K500 FAST

OPERATORE IRREVERSIBILE PER CANCELLI SCORREVOLI
OPERATEUR IRREVERSIBLE POUR PORTAILS COULISSANTES
IRREVERSIBLE OPERATOR FOR SLIDING GATES
SELBSTHEMMENDER TORANTRIEB FÜR SCHIEBETOREN
OPERADOR IRREVERSIBLE PARA VERJAS CORREDERAS

I

ATTENZIONE

- OPERATORE CON VELOCITA' ALTA (21 m/min).
- SOLO PER PASSAGGIO VEICOLARE.
- INSTALLARE SOLO SE SI HA LA CERTEZZA CHE NESSUNO POSSA ENTRARE IN CONTATTO CON IL CANCELLO.
- PREDISPORRE LE SICUREZZE COME INDICATO DALLA NORMA EN12445 AFFINCHE' NIENTE E NESSUNO POSSA VENIRE ACCIDENTALMENTE A CONTATTO CON L'AUTOMAZIONE.
- UTILIZZARE SOLO CREMAGLIERA RIB IN METALLO (CONSIGLIAMO ACS9050 MOD. 4 CON CATAFORESI).

F

ATTENTION

- OPÉRATEUR A GRANDE VITESSE (21 m/min).
- SEULEMENT POUR LE PASSAGE DES VEHICULES.
- INSTALLEZ SEULEMENT SI VOUS ÊTES SÛR QUE PERSONNE NE PEUT ÊTRE TOUCHÉ PAR LA PORTE.
- EQUIPEZ DE SECURITES COMME INDIQUE SUR LA NORME EN12445 POUR ÉVITER QUE QUELQUE CHOSE OU QUELQU'UN PUISSE ÊTRE TOUCHÉE PAR LA PORTE.
- UTILISER SEULEMENT CRÉMAILLÈRE RIB EN ACIER (ON CONSEILLE ACS9050 MOD. 4 TRAITÉ CATAPHORÈSE).

G B

ATTENTION

- HIGH SPEED OPERATOR (21 m/min).
- INTENDED ONLY FOR PASSAGE OF VEHICLES.
- INSTALL ONLY IF YOU ARE SURE THAT NOBODY IS IN THE REACH OF THE GATE.
- MAKE SURE THAT APPROPRIATE SAFETY DEVICES ARE USED AS SHOWN IN EN12445 TO AVOID THAT SOMETHING OR SOMEBODY COULD BE HIT BY THE GATE.
- TO USE METAL RIB RACK ONLY (WE ADVISE ACS9050 MODULE 4 WITH CATAPHORESIS TREATMENT).

D

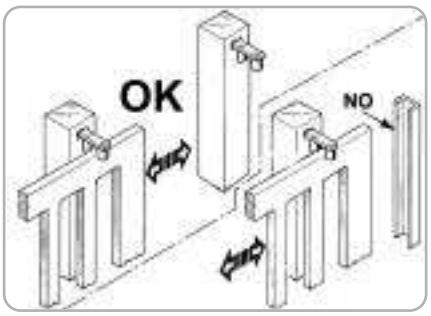
WICHTIG

- MIT HOCHGESCHWINDIGKEITSBEDIENER (21 m/min).
- NUR FÜR AUTO-DURCHFAHRTEN.
- INSTALLIEREN SIE DIES NUR, WENN SIE SICHER SIND, DASS NIEMAND DURCH DEN ZAUN GREIFEN KANN UND MIT DEM TOR IN BERÜHRUNG KOMMT, WIE ES DIE EN12445 VORSCHREIBT.
- ZAHNSTANGE AUS METALL BENUTZEN. WIR RATEN ACS9050 MIT KATAPHORESE.

E S

ATENCIÒN

- OPERADOR CON VELOCIDAD' ALTA (21 m/min).
- SOLO PARA PASAJE DE VEHICULOS.
- INSTALAR SÒLO SI SE TIENE LA SEGURIDAD QUE NINGUNO PUEDA ENTRAR EN CONTACTO CON LA CANCELA.
- PREDISPONER LAS SEGURIDADES COMO INDICADO EN LA NORMA EN12445 TAL QUE NADA NI NADIE PUEDA VENIR ACCIDENTALMENTE EN CONTACTO CON LA AUTOMACIÒN.
- UTILIZAR SÒLO CREMALLERA RIB EN METALO (ACONSEJAMOS CÒD. ACS9050 MOD. 4 CON CATAFÒRESIS).



