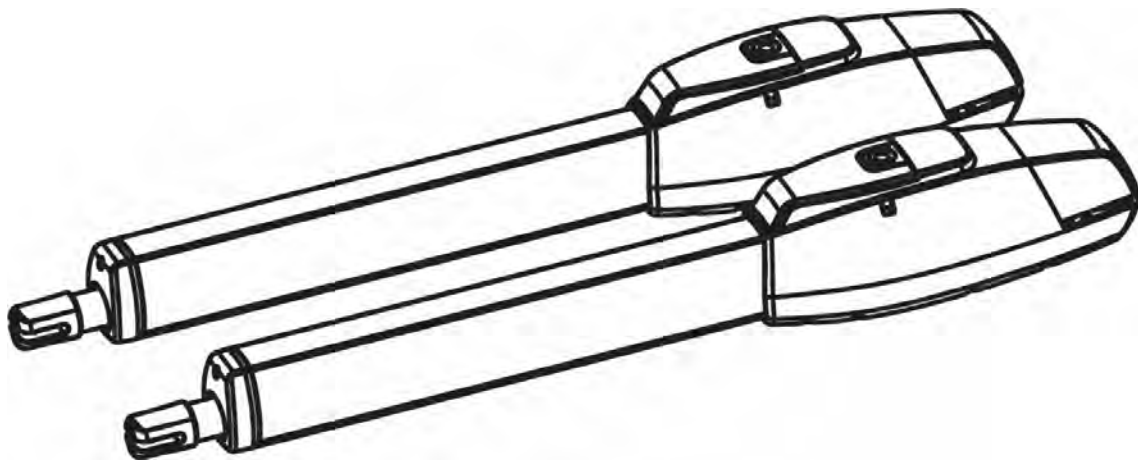


**ELSEMA**   
**INTELLIGENT**   
**SWING**®

**iS400 / iS400D / iS400Solar**  
**SWING GATE OPENER with LIMIT SWITCH**  
**USER MANUAL**



Reuse  
Reduce  
Recycle



# INDEX

1.1	GENERAL SAFETY PRECAUTION .....	P.1
1.2	INSTALLATION	
	A. STANDARD INSTALLATION .....	P.2
	B. INSTALLATION CHECK .....	P.3
	C. REAR BRACKET INSTALLATION .....	P.4
	D. FRONT BRACKET INSTALLATION .....	P.4
	E. MOTOR FIXING .....	P.5
	F. WIRE CONNECTION .....	P.5
	G. LIMIT SWITCH ADJUSTMENT.....	P.6
	H. EMERGENCY RELEASE.....	P.7
1.3	TECHNICAL FEATURES	
	A. TECHNICAL FEATURES .....	P.8
	B. DIMENSION .....	P.8
1.4	MAINTENANCE .....	P.9

