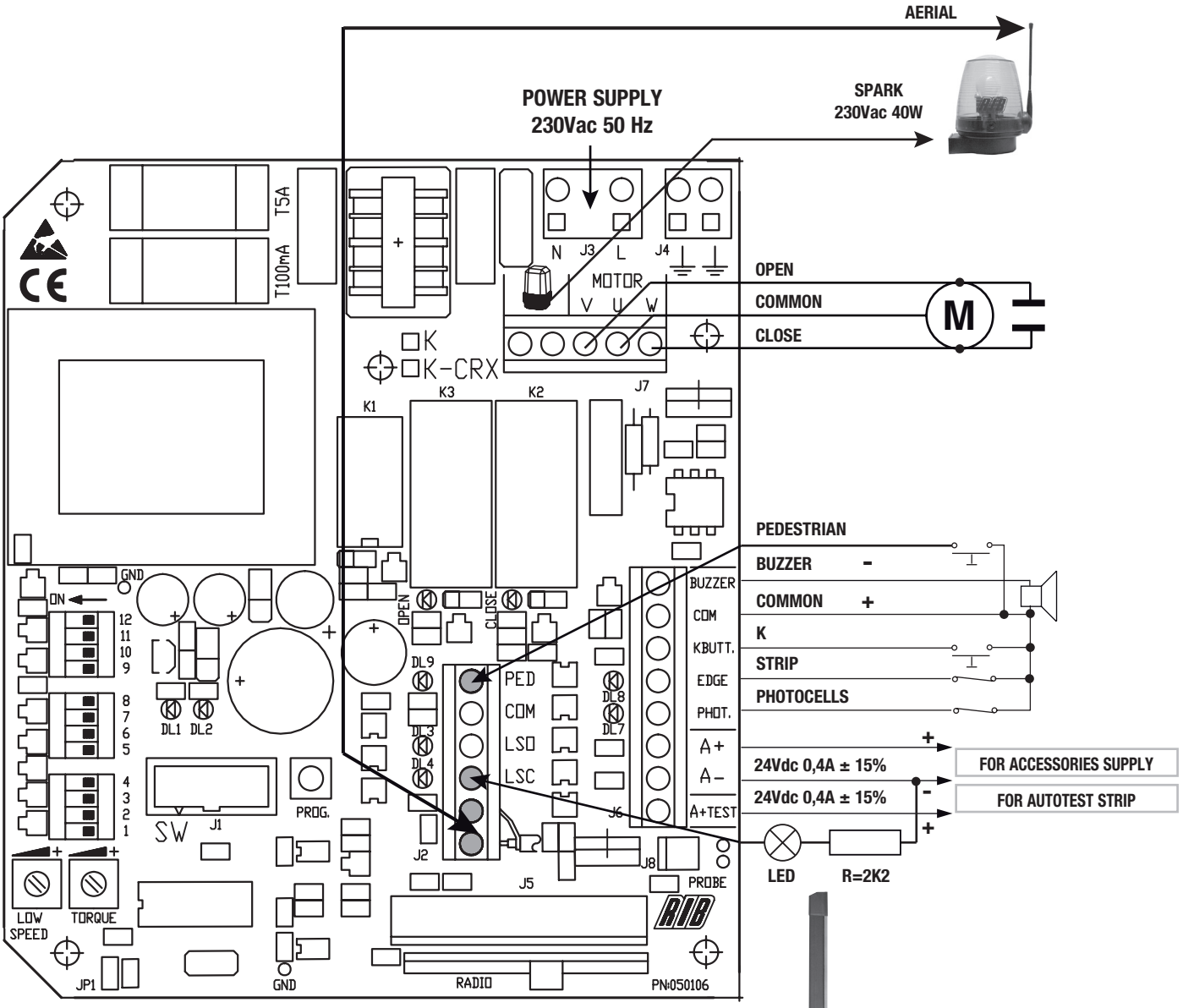


K FCM

8

ELECTRIC CONNECTIONS

K code AC07069
K-CRX code AC07068



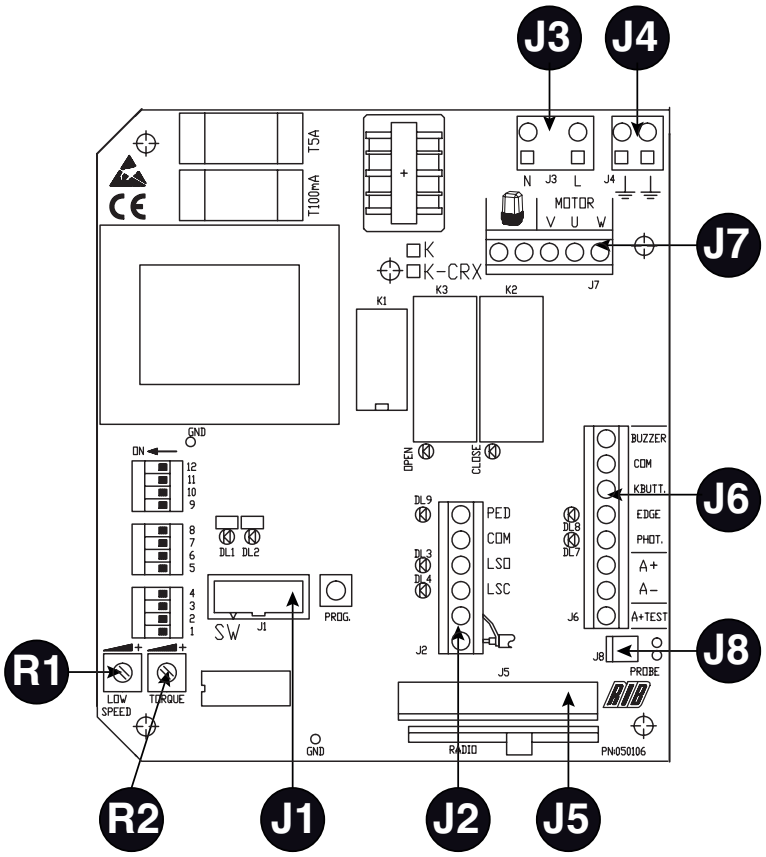
K / PEDESTRIAN
KEY SELECTORS BLOCK
AND PUSH-BOTTON FLAT

PHOTOCELLS
FIT SLIM

MECHANICAL SAFETY STRIP

POINT A - ELECTRIC CONNECTIONS

J1	NO CRX CRX	DO NOT REMOVE ANY JUMPER! OTHERWISE THE OPERATOR WILL NOT WORK!
J2	AERIAL	Radio Antenna
	LSC	Close limit-switch that cuts off the motor in closing
	LSO	Open limit-switch that cuts off the motor in opening
	COM	Limit-switch common contact
	PED BUTT	Pedestrian opening contact (NO)
J3	L-N	Main power supply 230 Vac 50/60 Hz (120V/60Hz upon request)
J4	EARTH	Connection of the earth line
J5	RADIO	Built-in radio module (model CRX), or connector for radio receiver RIB, 24Vdc supply
J6	A+ TEST	24Vdc safety strip self-test power supply
	A+	Accessories power supply +24Vdc
	A-	Accessories power supply -24Vdc
	COM +	Common contact (common line for all the command and safety inputs) (+)
	K BUTT.	Single pulse contact (NO)
	PHOT.	Photocells contact (NC)
	EDGE	Safety strip contact (NC)
	-	Buzzer contact (24Vdc max 200 mA) (-)
J7		Flashing light (max 40W)
	U - MOTOR	Motor common connection
	V-W - MOTOR	Motor phase and capacitor connections
J8	PROBE	Temperature sensor cable connection PROBE (Code ACG4665 optional)