I K500 FAST è applicabile solo a parti mobili che scorrono a lato della colonna di chiusura.
Non applicare K500 FAST su parti mobili che chiudono a ridosso della colonna.

F K500 FAST ne peut être appliqué qu'aux parties mobiles qui glissent à côté de la colonne de fermeture. Ne pas appliquer K500 FAST sur les parties mobiles qui ferment près de la colonne.

G B Fast operators are not suitable for installations in which the mobile gate leaf ends up against a post, a U shape bar, because the knocking of gate against these fixed parts cannot always be prevented. The best solution for using Fast operators is when the gate leaf ends up next to the posts.

D K500 FAST ist ausschließlich nur an beweglichen Teilen anzubringen, die sich seitlich an der Abschließsäule bewegen. K500 FAST nicht an beweglichen Teilen anbringen, die dicht an der Säule schließen.

E S K500 FAST se puede aplicar sólo a partes móviles que se se desplazan al lado de la columna de cierre. No aplicar K500 FAST en partes móviles que se cierran cerca de la columna.

Operatore Operateur 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	codice code code code codigo
K500 FAST	230V 50/60Hz	500 kg / 1103 lbs	N 520	AA33750

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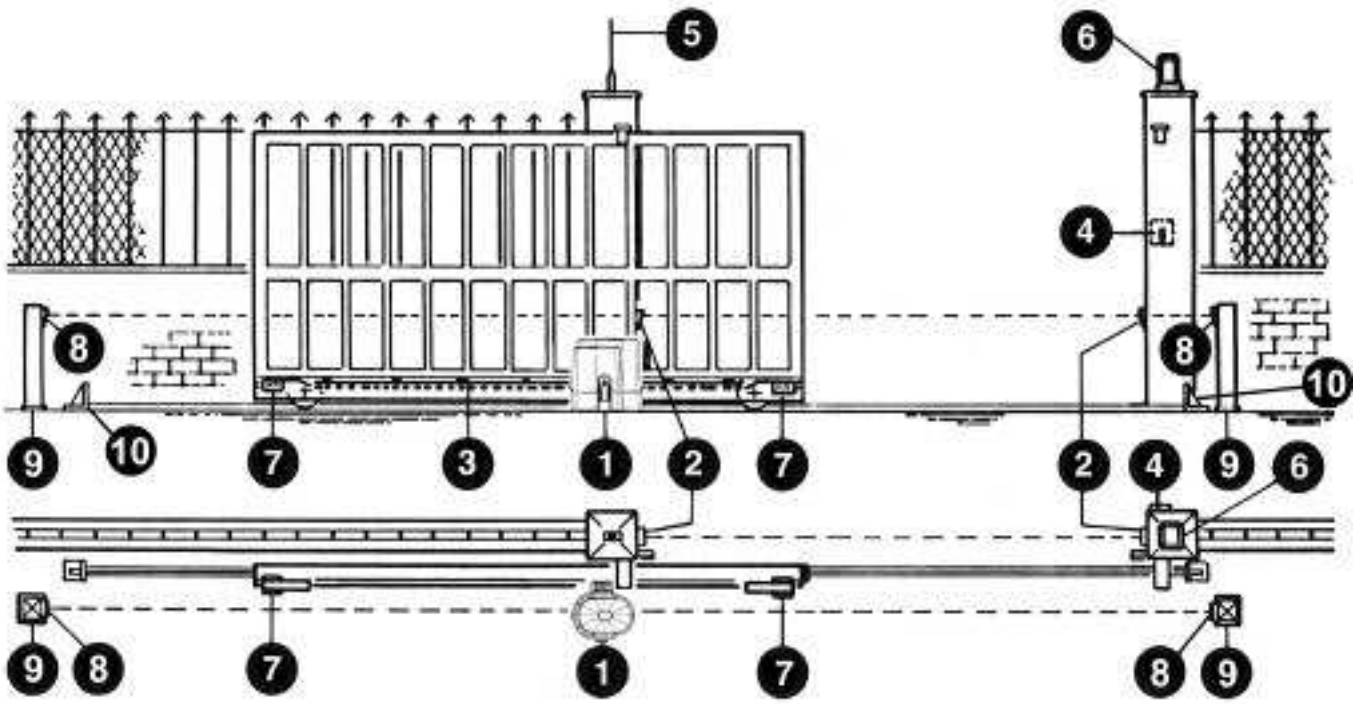
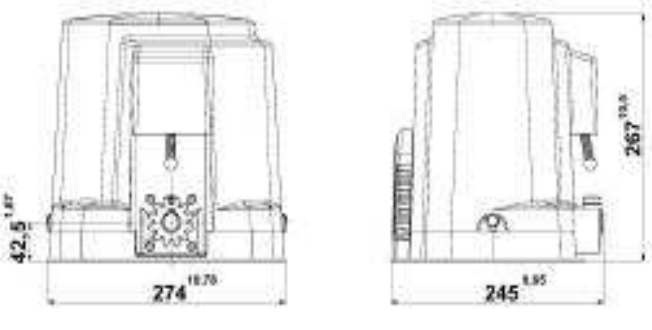


