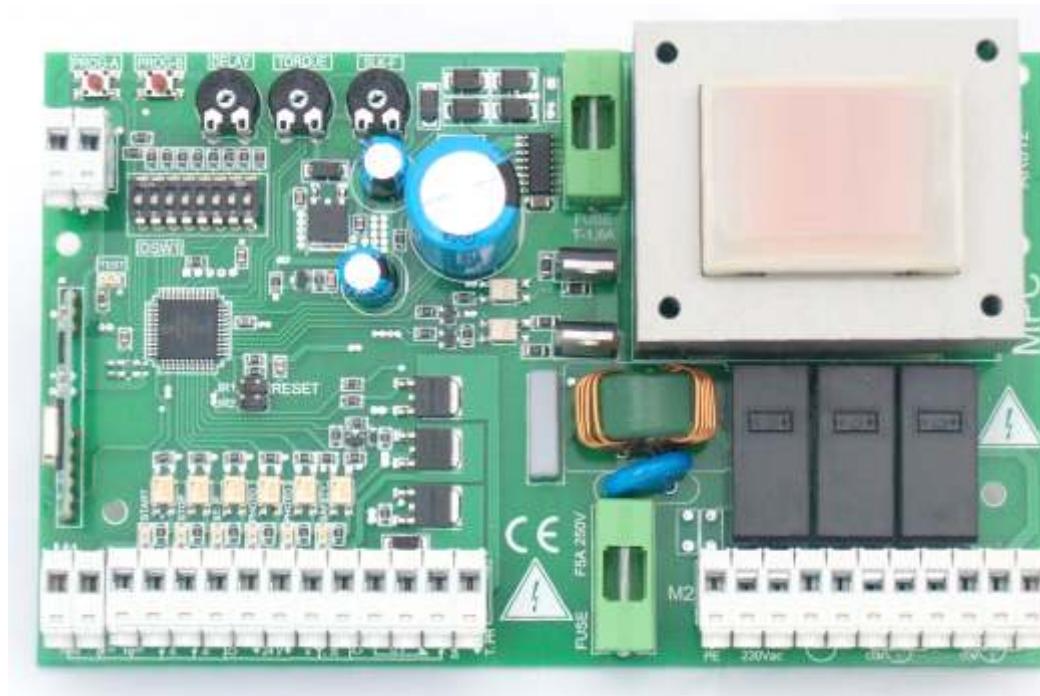


# INSTALLATION AND PROGRAMMING MANUAL FOR AR812 CONTROL BOARD FOR 230 Vac SWINGING GATES MOTOR



# AR812 Control Board for swinging gates

## DESCRIPTION

**TR1, TR2, TR3** = Adjustable trimmers

**DSW1** = Micro Switches

**DL1 – DL6** = Input LEDs

**DL7** = Programming LED

**F1** = 230Vac Fuse

**F2** = Low Voltage Fuse

**M1** = Low Voltage Input Terminal

**M2** = 230Vac Input Terminal

**CN1** = Receiver

**K1 – K3** = Relay

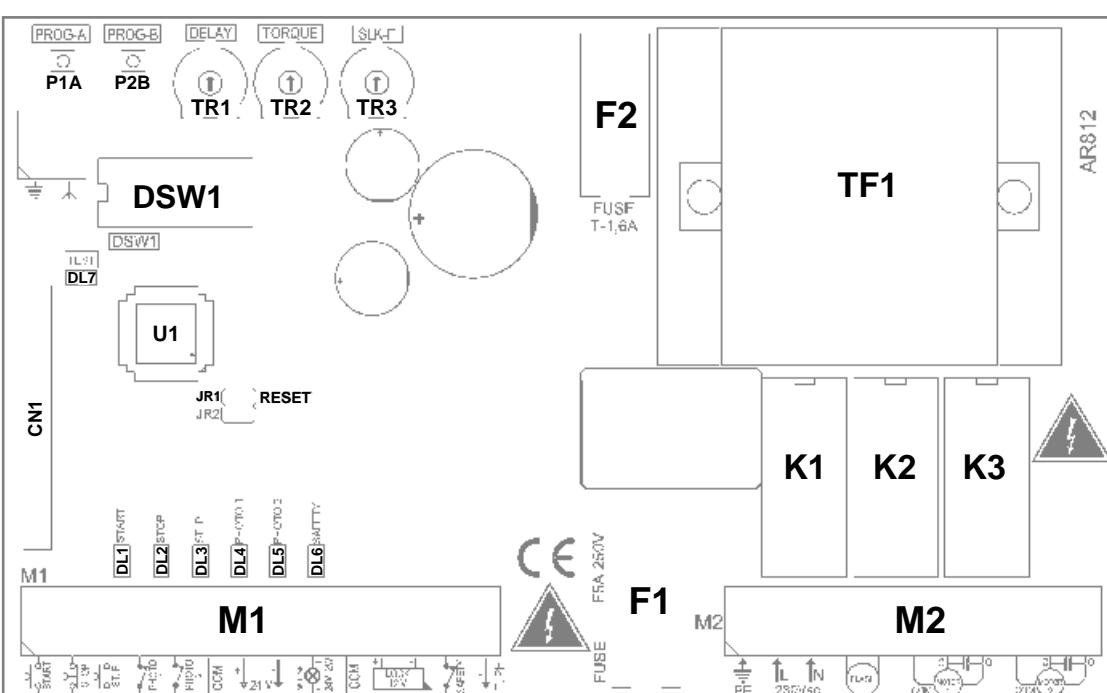
**TF1** = Transformer

**U1** = Micro Control Unit

**JR1** = Reset jumper

**P1A** = Operating time programming button

**P2B** = Remote control programming button



## INTRODUCTION

AR812 control board is suitable for two 230VAC actuators for single or double swinging gate.

The max absorption of the device is 650 W per 230Vac 50Hz.

The setup of the parameters must be carried out after the installation of all the equipment.

## ATTENTION

The Product must be installed by qualified personnel who can carry out the installation operation strictly in compliance with safety rules. The device must not be used incorrectly or for any purposes other than the ones designed for. Before proceeding with the installation it is necessary to read the instruction manual carefully in order to avoid danger to either the users or the equipment. It is necessary to power the device using a 6A bipolar thermomagnetic switch equipped with a differential with an operating current of 0.03 A. Before carrying out any installation or maintenance operations turn off the power supply to the device with the bipolar switch. The equipment must not be tampered with or modified in any way. It is necessary to turn off the power supply to the equipment before installing it or opening the enclosure.