R1	TRIMMER LOW SPEED	Electronic regulator for low speed on approach
R2	TRIMMER TORQUE	Electronic torque regulator

RELAYS AND MOTOR COMMAND
K1 => Flashing light command
K2 => Closing command
K3 => Opening command
Q1 => TRIAC - Motor command in opening and closing

POINT B - SETTINGS

DIP 1 MOTOR ROTATION DIRECTION CHECK (See Point C)
DIP 2 PROGRAMMING (See Point D)
DIP 2-1 PROGRAMMING OF THE PEDESTRIAN OPENING (See Point D)
DIP 1-2 STORAGE/DELETION OF RADIO CODES FOR COMPLETE OPENING (DIP 1 ON followed by DIP 2 ON) (POINT F) ONLY FOR CRX MODELS
DIP 1-3 STORAGE/DELETION OF RADIO CODES FOR PEDESTRIAN OPENING (DIP 1 ON followed by DIP 3 ON) (POINT G) ONLY FOR CRX MODELS

OPERATING MODE SETTINGS
DIP 3 ON - Automatic Closing ENABLED
OFF - Automatic Closing DISABLED
DIP 4 ON - Photocells active only in closing
OFF - Photocells always active
DIP 5 ON - blinker pre-flashing
OFF - blinker normal-flashing
DIP 6 ON - STEP BY STEP (OPEN-STOP-CLOSE-STOP-OPEN...)
OFF - AUTOMATIC
Single pulse contact (K BUTT)
Pedestrian button (PED BUTT)
Radio Receiver command
DIP 7 ON - electronic brake ENABLED
OFF - electronic brake DISABLED
With K FCM it is mandatory to activate the electronic brake - DIP 7 on ON mode
DIP 8 ON - low speed in approaching DISABLED
OFF - low speed in approaching ENABLED
DIP 9 ON - gradual start ENABLED
OFF - gradual start DISABLED
DIP 10 ON - safety strip self-test ENABLED
OFF - safety strip self-test DISABLED
DIP 11 OFF
DIP 12 OFF for K800-K1400
ON for K2200
S1 => PROG. Programming button

TORQUE => R1 Electronic regulator for motor torque
Adjustment of motor torque is carried out using the TORQUE Trimmer which varies the output voltage to the head/s of the motor/s (turn clockwise to increase torque).
This torque control is activated after 2 seconds form any manoeuvre begging, whereas the motor is turned on at full power to guarantee the starting at the manoeuvre begging.
PAY ATTENTION: IF THE TORQUE TRIMMER SETTING IS CHANGED, IT IS PREFERABLE TO REPEAT THE TIME PROGRAMMING.

LOW SPEED => R1 Electronic regulator for low speed on approach
Adjustment of low speed is carried out using the LOW SPEED Trimmer which varies the output voltage to the head/s of the motor/s (turn clockwise to increase speed). Adjustment is carried out to establish the correct speed at the completion of opening and closing, depending on the structure of the gate, or if there is any light friction that could compromise the correct working of the system. The low speed is activated (DIP8 OFF) when the gate leaf is 0.50-0.60 meters away from the complete close or open position.

ELECTRONIC BRAKE
With K FCM it is mandatory to activate the electronic brake - DIP 7 on ON mode
If the low speed in approaching is disabled (DIP8 ON), is preferable turn the DIP7 ON to enable at least the electronic brake that permits to win the gate leaf inertia when the gate reaches

the close or open limit switches.

GRADUAL START
With DIP 9 in the ON mode, the gate starts to move gradually for 1 second only.

LED WARNING
DL1 - programming activated (red)
DL2 - radio code programming (green) (CRX version only)
DL3 - open limit-switch contact (NC) (red)
DL4 - close limit-switch contact (NC) (red)
DL5 - gate closing M1 (red)
DL6 - gate opening (green)
DL7 - photocell contact (NC) (red)
DL8 - safety strip contact (NC) (red)
DL9 - Pedestrian opening button (red)

POINT C - MOTOR ROTATION DIRECTION CHECK

This operation is meant to help the installer during the installation (commissioning) and for further future controls.

1 - Unlock the operator with the Manual Release, install the limit switch plates, swing open the leaf about halfway and lock the operator.
2 - Turn **DIP1 to ON** position, LED DL1 starts blinking
3 - Press and hold the PROG button, the gate will open or close. Release the button and the gate will stop. Press and hold again, the gate will move in the opposite direction.
The K control board has two
- DL6 the GREEN led for OPENING
- DL5 the RED led for CLOSING

When you press and hold the PROG button, if the gate opens with the green led on then you may proceed to step 4.
If the gate moves in the wrong direction compared with the movement leds:
- turn OFF the main AC power
- reverse the V and W motor cables position (the blue motor cable must be always in the U position)
- reverse the limit switch wires marked LSO and LSC
- turn ON the main AC power and check again the motor direction

4 - After 2 seconds motor starting and for the next 10 seconds motor working, **the torque control** is automatically activated. Set the motor torque by the TORQUE Trimmer which varies the output voltage to the head of the motor (turn clockwise to increase torque).
5 - After other 10 seconds motor working, the **low speed control** is automatically activated (DIP8 OFF). Set the motor low speed by the LOW SPEED Trimmer to select the gate leaf low speed in approaching.
6 - Press and hold the PROG button to close completely the gate. Turn DIP1 to OFF, the RED led DL1 will stop blinking.

During Point C procedure, safety devices (photocells and safety strip) are not active.
(#) In Point D and Point E procedures, all the safety devices (photocells and safety strip) will be active, so they must be properly installed and connected to the control board. Any changing of the safety devices input state, will stop the Point D and Point E procedure that must be repeated from the beginning.