## 1.1 GENERAL PRECAUTION

### **WARNING:**

**This user manual is only for qualified technicians who are specialized in installations and automations.**

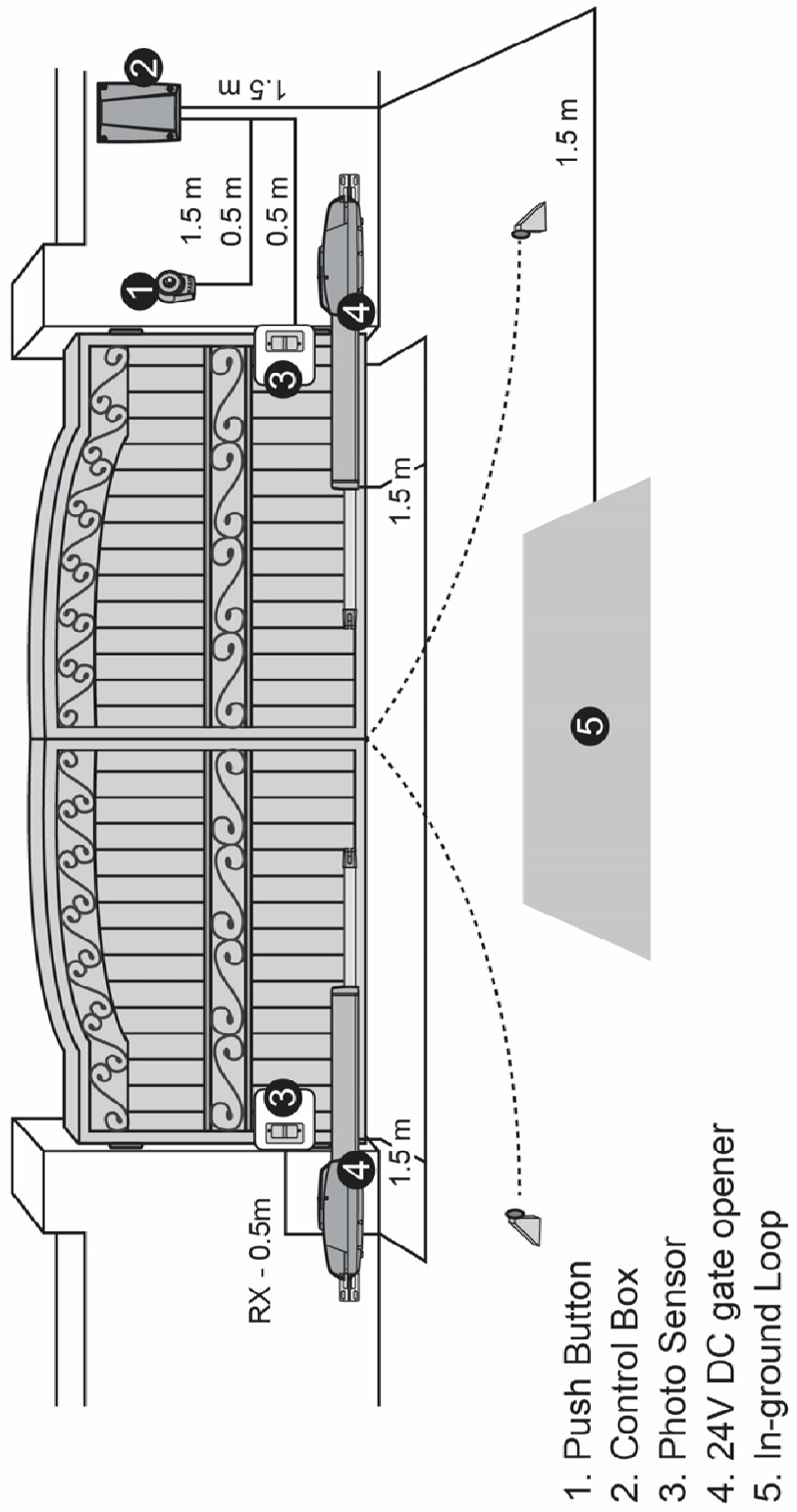
- 1) All installations, electrical connections, adjustments and testing must be performed only after reading and understanding of all instructions carefully.
- 2) Before carrying out any installation or maintenance operation, disconnect the electrical power supply by turning off the mains switch connected upstream and apply the hazard area notice required by applicable regulations.
- 3) Make sure the existing structure is up to standard in terms of strength and stability.
- 4) When necessary, connect the motorized gate to reliable earth system during electricity connection phase.
- 5) Installation requires qualified personnel with mechanical and electrical skills.
- 6) Keep the automatic controls (remote, push buttons, key selectors. Etc) placed properly and way from children.
- 7) For replace or repair of motorized system, only original parts must be used. Any damage caused by inadequate parts and methods will be not claimed to motor manufacturer.
- 8) Never operate the drive if you suspect that it might be faulty or will cause damage to the system.
  - 9) The motors are exclusively designed for gate opening and closing application, any other usage is deemed inappropriate. The manufacturer will not be liable for any damage resulting from the improper use. Improper usage should void all warranty, and the user accepts sole responsibility for any risks thereby may accrue.
- 10) The system may be operated in proper working order. Always follow the standard procedures by following the instructions in this installation and operating manual.
- 11) Only operate the remote when you have the full view of the gate.

**ELSEMA PTY LTD shall not be liable for any injury, damage, or any claim to any person or property which may result from improper use or installation of this system.**

Please keep this installation manual for future reference.

## 1.2 STANDARD INSTALLATION

### A. STANDARD INSTALLATION



## B. CHECKS BEFORE INSTALLATION

Before proceeding with the installation check the following:

- 1) Check that the motor mounting position on the gate pillar can be done with the measurements in Figure 1 and Graph 1
- 2) Be sure that gate moves freely
- 3) There are no obstacles in the moving gate area
- 4) Hinges are properly positioned and greased
- 5) There should be no friction between the gate leaf's
- 6) There should be no friction with the ground while moving the gates
- 7) Check that the gate structure is suitable to install automatic gate motors
- 8) "C" value is 140mm
- 9) "D" can be measured from the gate easily
- 10) "A" = "C" + "D"
- 11) The value of "B" can be calculated from the value of "A" and the leaves opening angle

\*\*Please make sure "B" and "A" are similar or the same in value that the leaf's can be operated smoothly, also to reduce the burden of the motor.