*The manufacturer reserves the right to make changes to the product without prior notice. Therefore this manual may not correspond exactly to the product specifications.*

## EC DECLARATION OF CONFORMITY -

Manufacturer (or his authorized Representative) :	AUTOTECH
Address / :	8 Archimidous Str., 12134 Peristeri, Greece

Declares that the product

Product identification : AT8070	Model Type : AR812
Product Name : μ :	REMOTE CONTROL SYSTEM FOR OPENING & CLOSING DOORS

conforms with the essential requirements of the R&TTE 99/5/CE European parliament directive of March 9th 1999 and satisfies all the applicable standards to the product within this directive as follows:

μ μ μ μ μ R&TTE 99/5/CE μ & μ :

**ETSI-EN 301 489-1: (2002-08)** Electromagnetic compatibility and Radio spectrum Matters (ERM): ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

**ETSI-EN 301 489-3: (2000 - 08)** Electromagnetic compatibility and Radio spectrum Matters (ERM): ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz

**ETSI-EN 300 220-3: (2000-2009)** Electromagnetic compatibility and Radio spectrum Matters (ERM): Short Range Devices (SRD): Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 3: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

**ETSI-EN 60950: 1992** Specification for safety of information technology equipment, including electrical business equipment

Athens 20/5/2005  
ANTONIOS APERGIS Technical Director



## INSTALLATION

Prior to the electric connection shut down the 230V 50Hz power supply and adjust motor torch to minimum.