1 - K500 FAST operating device
2 - External photocells
3 - Rack of Module 4
4 - Key selector
5 - Radio antenna
6 - Blinker
7 - Travel limiting devices (cams)
8 - Internal Photocells
9 - Photocell posts
10 - Mechanical stops

1

TECHNICAL FEATURES

Irreversible operating devices for sliding gates with a maximum weight of 500 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/inch

TECHNICAL DATA		K500 FAST
Max. leaf weight	kg	500
Torque	N/m	10
Thrust force to constant turns	N	520
Rack		4
EEC Power supply		**230V~ 50/60Hz**
Motor capacity	W	344
Power absorbed	A	1,87
Capacitor	µF	16
Normative cycles	n°	14 - 15s/2s
Daily operations suggested	n°	200
Service		60%
Guaranteed consecutive cycles	n°	25/5m
Grease		Bechem - RHUS 550
Weight of electroreducer	kg	8
Noise	db	<70
Working temperature	°C	-10 ÷ +55
Protection	IP	54

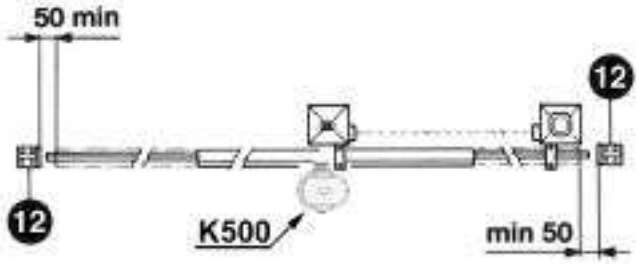
CHECKING BEFORE THE INSTALLATION

!! 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) (fig. 2).
- Gate columns shall have anti-derailment guides on their top (fig. 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.

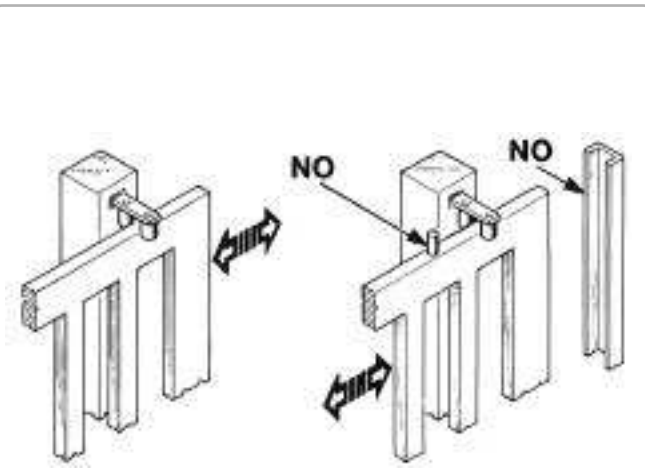


2

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)	E	E	E
with not visible impulses (e.g. remote controldevice)	E	E	E
automatic	E	E	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.
E: Photocells, like code ACG8026 (To apply every 60÷70 cm for all the height of the column of the gate up to a maximum of 2,5 m - EN 12445 point 7.3.2.1)