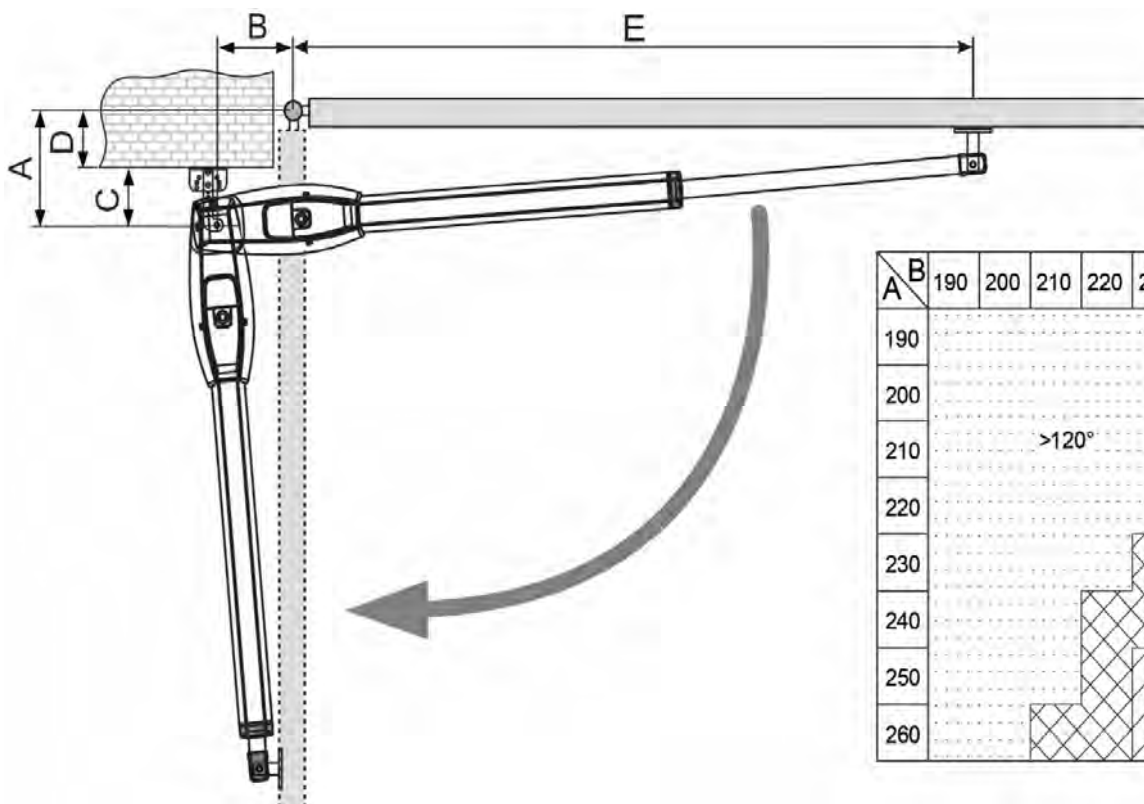


Fig 1

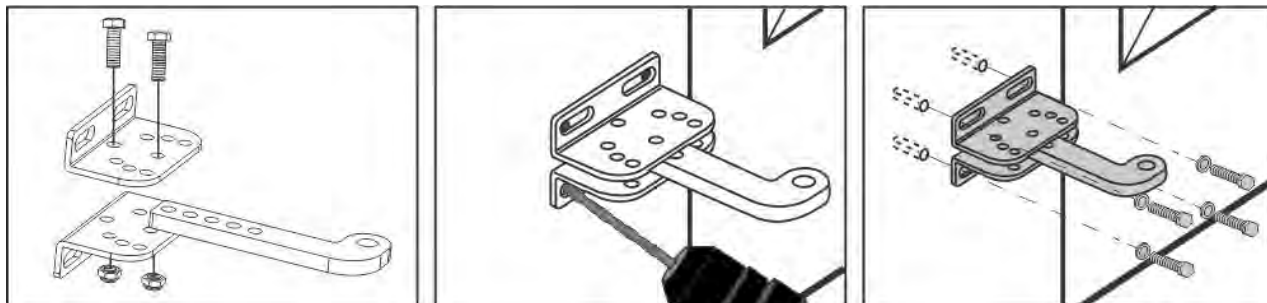
Graph 1

## C. INSTALLATION OF REAR BRACKET

**Step 1:** Before securing the rear bracket to the pillar check the front bracket can be welded to a solid point on the gate leaf.