Use 0.5mm<sup>2</sup> to connect the buttons, photocells and 24V power supply. For connections with electric bolt and lights use at least 1,5mm<sup>2</sup> cables. For 230V 50Hz connections and motor connections use at least 2.5mm<sup>2</sup> cables.

### Termina M1

START	= Input Button N.O. (Open / Close)
STOP	= Input Button N.C. (STOP)
S.T.P	= Input Button N.O. (Pedestrian Open)
PHOTO1	= External Photocell Command Input N.C.
PHOTO2	= Internal Photocell Command Input N.C.
COM	= Input and Flashing light Common
+24V	= +24Vdc Power Supply
-24V	= -24Vdc Power Supply
W. L GHT 2W 24V	= Flashing Light 24Vdc 2W max. Output
LOCK	= 12Vac Electric Lock Output
SAFETY	= Safety Contact Input N.C.
T. PH	= Photocell Test Input Contact (*).

(\*) To use the photocell test connect the negative contact of the transmitter to the T.PH in Terminal M1

### Terminal\_2

PE	= Ground Input
L	= Line Input 230V 50Hz
N	= Neutral Input 230V 50Hz (Electric Light Common)
FLASH	= Electric Light 230V 50Hz 15 W max.
Motor 1 COM	= Motor 1 Common
Motor 1 C	= Motor 1 Close
Motor 1 O	= Motor 1 Open
Motor 2 COM	= Motor 2 Common
Motor 2 C	= Motor 2 Close
Motor 2 O	= Motor 2 Open

- It is very important to firmly tight the signal cables of terminal 2 and power cables on terminal M1 separately to avoid errors. Use Jumpers to all N.C. inputs when not in use.
- Do not connect any kind of device in the terminal inputs other than the one they are designed for.
- If one of the . . . (START and S.TP) is closed, or one of the N.C.inputs is openthe TEST\_LED blinks fast. In this case track programming is not available.

## OPERATION MODES

### CONDOMINIUM AUTOMATIC:

If the door is closed or closing and you press START button the door opens. If the door is opening, START command is ignored, while during auto close, START command resets time. If you press START after STOP command the door closes.

### SUPERAUTOMATIC:

If the door is closed or closing and you press START button the door opens. if the door is opening START command stops the door. During auto close, START command closes the door. If you press START after STOP command the door closes.

### AUTOMATIC:

If the door is closed or closing and you press START button the door opens. START command is ignored while the door is open. During auto close, START command closes the door. If you press START after STOP, command the door closes.

### SEMIAUTOMATIC:

START command controls opening, closing and stoping the door. When the door is open you must press START to close the door .Auto close is disabled. If the door is opening and you press START the door stops and you must give a second START command to close the door. If START is pressed during closing function, the door starts to open. If you press START after a STOP command the door closes.

### STEP BY STEP:

When the door is closed and you press START, the door opens. During opening if START is pressed, the door stops. if you then press START the door closes and by pressing START again the door stops. if you press START after a STOP command, the door closes.

*Choose operation mode with micro Switches 1,2,3 and 6, according to the following board "CHOOSE OPERATION MODE" (after each change of operation mode you must short circuit jumper JR1 for a few seconds to apply change).*

## CHOOSE OPERATION MODE

### **Dip 1   Dip 2   Dip 3   Dip 6   OPERATION**

OFF	OFF	OFF	OFF	Condominium automatic
OFF	OFF	ON	OFF	Condominium automatic + comfort (1)
OFF	ON	OFF	OFF	Superautomatic
OFF	ON	ON	OFF	Superautomatic + comfort (1)
ON	ON	OFF	OFF	Automatic
ON	ON	ON	OFF	Automatic + comfort (1)
ON	OFF	OFF	OFF	Semiautomatic
ON	OFF	ON	OFF	Step by Step
OFF	OFF	OFF	ON	Condominium automatic + photocell retrigger (2)
OFF	ON	OFF	ON	Superautomatic + photocell retrigger (2)
ON	ON	OFF	ON	Automatic + photocell retrigger (2)

(1) Comfort operation allows the door to close 5 seconds after the photocells command, independent of the AUTO CLOSE programmed time.