3

RELEASE

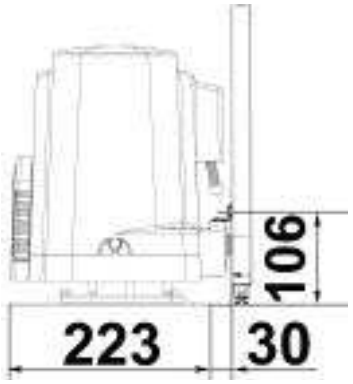
To operated after the power supply to the motor has been interrupted.
In order to work manually on the gate, you just need to insert the fitting key and rotate it 3 times counterclockwise (fig. 4).
In order to carry out the manual operation of the gate leaf the followings must be checked:

- 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).

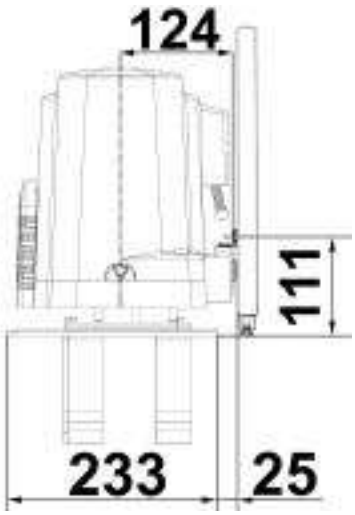

4

MOTOR AND RACK FITTING

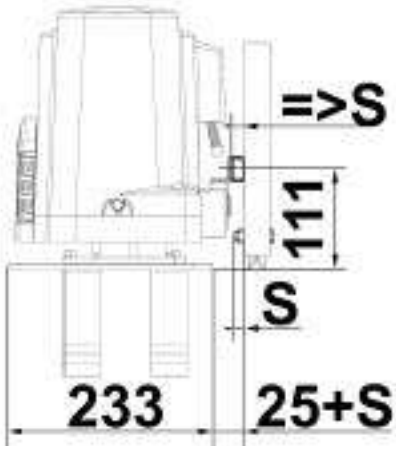
Operator K500 FAST comes with a base plate for vertical adjustment. Such adjustment proves to be useful to set a 1mm clearance between the drive gear and the rack.
The base plate is provided with three brackets that can be used to fasten the equipment to the floor. As an alternative, it is possible to obtain the special to type plate for type K500 FAST (code ACG8108) to be secured directly to the floor.
In addition, it is possible to install the equipment K500 FAST complete with base plate, directly over the installation plate, as suitable for operator K5 (code ACG8101).
The base plate for operator K500 FAST features four holes for floor securing, through four expansion studs.
The rack shall be fitted over the motor support, at a certain distance from it.
N.B.: To use metal rack only code ACS9050.
Its height can be adjusted thanks to the holes In the rack.
The height is adjusted to prevent the gate from resting on the driving gear of the K as it moves (Fig. 5, 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**



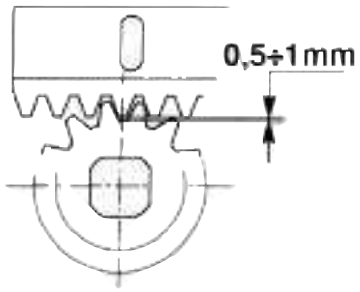
Measurements in mm **6**



Measurements in mm **7**

LIMIT SWITCH FITTING

In order to determine the travel of the moving part, place two cams at the ends of the rack (Fig. 9).
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 of the top guides.

