

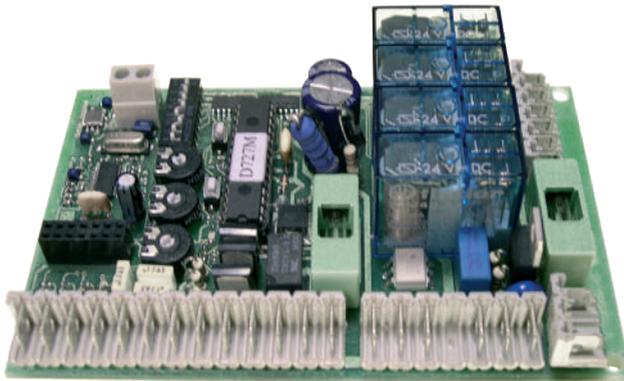
GUIDA ALL'INSTALLAZIONE
INSTALLATION GUIDE
INSTALLATIONSANLEITUNG
NOTICE D'INSTALLATION
GUÍA PARA LA INSTALACIÓN

D727M

Quadro di comando per motorizzatore EASY

Control panel for EASY gearmotor
Steuerplatine für den getriebemotor EASY
Logique de commande pour motoréducteur EASY
Panel de mandos para motorreductor EASY

D-MNL0D727M 21-03-2012 - Rev.11



IT - Istruzioni originali