(2) Photocell retrigger resets AUTO CLOSE time after any command from Photocells.

## SETTINGS

Through micro(DIP) switches 4,5,7 and 8 the following settings may be applied.

Dip switch	OPERATION	ON	OFF
4	Preflashing	Enabled	Disabled
5	Revert movement	Enabled	Disabled
7	Lighting operation	LIGHT	BEACON
8	Max torch at closing ending	Enabled	Disabled

### Remote control programmin for pedestrian

When the door is closed press PROG.B until TEST LED starts blinking. Do not relase TEST LED starts blinking faster. Realease PROG.B. Within 10 seconds, press the button of the remote control you want to program.

When the procedure is completed TEST LED and the FLASHING LIGHT must turn ON ant then OFF simultaneously. For rolling coded remote controls repeat procedure for each control. For Fixed coded remote controls just copy the remote controls.

### Erase all remote controls

When the door is closed press PROG.B and hold it until TEST LED starts blinking. Do not relase TEST LED until it starts blinking faster. TEST LED. When all remote controls are erased from memory TEST LED and the FLASHING LIGHT must turn ON ant then OFF simultaneously.

## ADJUSTABLE TRIMMER

TR1 adjusts auto close time (the time the door remains open before closes automatically),with range from 1 to 120 seconds.

TR2 adjusts motor torch. For motors with clutch or hydraulic oil pressure you must set TR2 to maximum (that is one full turn to the right).

TR3 adjusts door speed at slow motion mode, which can be set according to safety parameters. By setting TR3 to maximum (that is one full turn to the right) slow speed is disabled. (see. Operation time programming without slow speed).

Trimmer	Operation	Range	Special Functions
TR1	Auto Close	1 – 120 seconds	-
TR2	Motor Torch	20 – 100 %	100 % (Hydraulic or clutched motors)
TR3	Slow Speed	10 – 100 %	100 % = Slow Speed Disabled

## MAINTENANCE

There are two 5 20 fuses for the 230Vac line and the low voltage that is supplied from the transformers secondary coil. The fuses have the following values

F1 Line Fuse 230Vac = 6,3 Slow burning

F2 Low Voltage Fuse = 1,25 A Slow burning

*Prior to replacing the fuses the 230Vac power supply must be turned off from the main electrical supply. The value of the fuses must not be altered.*

*There is no other element on the control board that can be repaired or replaced from installation personnel. For any other issue contact technical support.*

## REMOTE CONTROL PROGRAMMING

AR812 control board has a built in receiver that can store up to 128 Rolling coded remote controls or one fixed coded remote control.