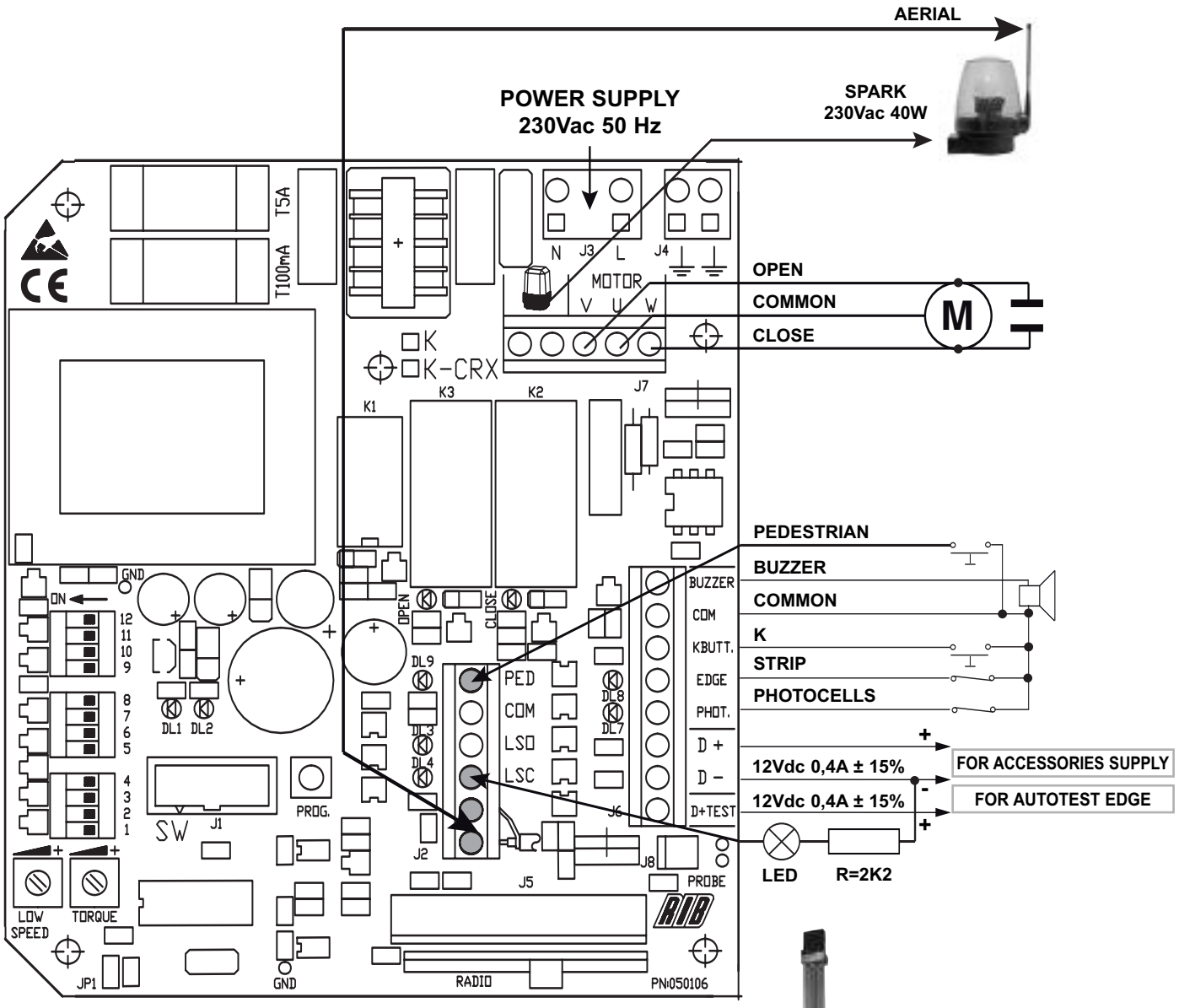


8

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.