POINT D - PROGRAMMING (#)

1 - The gate must be fully closed.
2 - Turn **DIP2 to ON** position, LED DL1 starts blinking
3 - **Press PROG. Button,** motor opens.
4 - Once reached the open position, the open limit switch will cut out motor and the gate travelling will be stored. The gap of time between now (stop of motor) and the next pressing of the PROG. button (see step 5 below) will be then stored as waiting time for Automatic Closing feature.
5 - **Press PROG. button,** gate closes and the Automatic Closing time is stored (see DIP3 function to enable or disable the Automatic Closing feature).
6 - The LED DL1 will turn OFF, signalling exit from the Point D procedure.
Closing of the gate will be carried out at normal speed and only on approaching total closing at low speed (depending on the adjustment of LOW SPEED trimmer).
7 - When the gate leaf reaches the close limit switch plate, the motor stops.
8 - **Turn DIP2 to OFF** position
During Point D procedure, safety devices (photocells and safety strip) are active.

POINT E - PROGRAMMING OF PEDESTRIAN OPENING (#)

1 - The gate must be fully closed.
2 - Turn **DIP2 to ON** position, the LED DL1 starts blinking quickly
3 - Immediately, turn also **DIP1 to ON** position, the LED DL1 starts blinking slowly
4 - **Press the pedestrian pushbutton PED. BUTT,** the gate opens
5 - When the gate leaf is opened enough for the pedestrian crossing, **press the pedestrian pushbutton PED. BUTT** to stop the travel (thus defining the opening stroke of the motor). The gap of time between now (stop of the motor) and the next pressing of the PROG. button (see point 6 below) will be stored as waiting time for Pedestrian Automatic Closing feature.
6 - **Press the pedestrian pushbutton PED. BUTT,** gate closes and the Pedestrian Automatic Closing time is stored (see DIP3 function to enable or disable the Automatic Closing feature).
7 - **Turn DIP1 to OFF** position
8 - **Turn DIP2 to OFF** position
During Point E procedure, the safety devices (photocells and safety strip) are active.

POINT F - PROGRAMMING RADIO CODES FOR COMPLETE OPENING

(UP TO 30 CODES - ONLY FOR CRX MODELS)
You can only programme the codes if the gate is closed.
1 - Position DIP 1 to ON and then DIP 2 to ON.
2 - The red programming DL1 LED will flash ON and OFF, one second on each, for 10 seconds.
3 - Press the remote control button (normally channel A) within the 10 seconds proscribed. If the remote control has been correctly programmed, the DL2 LED (green) will flash once.
4 - The code programming time resets automatically so that you can programme the next remote control.
5 - To finish programming, let 10 seconds pass and then press the PROG. button briefly. The red DL1 LED will stop flashing.
6 - Reposition DIP 1 to OFF and DIP 2 to OFF.
7 - You have completed the procedure

PROCEDURE FOR DELETING ALL RADIO CODES USED ONLY FOR COMPLETE OPENING
You can only delete the codes if the gate is closed.
1 - Position DIP 1 to ON and then DIP 2 to ON.
2 - The red programming DL1 LED will flash ON and OFF, one second on each, for 10 seconds.
3 - Press and hold the PROG button for 5 seconds. The green DL2 LED will flash twice to confirm that the stored codes have been deleted.
4 - The red programming DL1 LED remains active and you can programme new codes as shown above if required.
5 - Reposition DIP 1 to OFF and DIP 2 to OFF.
6 - You have completed the procedure.

HOW TO CHECK IF THE MEMORY IS FULL FOR RADIO CODES USED ONLY FOR COMPLETE OPENING
You can only check the memory if the gate is closed.
1 - Position DIP 1 to ON and then DIP 2 to ON.
2 - The green DL2 LED will flash 6 times if the memory is full (30 codes have been stored).
3 - After this, the DL1 programming LED will remain active for 10 seconds, so that you can delete all codes if required.
4 - Reposition DIP 1 to OFF and DIP 2 to OFF.
5 - You have completed the procedure

POINT G - PROGRAMMING RADIO CODES FOR PEDESTRIAN OPENING

(UP TO 30 CODES - ONLY FOR CRX MODELS)
You can only programme the codes if the gate is closed.
1 - Position DIP 1 to ON and then DIP 3 to ON.
2 - The red programming DL1 LED will flash ON and OFF, one second on each, for 10 seconds.
3 - Press the remote control button (normally channel B) within the 10 seconds proscribed. If the remote control has been correctly programmed, the DL2 LED (green) will flash once.
4 - The code programming time resets automatically so that you can programme the next remote control.
5 - To finish programming, let 10 seconds pass and then press the PROG. button briefly. The red DL1 LED will stop flashing.
6 - Reposition DIP 1 to OFF and DIP 3 to OFF.
N.B: IF THE DL1 LED CONTINUES TO FLASH RAPIDLY, THIS MEANS THAT DIP 1 IS STILL POSITIONED TO ON AND ANY MANOEUVRE HAS BEEN DELETED.
7 - You have completed the procedure.

PROCEDURE FOR DELETING ALL RADIO CODES USED ONLY FOR COMPLETE OPENING
You can only delete the codes if the gate is closed.
1 - Position DIP 1 to ON and then DIP 3 to ON.
2 - The red programming DL1 LED will flash ON and OFF, one second on each, for 10 seconds.
3 - Press and hold the PROG button for 5 seconds. The green DL2 LED will flash twice to confirm that the stored codes have been deleted.
4 - The red programming DL1 LED remains active and you can programme new codes as shown above if required.
5 - Reposition DIP 1 to OFF and DIP 3 to OFF.

6 - You have completed the procedure.

HOW TO CHECK IF THE MEMORY IS FULL FOR RADIO CODES USED ONLY FOR COMPLETE OPENING

You can only check the memory if the gate is closed.

1 - Position DIP 1 to ON and then DIP 3 to ON.
2 - The green DL2 LED will flash 6 times if the memory is full (30 codes have been stored).
3 - After this, the DL1 programming LED will remain active for 10 seconds, so that you can delete all codes if required.
4 - Reposition DIP 1 to OFF and DIP 3 to OFF.
5 - You have completed the procedure.

FUNCTIONING OF CONTROL ACCESSORIES

ATTENTION: ONLY IMPULSIVE COMMANDS HAVE TO BE CONNECTED.
Make sure that any other type of command accessories (e.g. mass detectors) used on the installation are set in the IMPULSIVE mode, otherwise, the gate will be operated even without the protection of the safety devices.

STEP BY STEP or AUTOMATIC commands
(K BUTT button, PED BUTT button, RADIO REMOTE button)

DIP 6 - ON The K BUTT, the PED BUTT button, the RADIO REMOTE buttons perform the cyclic command open-stop-close-open-stop-etc.

DIP 6 - OFF The K BUTT, the PED BUTT button, the RADIO REMOTE buttons perform:
- the open command, if pressed with the gate completely closed
- the close command, if pressed with the gate completely opened
- no effect, if pressed during the gate opening
- the gate re-open, if pressed while the gate is closing

The K BUTT opens the gate completely, whereas the PED BUTT opens the gate partially as described in Point D.