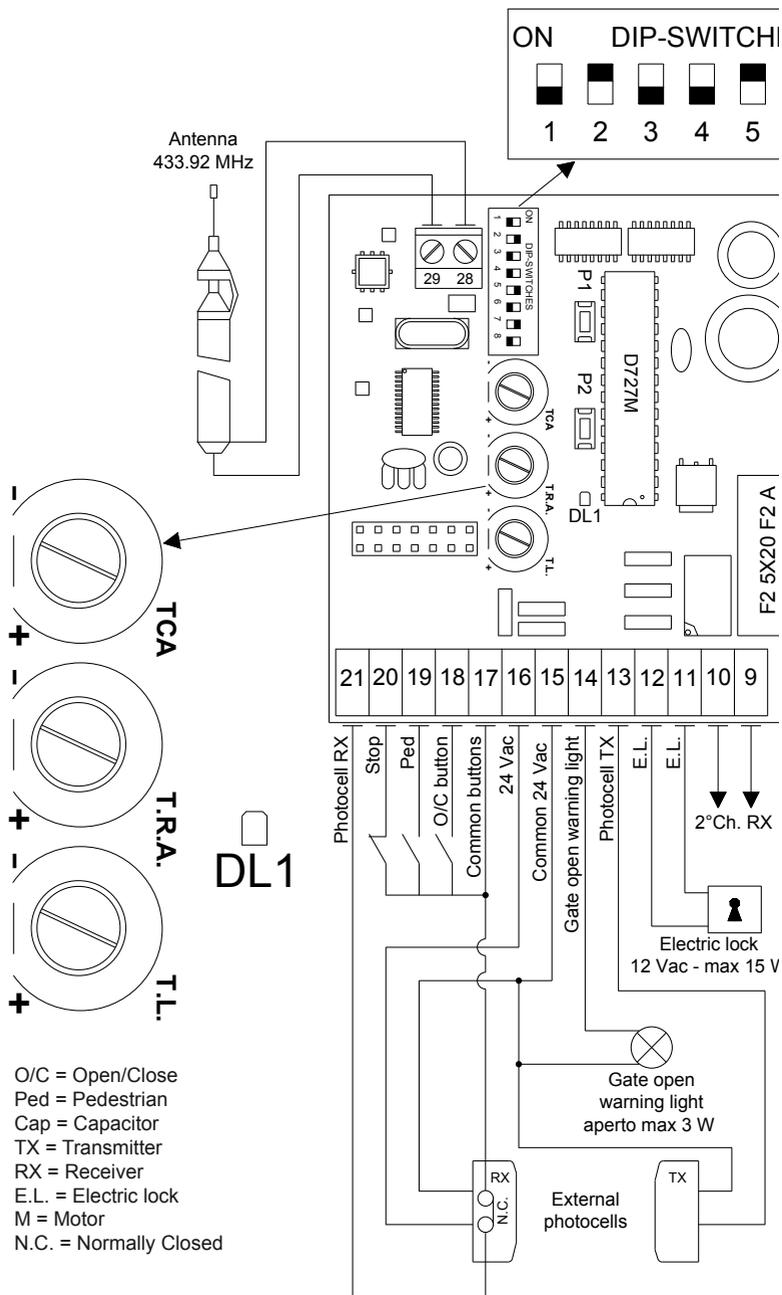


MADE IN
ITALY

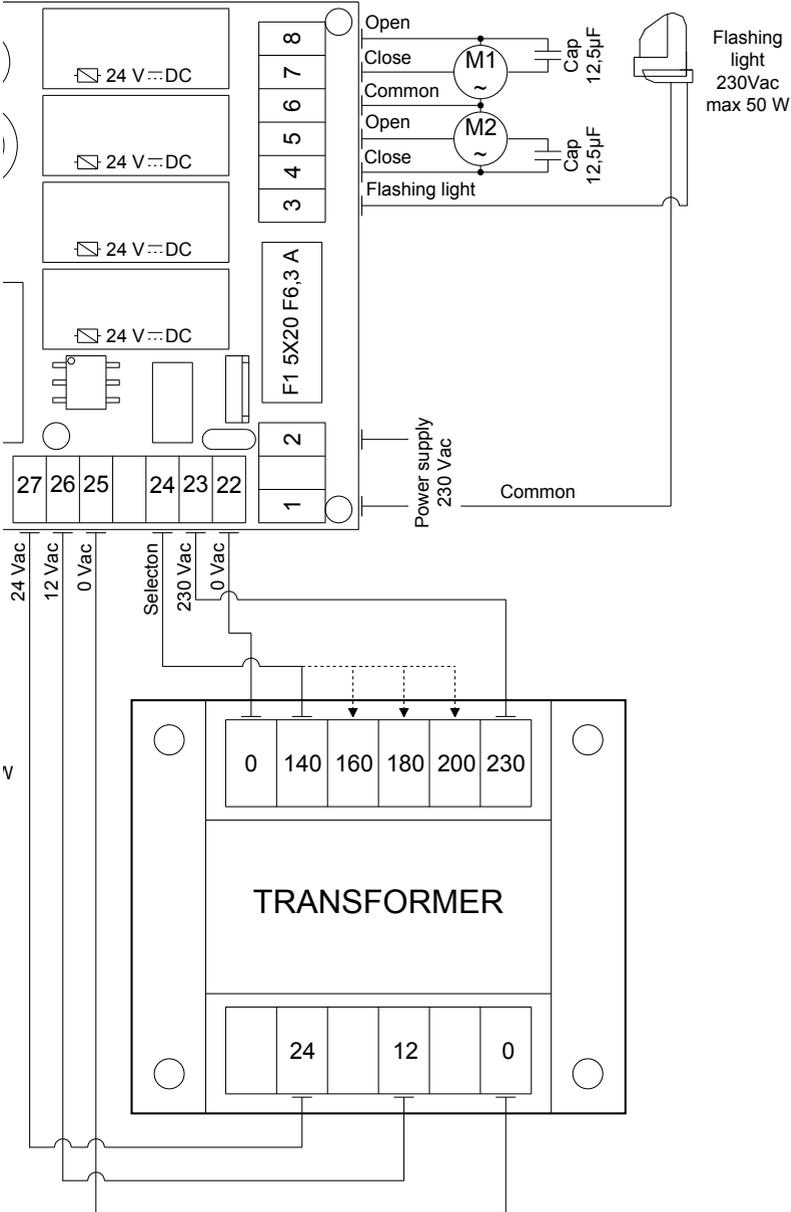


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SCHEMA CABLAGGIO D727M / D727M WIRING DIAGRAM / SCHALTPLAN DER



D727M / SCHÉMA CÂBLAGE D727M / ESQUEMA DEL CABLEADO D727M



MANUFACTURER'S DECLARATION OF INCORPORATION
(in accordance with European Directive 2006/42/EC App. II.B)

Manufacturer:

TAU S.r.l.