9

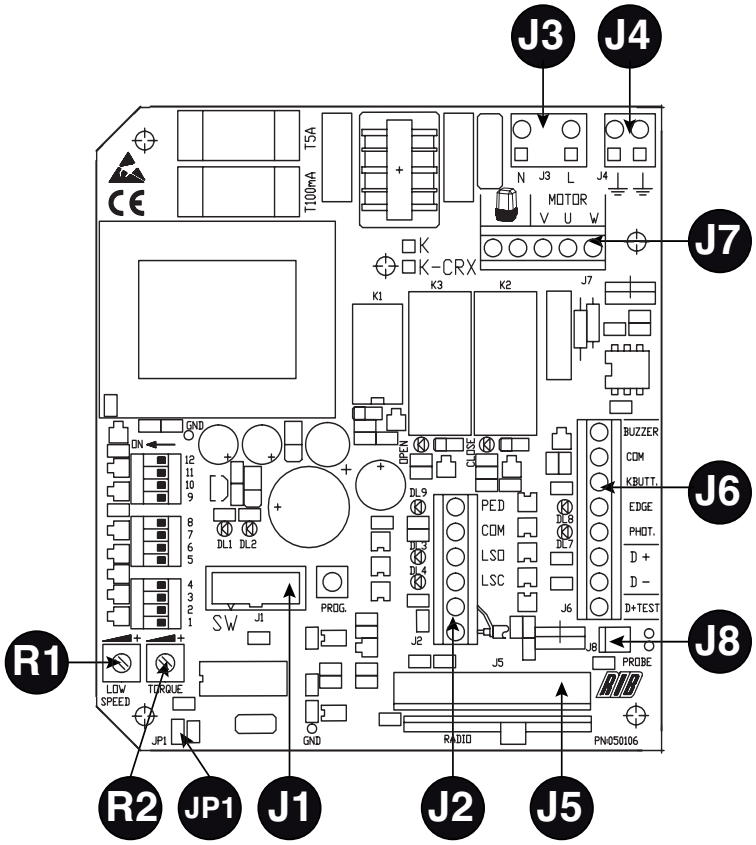


K / PEDESTRIAN
KEY SELECTORS BLOCK
AND PUSH-BOTTON FLAT

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 LSC LSO COM PED BUTT	Radio Antenna Close limit-switch that cuts off the motor in closing Open limit-switch that cuts off the motor in opening Limit-switch common contact 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, 12 Vdc supply
J6	D+ TEST D+ D- COM K BUTT. PHOT. EDGE 	12Vdc safety strip self-test power supply Accessories power supply +12Vdc Accessories power supply -12Vdc Common contact (common line for all the command and safety inputs) Single pulse contact (NO) Photocells contact (NC) Safety strip contact (NC) Buzzer contact (12Vdc max 200 mA)
J7	 U - MOTOR V-W - MOTOR	Flashing light (max 40W) Motor common connection 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 1-2 STORING/ERASING RADIO CODES FOR MOTOR CONTROL (only CRX control board) (See Point E)
DIP 2-1 PROGRAMMING OF THE PEDESTRIAN OPENING (See Point D)
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
Single pulse contact (K BUTT)
Pedestrian button (PED BUTT)
Radio Receiver command
OFF - AUTOMATIC
Single pulse contact (K BUTT)
Pedestrian button (PED BUTT)
Radio Receiver command
DIP 7 Electronic brake “weak version” (OFF)
Electronic brake “strong version” (ON)
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 to select type of motor (see chart 1)
DIP 12 to select type of motor (see chart 1)

CHART 1		
DIP 11	DIP 12	MOTOR TYPE
OFF	OFF	SUPER 2200 FAST
ON	OFF	K500 FAST
ON	ON	K800 FAST
OFF	ON	K500 FAST OR FREE FOR FUTURE APPLICATIONS

S1 => PROG. Programming button

JP1 => RESET jumper (to reset the microprocessor hold short circuited the reset jumper for at least 1 second (the short circuit could be done also with a screwdriver).

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.

ELECTORNIC BRAKE
The electronic brake is always enabled with FAST operators
The “weak version” of the electronic brake is enabled with the switch DIP7 OFF.
The “strong version” of the electronic brake is enabled with the switch DIP7 ON.