CLOCK FUNCTION

If you want the Clock Function must request K with firmware 12 NOUP.
ATTENTION: A CLOCK CONNECTED TO K with fw 05 or more ACTIVATES THE AUTOMATIC MOVEMENT OF THE GATE WITHOUT HAVING THE PROTECTION OF THE SAFETY DEVICES!

The Clock Function is useful during rush hours, when traffic is heavy and the flow is slow (e.g. entrance/exit of employees, emergencies in residential areas or car parks and, temporarily, for removal vans) and it's necessary to keep the gate opened.

CLOCK FUNCTION APPLICATION

It is necessary to request a K control panel with firmware 12 NOUP.

Select the automatic functioning **DIP 6 OFF**.

It can be done by connecting a switch and/or a daily/weekly clock either in parallel to the K BUTT button or instead of the K BUTT button. When the control board receives this command, the gate will open and by keeping this contact closed for all the time of the gate opening, the Clock Function is automatically activated. In fact, once reached the open position, the gate will remain opened and all of the control board functions are blocked. Only when K BUTT contact is released, the control board functions are re-activated and the Automatic Closing restarts (if enabled) doing the countdown to the gate closing.

PEDESTRIAN command (PED BUTT - COM)

This command is useful to open the gate partially, just enough, for example, to permit a pedestrian crossing. In fact, the Pedestrian command (see Point E) is carried out only by opening the gate just enough for a pedestrian to pass, as described into the Point E procedure.

From the Pedestrian opening position the Automatic Closing can be enabled or disabled with DIP3.

From the Pedestrian opening position, the gate can be completely opened by the OPEN or by the K BUTT button or by the RADIO button.

AUTOMATIC CLOSING (from the COMPLETE open position)

The Automatic Closing from the complete open position can be enabled turning ON the DIP3. The maximum gap of time that can be programmed is 5 minutes (see Point D).

AUTOMATIC CLOSING (from the PEDESTRIAN open position)

The Automatic Closing from the pedestrian open position can be enabled turning ON the DIP3. The maximum gap of time that can be programmed is 5 minutes (see Point E).

FUNCTIONING OF SAFETY ACCESSORIES

PHOTOCELL (PHOT - COM)

In case the switch DIP4 is in the OFF position, the photocells are active both in gate opening and in gate closing. In this configuration, if an obstacle cuts the photocell beam:
- while the gate is closing, the gate will open
- while the gate is opening, the gate will stop and will restart opening when the obstacle is removed
- while the gate is still, it will not move neither in opening nor in closing.

In case of the switch DIP4 is in the ON position, the photocells are active only in gate closing. In this configuration, if an obstacle cuts the photocell beam:
- while the gate is closing, the gate will open
- while the gate is opening, the gate will continue open
- while the gate is still, it will open if a open command is request, it will remain still if a close command is request.

The photocell input (PHOT - COM) is a NORMALLY CLOSED contact.

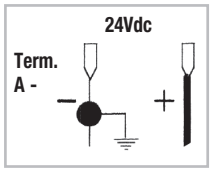
In case there are more couple of photocells, the contacts from all the photocell receivers must be connected in series.

In case the photocells are not installed, this contact must be short circuited with a wire jump (from PHOT to COM) to permit the gate to operate.

ATTENTION: In case the receiver led remains lit, malfunctioning of the main supply is suspected.

It is advisable to connect electrically to earth the columns or the photocells stands to the terminal A -, to shield the photocells from external noise.

Be careful not to short circuit the system when the supply phases are inverted!



SAFETY STRIP (EDGE - COM)

If it intervenes during opening, it inverts the movement and closes for 2 seconds and then stops.

If it intervenes during closing, it inverts the movement and opens for 2 seconds and then stops.

If the safety strip remains engaged (NO contact), no automatic movement is allowed.

In case the safety strip is not installed, this contact must be short circuited with a wire jump (from EDGE to COM) to permit the gate to operate.

PAY ATTENTION: it is highly recommended to check safety-strips operation at least every 6 months.

SAFETY STRIP ALARM

After the inversion given by the intervention of the safety edge, the gate stops in alarm mode and this is signaled by the blinker on for 1 minute and by the buzzer on for 5 minutes.

During or after the minute of alarm, the normal gate operations can be restored by pressing any push button.

TESTING THE SAFETY STRIP equipment

The DIP10 ON enables to test the safety strip equipment. The test is performed every time the gate completes a full opening. The test is available only if the safety strip device is equipped with a dedicated power supply input.In fact, the safety strip equipment power supply input can be connected to the A+TEST and A- outputs (DIP10 ON). Automatically, every time the gate completes a full opening, just before closing, the control board switches OFF the A+TEST and A- power supply output for a very short time. While the safety strip power supply is switched OFF, if everything is working fine the safety strip contact (EDGE - COM) must open. In case the test fails, no other gate manoeuvre will be allowed and the alarm state will be signalled by both the Blinker and the Buzzer, if installed, which will remain on for 5 minutes

NOT ALL THE SAFETY STRIPS CAN BE TESTED, THUS THE SWITCH DIP10 MUST BE LEFT OFF.

STOP BUTTON

If the Automatic command is enabled (DIP 6 OFF), a Normally Closed contact could be connected in series to the COM wire of the opened and the closed limit switches.

This contact works like a STOP button to interrupt any gate manouver.

FUNCTIONING IN DEAD MAN MODE WHEN THE SAFETY DEVICES ARE FAILING

If the safety edge fails or remains engaged for more than 5 seconds, or if photocell fails or remain engaded for more than 60 seconds, the K BUTTON and PEDESTRIAN commands will work only in dead man mode.

The signal that this mode has been activated is given by the blinking of the programming led. With the blinking of the programming led, the opening and closing operation are allowed only with the command button pressed and held. The radio commands and that of automatic closing, will be excluded, since their use in this mode, is not allowed by the norms.

Once the failing safety device is repaired, in automatic after 1 second, all standard commands that were selected, such as step by step, automatic mode, radio commands and automatic closing start functioning again.

Note 1: during this functioning in dead man mode, in case of damage to the safety strips (or photocells) the photocells (or safety strips) still work by interrupting the operation in progress.

The dead-man operation is only an emergency operation which must be activated for a very short period and with the complete installation at sight so to have a secure and safe control of the system. As soon as possible however, the failing safety devices must be repaired and activated.

FLASHING LIGHT
Connect the flashing light to J7 flashing light outputs, use flashing lights ACG7059 and bulbs of 40W maximum.
NB: This electronic K board can only supply power to FLASHING LIGHTS with inbuilt flashing circuit.