Address:

Via E. Fermi, 43
36066 Sandrigo (Vi)
ITALY

ENGLISH

Declares under its sole responsibility, that the product:
designed for automatic movement of:
for use in a:
complete with:

Electronic control unit
Swing Gates
Residential / Communities
Radioreceiver

Model:
Type:
Serial number:
Commercial name:

D727M
D727M
see silver label
Control panel for EASY gearmotor

Has been produced for incorporation on an access point (*swing gate*) of for assembly with other devices used to move such an access point, to constitute a machine in accordance with the Machinery Directive 2006/42/EC.

Also declares that this product complies with the essential safety requirements of the following EEC directives:

- **2006/95/EC Low Voltage Directive**
- **2004/108/EC Electromagnetic Compatibility Directive**

and, where required, with the Directive:

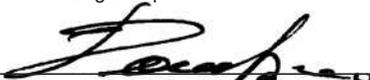
- **1999/5/CE Radio equipment and telecommunications terminal equipment**

Also declares that ***it is not permitted to start up the machine*** until the machine in which it is incorporated or of which it will be a component has been identified with the relative declaration of conformity with the provisions of Directive 2006/42/EC.

The manufacturer undertakes to provide, on sufficiently motivated request by national authorities, all information pertinent to the quasi-machinery.

Sandrigo, 31/03/2010

Legal Representative



Bruno Danieli

Name and address of person authorised to draw up all pertinent technical documentation:

Loris Virgilio Danieli - via E. Fermi, 43 - 36066 Sandrigo (Vi) Italy

WARNINGS

This manual is designed to assist qualified installation personnel only. It contains no information that may be of interest to final users. This manual is enclosed with the D727M control unit mounted on the Easy gearmotor and may therefore not be used for different products!

Important warnings:

Disconnect the mains power supply to the board before accessing it.

The D727M control unit has been designed to control two alternating current electromechanical gearmotors for automatic swing gates.

Any other use is considered improper and is consequently forbidden by current laws.

Please note that the automation system you are going to install is classified as “machine construction” and therefore is included in the application of European directive 2006/42/EC (Machinery Directive).

This directive includes the following prescriptions:

- Only trained and qualified personnel should install the equipment;
- the installer must first make a “risk analysis” of the machine;
- the equipment must be installed in a correct and workmanlike manner in compliance with all the standards concerned;
- after installation, the machine owner must be given the “declaration of conformity”.

This product may only be installed and serviced by qualified personnel in compliance with current, laws, regulations and directives.

When designing its products, TAU observes all applicable standards (please see the attached declaration of conformity) but it is of paramount importance that installers strictly observe the same standards when installing the system.

Unqualified personnel or those who are unaware of the standards applicable to the “automatic gates and doors” category may not install systems under any circumstances.

Whoever ignores such standards shall be held responsible for any damage caused by the system!

Do not install the unit before you have read all the instructions.

Installation

Before proceeding, make sure the mechanical components work correctly. Also check that the gear motor assembly has been installed according to the instructions.

THE EQUIPMENT MUST BE INSTALLED “EXPERTLY” BY QUALIFIED PERSONNEL AS REQUIRED BY LAW.

NOTE : it is compulsory to earth the system and to observe the safety regulations that are in force in each country.

IF THESE ABOVE INSTRUCTIONS ARE NOT FOLLOWED IT COULD PREJUDICE THE PROPER WORKING ORDER OF THE EQUIPMENT AND CREATE HAZARDOUS SITUATIONS FOR PEOPLE. FOR THIS REASON THE “MANUFACTURER” DECLINES ALL RESPONSIBILITY FOR ANY MALFUNCTIONING AND DAMAGES THUS RESULTING.