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 *movement leds*
- 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 1 sec. and within 5 sec. of continuous work, both in closing or opening, the electronic clutch intervenes automatically. Adjust the force of the electronic clutch by turning the appropriate trimmer TORQUE.
5 - After 5 sec. of continuous work, both in closing or opening, the deceleration is automatically activated (if DIP8 OFF). Adjust the low speed during the deceleration by turning the appropriate trimmer LOW SPEED.
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 - RADIO CODE STORING (ONLY FOR CRX) (MAX 60 CODES)

1 - Turn **DIP1 to ON** position, the LED DL1 starts blinking quickly.
2 - Immediately, turn also **DIP2 to ON** position, the LED DL1 starts blinking slowly.
Each code must be programmed within 10 seconds.
3 - **Press one of the buttons on the remote control** (usually channel A). If the remote control is stored correctly green LED L10 (on the K-CRX control board) emits a flash. The 10 seconds' time within storing radio code is automatically renewed to allow the storing of the next remote control.
4 - To end radio code storing **either press PROG. button or let 10 seconds pass.** The LED DL1 will turn OFF.
5 - Turn **DIP1 to OFF** position.
6 - Turn **DIP2 to OFF** position.

POINT G - RADIO CODE ERASING (only for CRX)

1 - Turn **DIP1 to ON** position, the LED DL1 starts blinking quickly.
2 - Immediately, turn also **DIP2 to ON** position, the LED DL1 starts blinking slowly.
Code erasing must be carried out within 10 seconds.
3 - **Press the PROG. button and hold it for 5 seconds,** the total memory erasing will be indicated by two flashes of green LED DL2. LED DL1 will blink for 10 seconds and it will be possible to store new radio codes following the Point E procedure described above.
4 - To end radio code storing either press PROG. button or let 10 seconds pass.
5 - Turn **DIP1 to OFF** position.
6 - Turn **DIP2 to OFF** position.

POINT H - RADIO CODE FULL MEMORY TEST (only for CRX)

1 - Turn **DIP1 to ON** position, the LED DL1 starts blinking quickly.
2 - Immediately, turn also **DIP2 to ON** position, the LED DL1 starts blinking slowly.
If the Green LED DL2 flashes six times, it means that the radio code memory is FULL (maximum codes to be stored 60).
3 - Turn **DIP1 to OFF** position.
4 - Turn **DIP2 to OFF** position.

FUNCTIONING OF CONTROL ACCESSORIES

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 (available ONLY with DIP 6 OFF)
The Clock Function permits to keep the gate opened even if, for example, the Automatic Closing is enabled (DIP3 ON) or somebody commands the gate closing. It 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.

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.

SAFETY STRIP (EDGE - COM)
If an obstacle presses the safety strip:
- while the gate is still, it will not move neither in opening nor in closing
- while the gate is closing, the gate will open
- while the gate is opening, the gate will close.

In case the safety strip is held pressed a further quick reversion, after 2 seconds, is performed. The gate interrupts any movement and this **alarm state** will be signalled by both the Blinker and the Buzzer, if installed, which will remain on for 1 minute. The normal gate operations can be restored by pressing any push button or radio commands.
The safety strip input (EDGE - COM) is a NORMALLY CLOSED contact. In case there are more than one safety strip, all their contacts must be connected in series.
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.

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 D+TEST and D- outputs (DIP10 ON). Automatically, every time the gate completes a full opening, just before closing, the control board switches OFF the D+TEST and D- 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.

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
The current supplied to the Buzzer will be 200 mA at 12Vdc.
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 (D 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% 12Vdc
IP protection grade	IP54
Control board weight	0,55 kg
Dimensions	130 x 50 x 115 mm

TECHNICAL RADIO SPECIFICATIONS (model CRX)

Reception frequency	433,92MHz
Impedance	52 OHM
Sensitivity	>2,24µV
Time of excitation	300ms
Time of discharge	300ms
Memory available	60codes
Maximum load of radio receiver output	200mA 12Vdc

- 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.

PLATE TO BE CEMENTED

code ACG8108

NYLON RACK MODULE 4

with zinc plated angle Iron, In 1mt. 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

RADIO TRANSMITTER MOON

MOON 433 - MOON 91 **MOON CLONE**

433 code ACG6081 433 code ACG6082 code ACG6093
91 code ACG7025 91 code ACG7026

SPARK

In order to make the systems mentioned above give the best performances, you need to install an antenna tuned on the frequency of the radio receiver installed.

N.B. Pay attention to not let the central wire of the cable to came Into contact with the external copper sheath, since this would prevent the antenna from working.