PRE-FLASHING function
The DIP 5 in the ON position enables the pre-flashing, the FLASHING LIGHT and BUZZER starts working 3 seconds before every movement of the gate.
The DIP 5 in the OFF position disables any pre-flashing, the FLASHING LIGHT, the BUZZER and the motor will start at the same time.

BUZZER (COM.+ BUZZER-)
The current supplied to the Buzzer will be 200 mA at 24Vdc.
During the normal operation of the gate, opening and closing, the buzzer will buzz intermittently. Only during the alarm situations (safety strip) the buzzing will almost be constant.

GATE OPEN INDICATOR (A negativo - LSC)
It is turned ON when the gate is open or partially open, it is turned OFF only when the gate is completely closed.
N.B.: connect in series to the indicator a resistance of 2K2. WE RECOMMEND NOT TO OVERLOAD THE INDICATORS OUTPUT OTHERWISE THE GATE FUNCTIONING COULD BE COMPROMISED OR THE CONTROL BOARD COULD BE DAMAGED.

TECHNICAL SPECIFICATIONS

Humidity	< 95% without condensation
Power supply voltage	230V~ ±10% (120V/60Hz upon request)
Frequency	50/60 Hz
Interruptions in electricity supply	20ms
Maximum load of motor outputs	1CV
Maximum load of blinker output with resistive load	40W
Maximum control board absorption (without accessories)	33 mA
Current available for photocells and accessories	0,4A±15% 24Vdc
IP protection grade	IP54
Control board weight	0,55 kg
Dimensions	130 x 50 x 115 mm

TECHNICAL RADIO SPECIFICATIONS (model CRX)

Reception frequency	433,92 MHz
Impedance	52 OHM
Sensitivity	>2,24µV
Time of excitation	300ms
Time of discharge	300ms
Memory available	60 codes (30 for complete opening and 30 for pedestrian opening)
Maximum load of radio receiver output	200mA 24Vdc

- All inputs shall be used as clean contacts without earthing, because the power supply is generated in the card and is structured in such a way to guarantee the respect of double and reinforced insulation to the elements under voltage
- All inputs are managed by a programmed circuit that carries out a self-control every time the gate is operated.

TROUBLESHOOTING

After having carried out all connections, by carefully following the layout and having positioned the gate in intermediate position, check the correct ignition of LEDS DL3, DL4, DL7, DL8.
In case of no ignition of the LEDS, always with gate in intermediate position, check the following and replace any faulty components.
DL3 switched off Faulty opening limit switch
DL4 switched off Faulty closing limit switch
DL7 switched off Faulty photocells
DL8 switched off Faulty safety edge (In case the edge is not connected, carry out jumper between COM and EDGE)
During functioning with personnel present, with DIP 1 at ON, check that during opening the green DL6 LED switches on and that during closing the red DL5 LED switches on.
If not, invert clamps V and W on the motor terminal board.

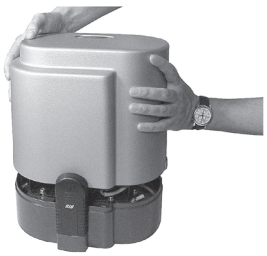
FAULT	SOLUTION
After having carried out the various connections and having supplied voltage, all the LEDS are switched off.	Check the integrity of fuses F1 and F2. In case of interrupted fuse use only of adequate value F2 = 5A F1 = 100mA.
The motor opens and closes, but it has no strength and moves slowly.	Check trimmers TORQUE and LOW-SPEED adjustment.
The gate opens but does not close after the time set.	Ensure to have set DIP 3 at ON. Button K BUTTON always inserted in automatic functioning mode (DIP 6 OFF). Replace button or switch of the selector switch. Failed edge self-test => check the connections between electronic board and edge feeder. **Attention:** if not using a feeder for edges, DIP 10 must be at OFF position.
The gate does not open or close by activating the various K and RADIO buttons.	Faulty safety edge contact. Faulty photocells contact with DIP 4 OFF. Fix or replace the relative contact.
By activating the K button the gate does not move.	Impulse K always inserted. Check and replace any buttons or micro-switches of the selector switch.
The slowing phase is not performed.	Ensure that DIP 8 is at position OFF (slowing enabled). Learn the times through procedure from DIP 2. Check trimmer LOW-SPEED adjustment.

FINAL OPERATION

The gasket shall be fitted only at the end of the installation, before you mount the case.


Fit the gasket


The gasket is fitted


Close the case


Motor ready

ACCESSORIES

For the connections and the technical data of the optional equipments follow the relevant handbooks.

PLATE TO BE CEMENTED

code ACG8108

NYLON RACK MODULE 4

with zinc plated angle Iron, In 1 m bars. Ideal for gates up to 1,000 kg / 2,200 lbs weight.
1 m / 3,28" code ACS9000
10 m / 32,8" (1 m/3,28" x 10) code ACS9001

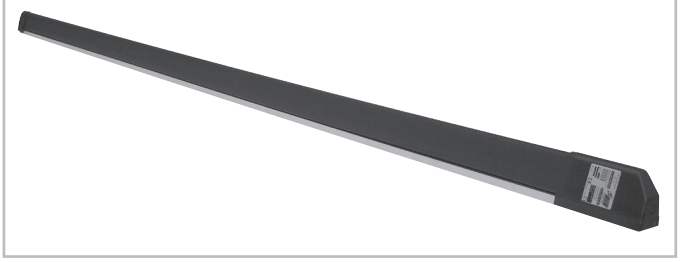
FIT SLIM

PHOTOCELLS for the wall-installation code ACG8032
PAIR OF COLUMNS FOR FIT SLIM code ACG8065
FIT SLIM photocells have synchronism function in AC current and ranges of 20 m.
You can fit many couples close together thanks to the synchronising circuit.
Add the **SYNCRO TRANSMITTER TX SLIM SYNCRO** code ACG8029
for more than 2 photocells couples (up to 4).