CONTROL BOARD FOR THE “EASY” GEARMOTOR

- MICROPROCESSOR-CONTROLLED LOGIC
- “PEDESTRIAN ENTRY” FUNCTION
- BUILT-IN FLASHING LIGHT CIRCUIT
- FAULT DIAGNOSTICS LED
- 433.92 MHz 2 CHANNEL BUILT-IN RADIO RECEIVER (CH)
- “MEMORY OF THE WORKING TIMES” FUNCTION

ATTENTION:

- do not use single cables (with one single wire), ex. telephone cables, in order to avoid breakdowns of the line and false contacts.
- do not re-use old pre-existing cables.

TECHNICAL FEATURES

Power input to board	230V AC - 50 Hz
Maximum power of motor	280 W - 230V AC
230 Vac line rapid fuse (F1 - 5x20)	F 6,3A
24 Vac auxiliary delayed fuse (F2 - 5x20)	T 2A
Input voltage of motor circuits	230V AC
Input voltage of auxiliary circuits	24V AC
Input voltage of logic circuits	5V DC
Working temperature	-20 °C ÷ +55 °C

TERMINAL BOARD CONNECTIONS

Key:

N.C. = Normally Closed

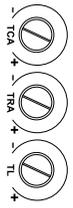
N.O. = Normally Open

Terminals	Function	Description
1 - 2	<i>POWER SUPPLY</i>	power input 230 Vac. 1=NEUTRAL, 2=PHASE;
1 - 3	<i>FLASHING LIGHT</i>	flashing light output 230 Vac 50 W max. Note : the signal is already modulated for direct use;
4 - 5 - 6	<i>MOTOR 2</i>	motor 2 power output, 230 Vac, max. 400 W. 4=CLOSE, 5=OPEN, 6=COMMON. Note: connect the capacitor between terminals 4 and 5;
6 - 7 - 8	<i>MOTOR 1</i>	motor 1 power output (opens the leaf fitted with the electric lock), 230 Vac, max. 280 W. 6=COMMON, 7=CLOSE, 8=OPEN. Note: connect the capacitor between terminals 7 and 8;
9 - 10	<i>2nd CH RADIO</i>	2nd built-in radio channel output – for commanding another automatic device or turning on lights, etc. (N.O. no-voltage contact max. 1 A); Warning: to connect other devices to the 2nd Radio Channel (area lighting, pumps, etc.), use an additional auxiliary relay.
11 - 12	<i>ELECTRIC LOCK</i>	electric lock power output 12 Vac max. 15 W;
13 - 15	<i>PHOTOCELL TX</i>	transmitting photocell power output (for PHOTO TEST), 24 Vac max. 5 W - max. no. 1 photocell transmitter;
14 - 15	<i>GATE OPEN WARNING LIGHT</i>	gate open and moving LED power output 24 Vac, max. 3 W;
15 - 16	<i>PHOTOCELL</i>	power output, 24 Vac max. 15 W for photocells – max. 2 pairs (and/or relays, receivers, etc.);

17 - 18	OPEN/CLOSE	N.O. OPEN/CLOSE button contact input – commands opening and closing of the gate - governed by dip-switches 2 and 4 (17 = COM -18 = O/C);
17 - 19	PEDESTRIAN	N.O. PEDESTRIAN button contact input – commands total opening and closing of motor 1 – governed by dip-switches 2 and 4 (17 = COM - 19 = PED);
17 - 20	STOP	N.C. STOP button contact input – if programmed, it stops the gate in any position and temporarily disables the automatic closing cycle (17 = COM - 20 = STOP);
17 - 21	PHOTOCELL	N.C. photocell contact input – cuts in during closing or during opening and closing, see dip-switch 3 (17 = COM - 21 = PHOT); Note: the photocell transmitter must always be powered by terminals 13 and 15 as the safety system is tested (Photo test) through them. The control unit will not work without this connection. To disable the safety system test, or when photocells are not used, turn dip-switch 6 OFF.
22 - 23	TRANSFORMER	transformer power output (22 = 0 Vac - 23 = 230 Vac);
24	POWER SUPPLY SELECTION	selected working voltage input; ADJUSTMENT OF MOTOR THRUST The higher the selected voltage, the greater the thrust of the gearmotor;
25 - 26 - 27	AUX	low voltage input for powering auxiliary and logic circuits (25 = 0 Vac - 26 = 12 Vac - 27 = 24 Vac);
28 - 29	AERIAL	433,92 MHz built-in radio-receiver aerial input (28 = EARTH - 29 = SIGNAL).