- Fully close the gate.
- Connect the rear and front brackets to the motor.
- Hold the rear bracket onto the pillar with the calculated **A** and **B** values.
- Move the motor in a vertical direction until the fixing zone is in a solid area of the gate leaf for the front bracket.

**Step 2:** Then fix the rear bracket to the pillar.



4 x Mounting screws are not included

## D. INSTALLATION OF FRONT BRACKET

For proper operation, the front bracket should be fixed so the motor has the correct angle. Use Table 1 to calculate the location of the front bracket.

**Table 1**

B (mm)	E (mm)
190	1330
200	1320
210	1310
220	1300
230	1290
240	1280
250	1270
260	1260
270	1250

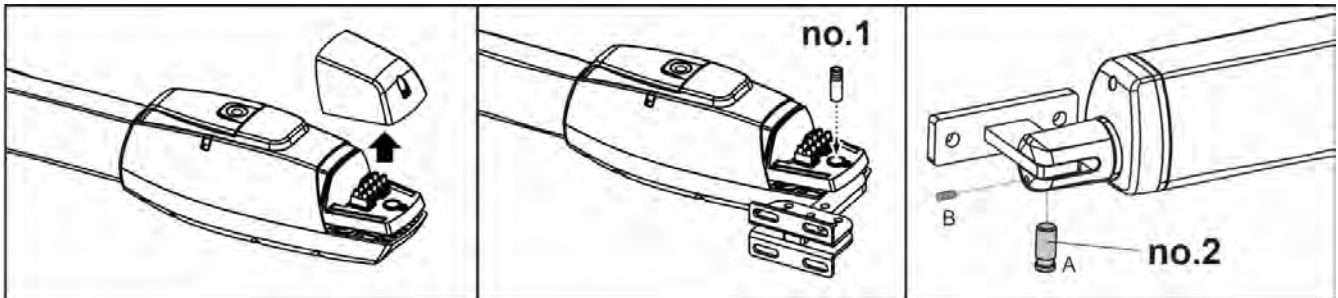
## E. MOTOR FIXING

While the motor is disengaged, remove the wire cover and fix the rear bracket with the pin. The pin will slot into the hole with the threaded side up as shown in no.1. No screw is required to hold the pin in place. Attach the front bracket to the drive unit with the pin (A) and the set screw (B) provided as shown in no.2

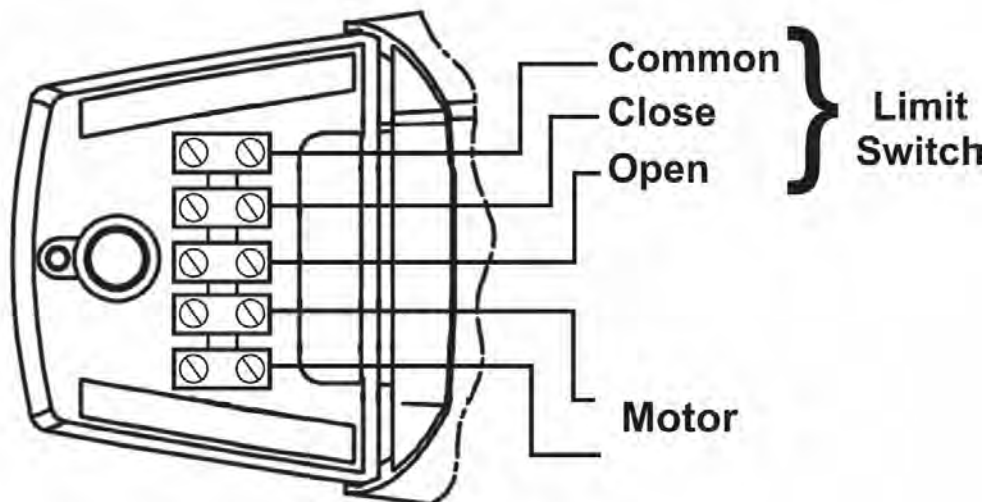
Make sure the motor is mounted in a horizontal position, especially in these positions:

- 1) Gate in "CLOSE" position
- 2) Gate in "OPEN" position
- 3) Gate at "45° angle" position

Prior to welding the bracket on the gate leaf (if necessary), cover the gate opener to prevent damages from sparks.