### Remote control programming for total door open

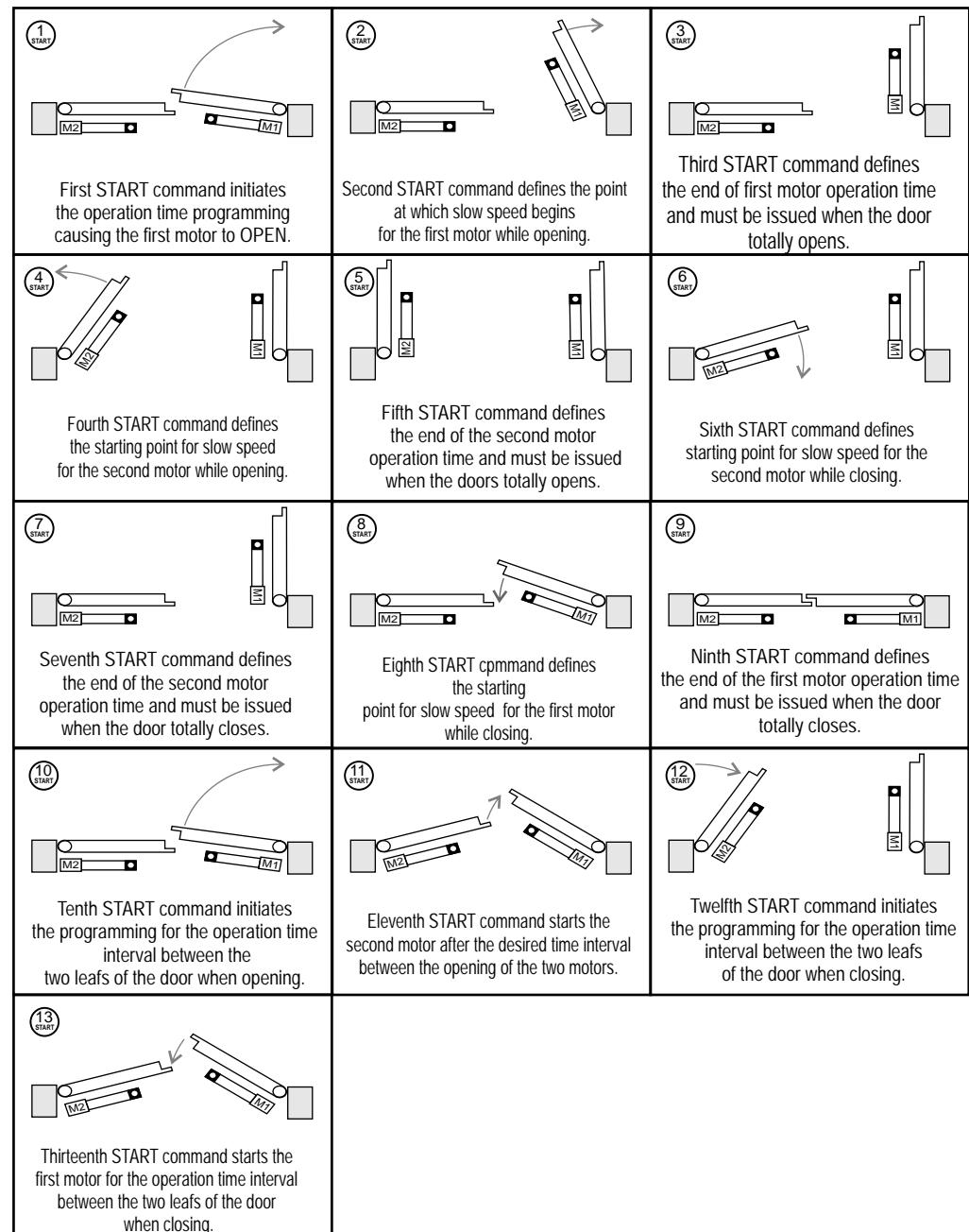
If the door is closed, press PROG.B and hold it until TEST LED starts blinking. Release PROG.B and within 10 seconds, press the remote control you want to program. When the procedure is completed TEST LED and the FLASHING LIGHT must turn ON ant then OFF simultaneously. For rolling coded remote controls repeat procedure for each control. For Fixed coded remote controls just copy the remote controls.

## OPERATION TIME PROGRAMMING FOR TWO LEAFED SWINGING GATE WITH SLOW SPEED

- Set trimmer TORQUE at minimum needed to move the door leaf correctly and adjust trimmer SLK-F for slow speed at minimum needed to move the door leafs correctly.
- Totally close the door.
- Press PROG.A for at least 3 seconds.
- TEST LED starts blinking.
- Release PROG.A
- Press START: The first leaf starts moving at normal speed.
- When you want to start slow speed press START: Slow speed mode has began.
- When first leaf is totally open press START: The second leaf starts opening at normal speed.
- When you want to start slow speed for the second leaf press START: Slow speed has began.
- When the second leaf is totally open press START: The second leaf starts closing at normal speed.
- When you want to start slow speed for the second leaf press START: Slow speed has began.
- When the second leaf is totally closed press START: The first leaf starts closing at normal speed.
- When you want to start slow speed for the first leaf press START: Slow speed has began.
- When the first leaf is totally closed press START.
- Press START: the first leaf starts opening and when you decide that the time interval between the opening of the two leafes is enough press START again: The second leaf starts opening.
- Press START: The second leaf starts closing and when you decide that the time interval between the closing of the two leafes is enough press START again: The first leaf starts closing.
- Wait until the TEST LED turns off.
- The operation time programming is complete.
- The next time the door will open will be according to the settings just completed.