LOGIC ADJUSTMENTS
TRIMMERS

- TCA** Automatic Closing Time adjustment: from approx. 5 to 245 seconds (see dip switch 1);
- TRA** second motor delay adjustment during closing cycle: from approx. 1 to 16 sec.;
- TL** Work Time adjustment: from approx. 4 to 64 seconds.



THE D727M CONTROL UNIT IS EQUIPPED WITH THE “MEMORY OF THE WORKING TIMES” FUNCTION. THIS FUNCTION MEANS THAT THE FIRST MANOEUVRE MUST BE LEFT TO COMPLETELY FINISH WITHOUT INTERRUPTING THE TRAVEL OF THE MOTOR (OPERATION TIME REGULATED BY THE T.L. TRIMMER). OTHERWISE, TURN OFF THE MAINS POWER SUPPLY, WAIT ABOUT 5 SECONDS, TURN ON THE POWER SUPPLY AND REPEAT THE PROCEDURE.

Dip-switches

1	AUTOMATIC CLOSING	On	after opening, the gate automatically closes when the delay set on the T.C.A. trimmer expires;
		Off	a manual command is required to close the gate;
2	2 / 4 STROKE	On	with automatic closing enabled, a sequence of open/close commands causes the gate to OPEN-CLOSE-OPEN-CLOSE etc.;
		Off	in the same conditions, the same command sequence causes the gate to OPEN-STOP-CLOSE-STOP-OPEN-STOP, etc. (step-by-step) (see also dip switch 4);
3	OPENING PHOTOCELLS OPERATION	On	during opening, the photocell cuts in to stop the gate until the obstacle is removed. During closing, it stops the gate and then totally reopens it.
		Off	during opening, the photocell does not trigger while during closing, it behaves as if the dip switch were on;

4	NO REVERSE	On	the gate works as set by dip switch 2
		Off	the gate ignores the close command during the opening cycle (apartment block function);
5	PRE- FLASHING	On	pre-flashing function enabled;
		Off	pre-flashing function disabled;
6	FOTOTEST	On	“photocell test” function enabled;
		Off	“photocell test” function disabled. N.B.: used when photocells are not used;
7		On	bistable (or STEP-BY-STEP) function of the CH2 control relay (terminals 9 and 10) enabled;
		Off	monostable function of the CH2 control relay (terminals 9 and 10) enabled;
8	SETUP 2 nd RADIO CH	On	with dip-switch 7 OFF (monostable function), the N.O. contact remains closed for 180 secs. (fixed invariable delay for the timed control of the lights);
		Off	with dip-switch 7 OFF (monostable function), the N.O. contact remains closed for 2 secs. (fixed invariable delay for commanding a second automatic system).

FEATURES OF THE D727M

LED - DL1

As well as indicating power-on, the LED also indicates faults by means of a series of predefined sequences of flashes:

steady: ok;

1 flash: photo test error after three unsuccessful attempts;

Disable photo test (dip-switch 6 OFF), check photocells and relative connections;

2 flashes: obstacle present after 5 unsuccessful attempts to complete the closing cycle;

Check the gate for obstacles and make sure it swings smoothly;

3 flashes: max. number of programmed manoeuvres exceeded (optional).

Reset manoeuvre counter.

Note: the version of the microprocessor installed in the control panel in your possession does not count the number of manoeuvres.

More than one error is indicated by means of a 2 second pause between one signal and the next. The fault indication continues until a complete manoeuvre (open and close) has been performed.