FIT SYNCRO

FIT SYNCRO PHOTOCELLS for the wall-installation code ACG8026
The range you can set is 10-20 m, 30÷60 ft.
You can fit many couples close together thanks to the synchronising circuit.
Add the **SYNCRO TRANSMITTER** code ACG8028
for more than 2 photocells couples (up to 4).
COUPLE OF BUILT-IN BOXES FOR THE FIT SYNCRO code ACG8051

TOUCH



MECHANICAL STRIP L = 2 m
CERTIFIED EN 13849-2 (2008) CATEGORY 3 code ACG3015

RADIO TRANSMITTER SUN

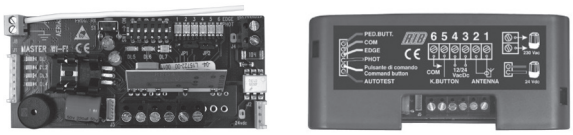
SUN 2CH	code ACG6052	SUN 4CH	code ACG6054
SUN CLONE 2CH	code ACG6056	SUN CLONE 4CH	code ACG6058

PROBE

The probe detects the motor temperature to operate the heating system under low temperature conditions, up to -30°C (connect to connector J8). code ACG4665

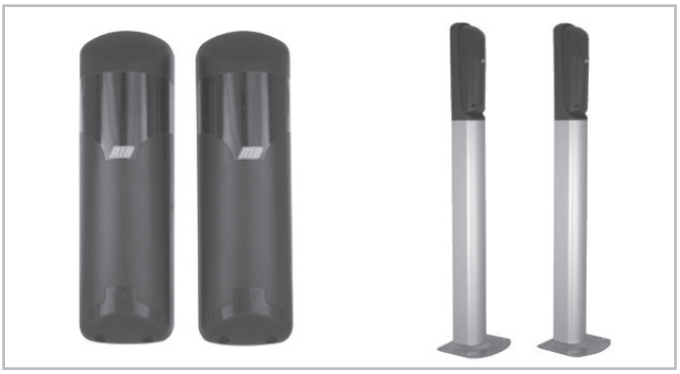
Wi-Fi DEVICES

MASTER Wi-Fi



RECEIVER CARD TO MANAGE WIRELESS SYSTEM
with connector - 12÷30V ac/dc code ACG6094
with terminal block - 12÷30V ac/dc code ACG6099

NOVA Wi-Fi



PHOTOCELLS WITHOUT WIRES code ACG8037
PAIR OF COLUMS NOVA code ACG8039

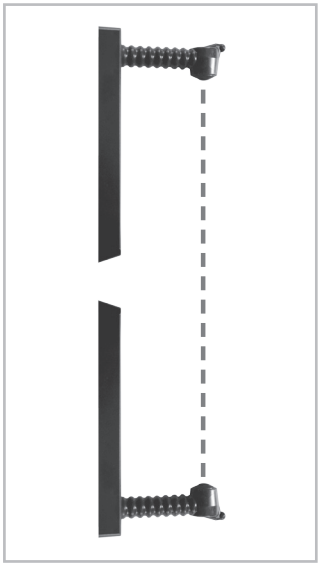
RADIO NUMERIC CODER

built-in code ACG9434
to wall code ACG9436

BLOCK Wi-Fi

KEY SELECTOR WITHOUT WIRES code ACG6098

VERTIGO Wi-Fi



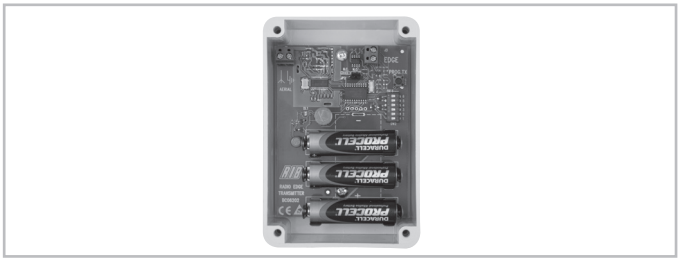
WIRELESS PHOTOCELLS SUBSTITUTING THE SAFETY STRIP

VERTIGO Wi-Fi 8 code ACG8042
VERTIGO Wi-Fi 10 code ACG8043

TOUCH Wi-Fi

SAFETY STRIP WITHOUT WIRES
code ACG3016

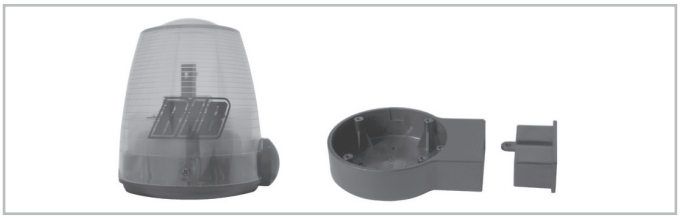
RED RADIO TRANSMITTER



for mechanical and electrical safety strip. Batteries not included.
RED allows to make a system made with edges fixed to the moving shutter without having to use cable sleeving systems.
It complies with EN13849-1:2007 Standard, if installed with an RIB Electronic Board it is a Class-2 Device.