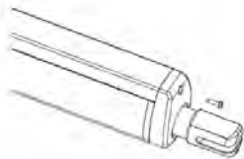
## F. WIRE CONNECTION



Avoid tension in the cable during opening and closing cycles  
Limit switches are **Normally Closed Type**.

## G. LIMIT SWITCH ADJUSTMENT

1. Remove the screw on the anti-shaking ring



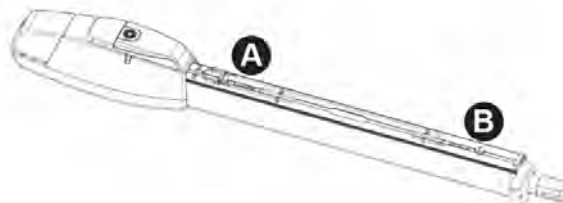
2. Turn the anti-shaking ring



3. Remove the upper-cover of the outer tube and reveal two Knobs of the front and rear limit switch



4. Adjust two Knobs to set the open and close position

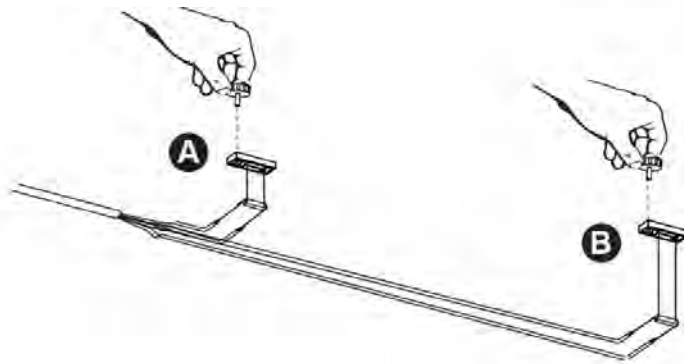


### Opening position:

1. Loosen the screw of limit switch A by hands.
2. Slide the switch to the right position.
3. Tighten up the screw.

### Closing position:

1. Loosen the screw of limit switch B by hands.
2. Slide the switch to the right position.
3. Tighten up the screw.



After installation of the motor and the bracket, navigate to the “Tools” option on the control card and to “Test Inputs”. Manually move the gate to fully open and closed position and make sure the Limit switch input is activated. Move the Limit switch if needed. The gate will stop in the position at which the control card detects the limit switch activation. Input name will change to “UPPER CASE” when it is activated.



## H. EMERGENCY RELEASE

In case of power failure, slide the lid of the manual release chamber forward. Insert the key and turn clockwise to unlock, and then turn around the knob to release.

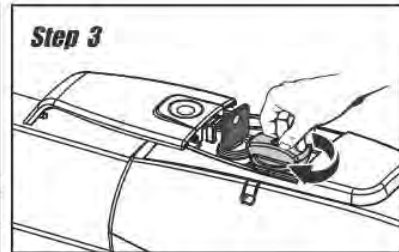
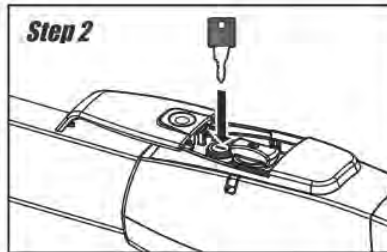
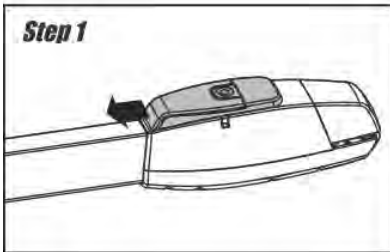
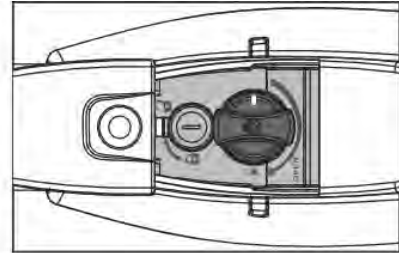
**Step1. Slide the lid of the release chamber forward**

**Step2. Insert the key and turn clockwise into the unlock position**

**Step3. Then turn the knob clockwise to release the motor.**

Make sure the white bar on the knob is on the position opposite to the triangle indicator.