### ATTENTION:

After RESET or power supply failure, at the first closing of the door the operation time will be greater (approximately 12 seconds)

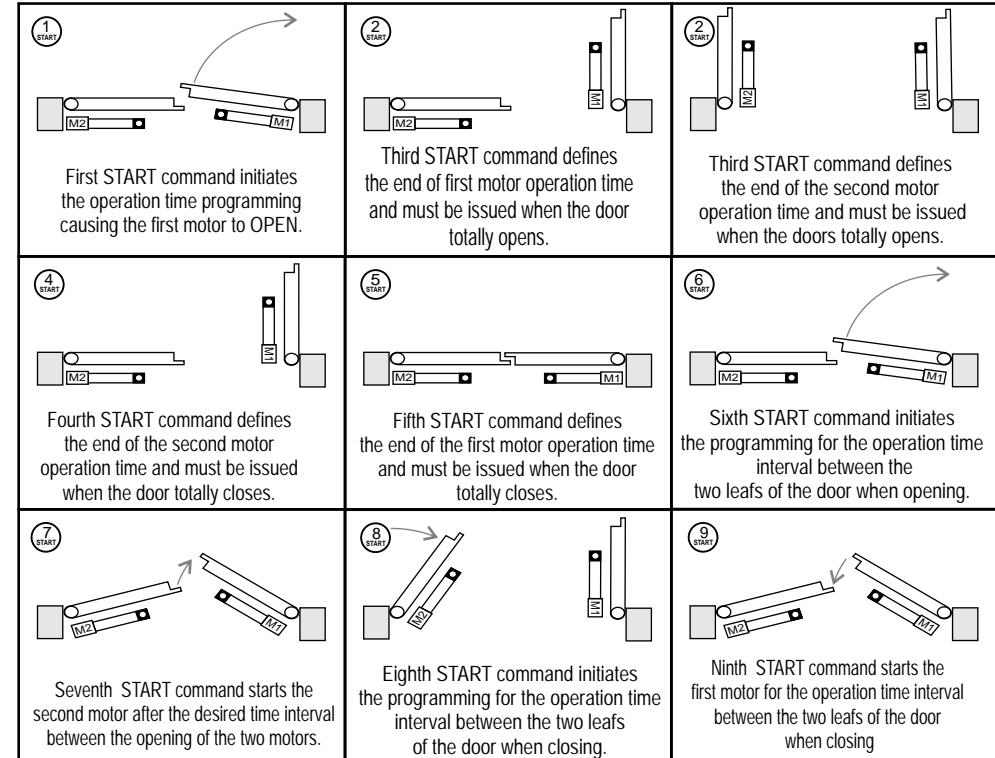


## OPERATION TIME PROGRAMMING FOR TWO LEAFED SWINGING GATE WITHOUT SLOW SPEED

- Set trimmer TORQUE at minimum needed to move the door leaf correctly and adjust trimmer SLK-F for slow speed at maximum needed to move the door leafs correctly.
- Totally close the door.
- Press PROG.A for at least 3 seconds.
- TEST LED starts blinking.
- Release PROG.A
- Press START: The first leaf starts moving at normal speed.
- When first leaf is totally open press START: The second leaf starts opening at normal speed.
- When the second leaf is totally open press START: The second leaf starts closing at normal speed.
- When the second leaf is totally closed press START: The first leaf starts closing at normal speed.
- Press START: the first leaf starts opening and when you decide that the time interval between the opening of the two leafes is enough press START again: The second leaf starts opening.
- Press START: The second leaf starts closing and when you decide that the time interval between the closing of the two leafes is enough press START again: The first leaf starts closing.
- Wait until the TEST LED turns off.
- The operation time programming is complete.
- The next time the door will open will be according to the settings just completed.