code ACG6202

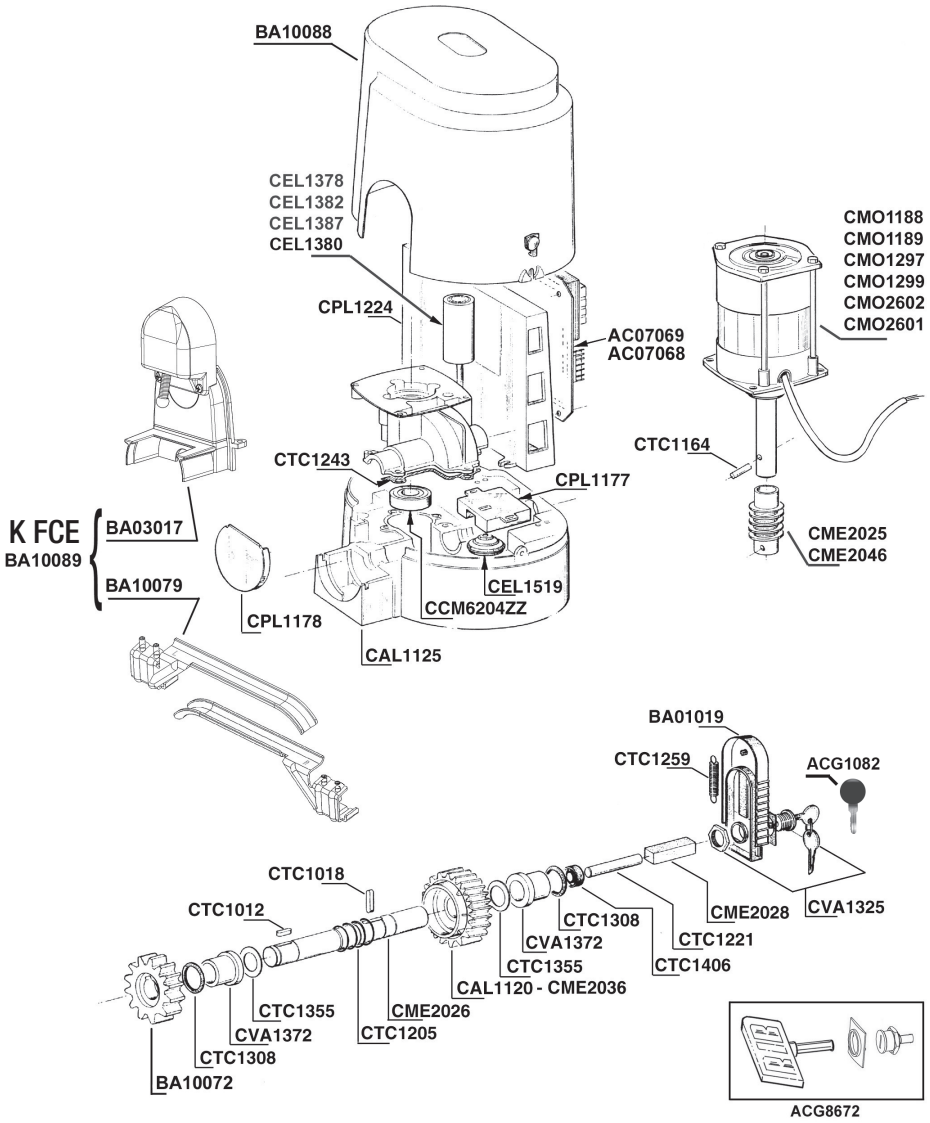
SPARK Wi-Fi

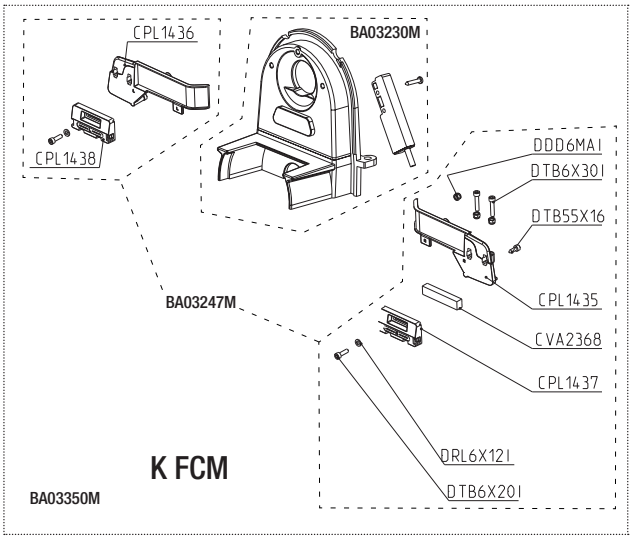


BLINKER WITHOUT WIRES code ACG7064
LATERAL SUPPORT code ACG7042

K800-1400-2200 FCE - FCM

Codice	Denominazione Particolare
AC07069	Scheda K 230/50-60Hz
AC07068	Scheda K-CRX 230/50-60Hz
ACG1082	Chiave di sblocco K
ACG8672	Serratura esagonale
BA01019	Serie accessori per cilindro
BA03017	Gruppo finecorsa per K FCE
BA03230M	Gruppo finecorsa magnetico per K FCM
BA03247M	Gruppo camme per K FCM
BA03350M	Finecorsa magnetico con camme per K FCM
BA10072	Ingranaggio di traino
BA10079	Confezione fermi finecorsa verticale
BA10088	Carter K completo
BA10089	Finecorsa con camme per K FCE
CAL1120	Corona elicoidale per K800
CAL1125	Base scorrevole con semiguscio
CCM6204ZZ	Cuscinetto motore
CEL1378	Cond. 60µF 420/470V per K1400/2200 120/60V
CEL1380	Cond. 12,5µF 450V per K800/1400 230/50V
CEL1382	Cond. 16µF 450V per K2200 230/50V
CEL1387	Cond. 40µF 450V per K800 120/60V
CEL1519	Passacavo IP55 GW50431 AC50
CME2025	Vite senza fine per K2200
CME2026	Albero traino
CME2028	Perno di sblocco
CME2036	Corona K1400 - K2200
CME2046	Vite rullata K800 - K1400
CMO1188	Motore K1400 230V - 50/60Hz
CMO1189	Motore K1400 120V - 60Hz
CMO1297	Motore K2200 230V - 50/60Hz
CMO1299	Motore K2200 120V - 60Hz
CMO2602	Motore K800 230V - 50/60Hz
CMO2601	Motore K800 120V - 60Hz
CPL1177	Guida porta micro
CPL1178	Tappo ingranaggio traino
CPL1224	Supporto scheda
CTC1012	Chiavetta 8x7x20
CTC1018	Chiavetta 8x7x50
CTC1164	Spina elastica 6x30
CTC1205	Molla sblocco
CTC1221	Spina cilindrica 10x80
CTC1243	Guarnizione base K
CTC1259	Molla trazione coperchio
CTC1308	Anello di tenuta OR 4100
CTC1355	Anelli di rasamento 25x35x0,5
CTC1406	Paraolio 10x26x7
CVA1325	Cilindro serratura
CVA1372	Boccole flangia 25X32X40X5X2





Dichiarazione di incorporazione per le quasi-macchine - Direttiva Macchine 2006/42/CE, Allegato II., B
Déclaration d'incorporation pour les quasi-machines - Directive Machines 2006/42/CE, Annexe II, B
Declaration of incorporation for partly completed machinery - Machinery Directive 2006/42/EC, Annex II., B
Einbauerklärung für unvollständige Maschinen - Maschinenrichtlinie 2006/42/EG, Anhang II, B
Declaración de incorporación de una cuasi máquina - Directiva de Máquinas 2006/42/CE, Anexo II, B

R.I.B. S.r.l. - Via Matteotti, 162 - 25014 Castenedolo - Brescia - Italy
Tel. ++39.030.2135811 - www.ribind.it - ribind@ribind.it

Apparecchio modello : Modèle d'appareil : Apparatus model : Vorrichtung Modell : Modelo de aparato :	**K800** **K1400** **K2200**	Oggetto della dichiarazione : Objet de la déclaration : Object of the declaration : Gegenstand der Erklärung : Objeto de la declaración :		

I seguenti requisiti essenziali della Direttiva Macchine (2006/42/CE) sono applicati e rispettati:
· La documentazione tecnica pertinente è stata compilata in conformità alla parte B dell'allegato VII; tale documentazione, o parti di essa, sarà trasmessa per posta o per via elettronica, in risposta ad una richiesta motivata da parte delle autorità nazionali competenti.
· Questa quasi-macchina è conforme alle disposizioni delle seguenti altre direttive CE: **Direttive 2014/30/UE, 2014/35/UE e 2014/53/UE**
· Sono stati applicati e rispettati tutti i requisiti essenziali pertinenti di cui all'allegato I della direttiva UE 2006/42/CE mediante il rispetto delle norme armonizzate applicate che conferiscono presunzione di conformità ai requisiti essenziali specifici delle Direttive applicabili da esse coperti.
AVVERTENZA: Altri requisiti e altre Direttive UE possono essere applicabili ai prodotti oggetto di questa dichiarazione.