To restore the automation, simply reverse the above procedure.



## I. ELECTRICAL CONNECTION

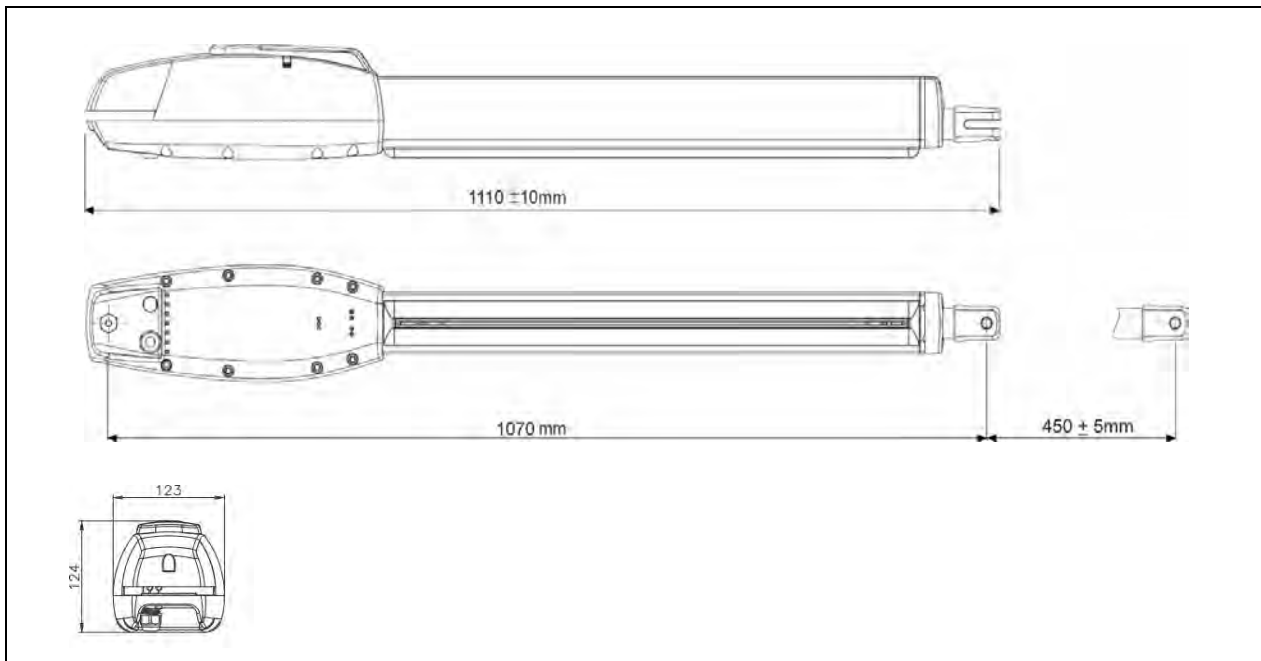
After successful motor installation, refer to the user manual of the control card for automatic operation setup.

### 1.3 TECHNICAL FEATURES:

#### A. Technical Features:

Motor Voltage	24Volts DC motor
Gear Type	Worm gear
Max Absorbed Power	144 Watts
Peak Thrust	4500N
Nominal Thrust	4000N
Stroke Length (CD)	450mm
Power Supply	240 Volts AC
Nominal Input Current	2 Amps
Maximum Operating Current	5.5 Amps for maximum 10 sec
Maximum Gate Weight	450 kg per leaf
Maximum Gate Length	4.5 metres
Duty Cycle	20%
Operating Temperature	-20°c ~ +50°c
Dimension	1110mm x 123mm x 124mm

#### B Dimension:



## 1.4 MAINTENANCE:

Maintenance should be performed at least every six months. If it is used in high traffic area, a more regular maintenance should be performed.

### Disconnect the power supply:

- (1) Clean and lubricate the screws, the pins and the hinge with grease.
- (2) Check the fastening points are properly tightened.
- (3) Check and make sure that the wire connections are in good condition.

### Connect the power supply:

- (1) Check the power adjustments.
- (2) Check the function of the manual release
- (3) Check the photocells or other safety device.

## Service History

Date	Maintenance	Installer

- **Solar kits**
- **Solar panels**
- **Backup batteries**
- **Photo electric beams**
- **Magnetic locks**
- **Wireless keypads**
- **Pre formed loop**



Visit [www.elsema.com](http://www.elsema.com) to see our full range  
of Gate and Door Automation products