GATE OPEN INDICATOR (24 Vac – max. 3W)

During the opening and closing cycles, the gate open indicator flashes in time with the LED (flashing). It then remains steady when the gate is totally open. After the closing phase has been completed, it turns off.

The gate open indicator also signals:

- the presence of obstacles near the gate after 5 unsuccessful attempts to complete the closing cycle;
flashes in time with the flashing light.

TIMED OPENING AND CLOSING

The gate can be opened and closed by means of a digital clock with a relay output contact. Simply connect it to terminals 17 - 18 (OPEN/CLOSE button) and programme it so that, at the required opening time, the relay contact of the clock closes until the required closing time (when the relay contact of the clock opens once again, thereby allowing automatic closing).

Note: automatic closing must be enabled (Dip-switch 1 ON).

SELECTING MOTOR INPUT VOLTAGE

Select the operating voltage of the motors (140 - 160 - 180 - 200 Vac) using terminal 24 on the control board and the output for the required voltage on the transformer.

Note: DISCONNECT the transformer before selecting a voltage.

433.92 MHz BUILT-IN RADIO RECEIVER

The radio receiver can learn up to a maximum of 8 dip-switches (TXD2, TXD4, BUG2, BUG4) or rolling codes (BUG2R, BUG4R) which can be set on the two channels as required.

The first channel directly commands the control board for opening the automatic device; the second channel commands a relay for a N.O. no-voltage output contact (terminals 9 and 10, max. 24 Vac, 1 A).

The learning mode (dip-switch or rolling code) is determined by the first radio control device and remains unchanged until all the codes have been cancelled.

LEARNING SYSTEM FOR RADIO CONTROL DEVICES

P1 = 2nd channel

P2 = OPEN/CLOSE

- 1_ press button P2 briefly to associate a radio control device with the OPEN/CLOSE function;
- 2_ LED DL1 turns off to indicate that the code learning mode has been activated (if no code is entered within 10 seconds, the board exits the programming mode);
- 3_ press the button of the relative radio control device;
- 4_ LED DL1 turns on again to indicate that the code has been memorised (if this does not happen, wait 10 seconds and start again from point 1);
- 5_ to memorise codes to other radio control devices, repeat the procedure from point 1 up to a maximum of 8 transmitters;
- 6_ to memorise codes on the 2nd channel, repeat the procedure from point 1 using button P1 instead of P2;
- 7_ to exit the learning mode without memorising a code, press button P1 or P2 briefly.

Note: if the maximum number of radio control devices (8) is exceeded, LED DL1 flashes rapidly for about 3 seconds without memorising the code.

CANCELLING CODES FROM RADIO CONTROL DEVICES

- 1_ keep button P2 pressed for 3 seconds in order to cancel all the associated radio control devices;
- 2_ LED DL1 flashes slowly to indicate that the cancellation mode has been activated;
- 3_ press button P2 again for 3 seconds;
- 4_ LED DL1 turns off for approx. 3 seconds and then remains steady to indicate that the code has been cancelled;
- 5_ repeat the procedure from point 1 using button P1 to cancel all the associated radio control devices;
- 6_ to exit the learning mode without memorising a code, press button P1 or P2 briefly.

ATTENTION: TO memorise a code on a new type of remote control unit (e.g.: from dip-switch to rolling code or vice-versa) both channels must be cancelled.

MALFUNCTIONS: POSSIBLE CAUSES AND SOLUTION

1- The automation does not start

- a- Check there is 230Vac power supply with the multimeter;
- b- Check that the NC contacts of the card are actually normally closed;
- c- Set dip 6 (phototest) to OFF;
- d- Check that the fuses are intact with the multimeter.

2- The radio control has very little range

- a- Check that the ground and the aerial signal connections have not been inverted;
- b- Do not make joints to increase the length of the aerial wire;
- c- Do not install the aerial in a low position or behind walls or pillars;
- d- Check the state of the radio control batteries.

3- The gate opens the wrong way

- a- Invert the motor connections on the terminal block (terminals 7 and 8 for motor 1; terminals 4 and 5 for motor 2);

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 SUCCESSFUL 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>