### ATTENTION:

After RESET or power supply failure, at the first closing of the door the operation time will be greater (approximately 12 seconds)

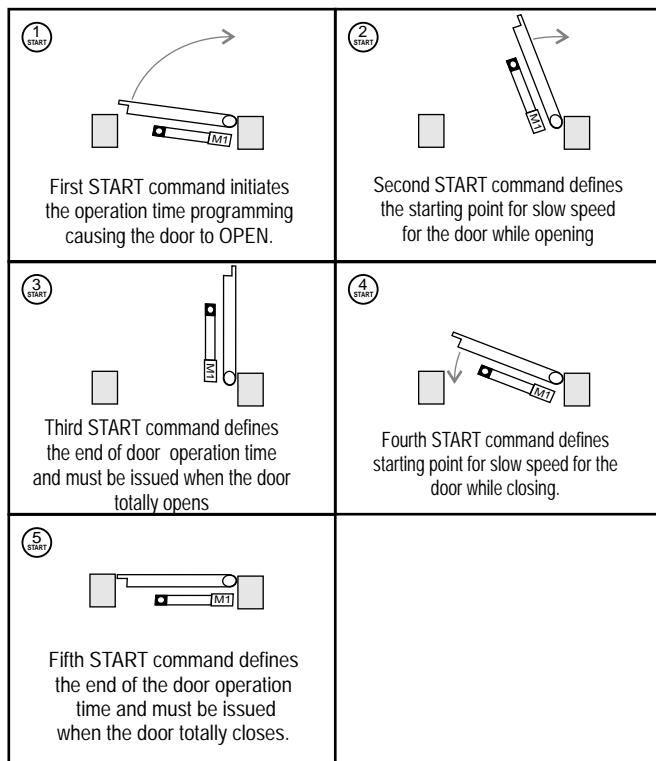


## OPERATION TIME PROGRAMMING FOR SINGLE LEAFED SWINGING GATE WITH SLOW SPEED

- Set trimmer TORQUE at minimum needed to move the door leaf correctly and adjust trimmer SLK-F for slow speed at minimum needed to move the door correctly .
- Totally close the door.
- Press PROG.A until TEST LED starts blinking and do not release PROG.A until TEST LED starts blinking faster.
- Release PROG.A
- Press START: The door starts moving at normal speed.
- When you want to start slow speed press START: Slow speed mode has began.
- When the door is totally open press START: The door closing at normal speed.
- When you want to start slow speed for the door press START: Slow speed has began.
- When the door is totally closed press START.
- Wait until the TEST LED turns off.
- The operation time programming is complete.
- The next time the door will open will be according to the settings just completed.

### ATTENTION:

After RESET or power supply failure, at the first closing of the door the operation time will be greater (approximately 12 seconds)



## OPERATION TIME PROGRAMMING FOR SINGLE LEAFED SWINGING GATE WITHOUT SLOW SPEED

- Set trimmer TORQUE at minimum needed to move the door leaf correctly and adjust trimmer SLK-F for slow speed at maximum needed to move the door correctly .
- Totally close the door.
- Press PROG.A until TEST LED starts blinking and do not release PROG.A until TEST LED starts blinking faster.
- Release PROG.A
- Press START: The door starts moving at normal speed.
- When the door is totally open press START: The door closing at normal speed..
- When the door is totally closed press START.
- Wait until the TEST LED turns off.
- The operation time programming is complete.
- The next time the door will open will be according to the settings just completed.

### ATTENTION:

After RESET or power supply failure, at the first closing of the door the operation time will be greater (approximately 12 seconds)