Install the antenna vertically and in such a way the remote control can reach it.

SPARK ANTENNA 91 code ACG5454
SPARK ANTENNA 433 code ACG5252
SPARK BLINKER WITH IN-BUILT INTERMITTENT CARD code ACG7059

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

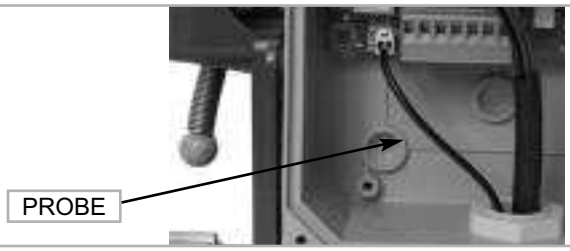
BLOCK

BLOCK KEY SELECTOR FOR WALL-INSTALLATION code ACG1053
BLOCK KEY SELECTOR TO BUILD-IN code ACG1048

MECHANICAL STRIP

L = 2 m - 6,56 feet
With double-safety contact, you can cut the length you need.
code ACG3010

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

SELF INSTALL - NEED TECHNICAL ASSISTANCE?

OPTION 1: DIRECT WITH THE SERVICE DESK – QUICKEST AND MOST EFFECTIVE METHOD

Submit your enquiry direct with the service desk at – service@automaticsolutions.com.au
The service desk has the most experienced staff in Australia to help with your problem but they need your help.

- **Describe your problem in detail and as clearly as possible. Don't forget to include a telephone number.**
- **Be certain to detail which model or models of you are working with.**
- **Send photos of the installation – they love photos. The people at the service desk are good but they are even better when they can see the installation. Send photos of the overall scene so they can see the entire installation. Also send photos of the wiring to the control board and any other part of the installation you think is relevant.**
- **Send video if appropriate. Smartphone's these days take remarkably good video in small file sizes which can be emailed in a moment. If your problem needs a video to show the issue please feel free to send it.**

NOTE: THIS IS BY FAR THE FASTEST AND MOST SUCCESFUL WAY TO SOLVE YOUR PROBLEM
PHOTOS AND VIDEOS ARE THE NEXT BEST THING TO BEING THERE

OPTION 2: LODGE YOUR ENQUIRY LOCALLY - SLOWER BUT CAN STILL BE EFFECTIVE

Make contact with the store of purchase. Branch staffs are typically not technicians and dependent on their length of service will have varying degrees of technical knowledge. If they cannot help however they will certainly either source help locally from their technicians or make contact with the service technicians on your behalf.

OPTION 3: SERVICE CALL WITH AUTOMATIC SOLUTIONS TECHNICIAN – SLOWEST METHOD

If you fall within the local branch service area it may be possible to book a local technician to look at your installation. Wait times will vary dependent on local workloads. The cost is a service fee which includes the first half hour and the hourly rate thereafter. If any Automatic Solutions provided parts are found to be defective and within warranty these will be provided free of charge.
(NOTE: If you suspect that any parts are defective and within warranty you may wish to consider option 4)

A note on this option: If you decide on this option you will be asked to sign an "authorisation to proceed" which will provide legal authority and payment security. This form has three options available of which only the first two are available to you. The third option is for warranty repairs only for full install customers. Self install customers requiring warranty only service need to refer to option four below.

IMPORTANT: IN SHORT THIS OPTION WILL INCUR CHARGES

OPTION 4: RETURN THE PRODUCT IF BELIEVED TO BE FAULTY

As a self install customer who has purchased product if you believe the product to be faulty rather than an installation or site problem you have the option of returning the product for evaluation and to exercise your right to a replacement, repair or refund as applicable. All returned product is forwarded immediately to the service technicians for evaluation and response. There are two main methods available to return product –

- **Direct to the service centre – this is the quickest method as it cuts out the branch delay**
- **Via the branch of purchase – slower because of the delay at the branch**

When choosing this option you need to complete a product return form. This form gives you all the information on procedure involved and where to send to. These are available at the branch of purchase, can be emailed to you (contact your branch), or available here - http://automaticsolutions.com.au/page/warranty.php