Les exigences essentielles suivantes de la Directive Machines (2006/42/CE) sont appliquées et satisfaites:
· La documentation technique pertinente est constituée conformément à la partie B de l'annexe VII; ces documents, ou des parties de celui-ci, seront envoyés par la poste ou par voie électronique, en réponse à une demande motivée des autorités nationales compétentes.
· Cette quasi-machine est en conformité avec les dispositions des autres directives CE suivantes: **Directives 2014/30/UE, 2014/35/UE et 2014/53/UE**
· Les exigences essentielles pertinentes indiqueés dans l'annexe I de la Directive UE 2006/42/CE ont été appliquées, au moyen du respect des normes harmonisées donnant présomption de conformité aux exigences essentielles pertinentes spécifiques des Directives Européennes, couvertes par de telles normes ou parties de celles-ci.
ATTENTION: On peut appliquer d'autres exigences et d'autres Directives Européennes aux produits couverts par cette déclaration.

The following essential requirements of the Machinery Directive (2006/42/EC) are abided by and applied:
· The relevant technical documentation is compiled in accordance with Part B of Annex VII; such documentation, or parts of it, will be sent by post or by electronic means, in response to a motivated request received from the qualified national authorities.
· This almost complete-machinery is conformed with the provisions of these others EC directives: **Directives 2014/30/UE, 2014/35/UE and 2014/53/UE.**
· All relevant essential requirements as given in Annex I of the EU Directive 2006/42/EC have been applied to the product. Compliance with the cited harmonized standards provides presumption of conformity with the specified essential requirements of the Directive covered by those Standards or parts thereof.
WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this Declaration

Die folgenden grundlegenden Anforderungen der Maschinenrichtlinie (2006/42/CE) angewendet werden und erfüllt:
· Die technischen Unterlagen gemäß Teil B des Anhangs VII zusammengestellt; Unterlagen, oder Teile davon, werden per Post oder auf elektronischem Wege übermittelt werden, in Reaktion auf einen begründeten Antrag bei den zuständigen nationalen Behörden.
· Diese unvollständige Maschine in Übereinstimmung mit den Bestimmungen der folgenden anderen CE-Richtlinien: **Richtlinien 2014/30/UE, 2014/35/UE und 2014/53/UE**
· Alle grundlegenden Anforderungen, gemäß Anhang I der Richtlinie UE 2006/42 /CE, angewendet wurden. Die Übereinstimmung mit den genannten harmonisierten Normen sieht die Vermutung der Übereinstimmung mit den festgelegten grundlegenden Anforderungen der Richtlinie vor, die unter diese Normen oder Teile davon fallen.
ACHTUNG: Weitere Anforderungen und andere EU-Richtlinien können für Produkte dieser Erklärung unterliegen angewendet werden.

Los siguientes requisitos esenciales de la Directiva de Máquinas (2006/42/CE) se cumplen y aplican:
· La documentación técnica correspondiente se elaborará de acuerdo con la Parte B del Anexo VII; dicha documentación, o partes de ésa, será enviada por correo o por medios electrónicos, en respuesta a una solicitud motivada de las autoridades nacionales competentes.
· Esta cuasi-máquina está conforme con las disposiciones de las siguientes otras directivas de la CE: **Directivas 2014/30/UE, 2014/35/UE y 2014/53/UE**
· Se han aplicado y se ha cumplido con todos los requisitos esenciales pertinentes del Anexo I de la Directiva de la UE 2006/42/CE mediante el cumplimiento de las normas armonizadas aplicadas que dan presunción de conformidad con los requisitos esenciales específicos de las directivas aplicables cubiertos por ellas.
ADVERTENCIA: Otros requisitos y otras Directivas de la UE pueden ser aplicables a los productos cubiertos por esta norma.

L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione:
L'objet de la déclaration décrit ci-dessus est en conformité avec la législation d'harmonisation de l'Union:
The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:
Die Aufgabe der Erklärung oben beschrieben, ist in Übereinstimmung mit den einschlägigen EU-Harmonisierungsvorschriften:
El objeto de la declaración descrita anteriormente es conforme con la legislación de armonización de la Unión pertinente:

EN 12453:2000
EN 12445:2000
EN 12635:2002+A1:2008
EN 12978:2003+A1:2009
EN 13241-1:2003+A1:2011
EN 301 489-1 V1.9.2
EN 301 489-3 V1.6.1
EN 300 220-2 V2.4.1
EN 55014-1:2006+A1:2009+A2:2011
EN 55014-2:2012+A1:2014
EN 60335-1:2016
EN 60335-2-103:2015
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 61000-6-1:2007
EN 61000-6-2:2005
EN 61000-6-3:2007+A1:2011
EN 61000-6-4:2007+A1:2011

- Il presente prodotto non può funzionare in modo indipendente ed è destinato ad essere incorporato in un impianto costituito da ulteriori elementi. Rientra perciò nell'Art. 6 paragrafo 2 della Direttiva 2006/42/CE (Macchine) e successive modifiche, per cui segnaliamo il divieto di messa in servizio prima che l'impianto sia stato dichiarato conforme alle disposizioni della Direttiva.
- Le présent dispositif ne peut fonctionner de manière indépendante, étant prévu pour être intégré à une installation constituée d'autres éléments. Aussi rentre-t-il dans le champ d'application de l'art. 6, paragraphe 2 de la Directive machines 2006/42/CEE et de ses modifications successives. Sa mise en service est interdite avant que l'installation ait été déclarée conforme aux dispositions prévues par la Directive.
- This product can not work alone and was designed to be fitted into a system made up of various other elements. Hence, it falls within Article 6, Paragraph 2 of the EC-Directive 2006/42 (Machines) and following modifications, to which respect we point out the ban on its putting into service before being found compliant with what is provided by the Directive.
- Dieses Produkt kann nicht allein funktionieren und wurde konstruiert, um in einen von anderen Bestandteilen zusammengesetzten System eingebaut zu werden. Das Produkt fällt deswegen unter Artikel 6, Paragraph 2 der EWG-Richtlinie 2006/42 (Maschinen) und folgenden.
- Este producto no puede funcionar de manera independiente y se tiene que incorporar en una instalación compuesta por otros elementos. Está incluido por lo tanto en el Art. 6 párrafo 2 de la Disposición 2006/42/CEE (Maquinaria) y sus siguientes modificaciones, por lo cual destacamos que está prohibido poner la instalación en marcha antes de que esté declarada conforme a la citada Disposición.

(Bosio Stefano - Presidente)

Castenedolo, 01-01-2017

Cod. CVA1877 - 01012017 - Rev. 35

CE
MADE IN ITALY

· Questo prodotto è stato completamente progettato e costruito in Italia
· Ce produit a été complètement développé et fabriqué en Italie
· This product has been completely developed and built in Italy
· Dieses Produkt wurde komplett in Italien entwickelt und hergestellt
· Articulo totalmente proyectado y producido en Italia

RIB
AUTOMATISMI PER CANCELLI
AUTOMATIC ENTRY SYSTEMS

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 =