

iS250 / iS250D / iS250Solar SWING GATE OPENER

USER MANUAL



INDEX

1.1	GENERAL SAFETY PRECAUTIONP.1
1.2	INSTALLATION
	A. STANDARD INSTALLATIONP.2
	B. INSTALLATION CHECKP.3
	C. REAR BRACKET INSTALLATIONP.4
	D. FRONT BRACKET INSTALLATIONP.5
	E. CHECK BRACKETP.5
	F. MOTOR FIXINGP.6
	G. EMERGENCY RELEASEP.7
	H. MECHANICAL STOPPER ADJUSTMENTP.7
1.3	TECHNICAL FEATURES
	A. TECHNICAL FEATURESP.8
	B. DIMENSIONP.8
1.4	MAINTENANCEP.8

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.
- 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 deem 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) The maximum gate leaf weight should not exceed the maximum leaf length rating shown in Graph 1.
- 2) Check that the motor mounting position on the gate pillar can be done with the measurements in Figure 1 and Graph 2.
- 3) Be sure that gate moves freely.
- 4) There are no obstacles in the moving gate area.
- 5) Hinges are properly positioned and greased.
- 6) There should be no friction between the two gate leafs.
- 7) There should be no friction with the ground while moving the gates.
- 8) Check that the gate structure is suitable to install automatic gate motors.



Graph 1

C. INSTALLATION OF REAR BRACKET

Step 1 : Calculate the position of the rear bracket by using the details in Figure 1 and Graph 2. This Figure and Graph establishes dimensions **A**, **B** and the **maximum opening angle**. If your gate is opening 90° you can also use values for greater than 90° from Graph 2. **Please note that the fully closed position of the gate should be where the operator is fully extended minus 10mm.**

Step 2 : Before securing the rear bracket to the pillar check the front bracket can be welded to a solid point on the gate leaf. Do not fix the front bracket yet.

- 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 3 : Then fix the rear bracket to the pillar.





Left Side

Right Side

• Make sure the rear brackets straight edge is facing each other when mounted.



Rear Brackets Facing each other

• If the 2 gate leafs have different speeds, check the **A** and **B** dimensions. They should be same for both the gate leafs. **A** and **B** for gate 1 should be the same as **A** and **B** for gate 2



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. Also note that the front bracket is **50mm lower** than the rear bracket.

A (mm)	E (mm)		
120	760		
130	750		
140	740		
150	730		
160	720		
170	710		
180	700		
190	690		
200	680		

Table 1

E. CHECK BRACKET

Secure the motor to the rear bracket firmly as detailed in the Motor Fixing section.

Follow the instructions in the Emergency Release section to disengage the motor from the mechanics.

INSTALLATION RULES

- 1. To prevent the operator from over running its maximum and minimum operating limits the operating stroke, **Cu** (Cu= A + B) should always be shorter than the available stroke **CD** which is 545 mm.
- 2. To achieve 90° opening of a gate leaf **A** + **B** = **Cu**
- 3. To achieve more than 90° opening of a gate leaf **A** + **B** < **Cu**
- 4. The smaller the values for **A** and **B** the faster the gates will travel.
- 5. Limit the difference between **A** and **B** to less than 40 mm. Higher difference will vary the gate opening and closing speed.

 ${\bf B}$ must always be greater than ${\bf F}$ when the gate leaf is in the closed position

F. MOTOR FIXING

1. Attached the front bracket to the operator only.

2. Fully close the gate and move the motor piston to the maximum extended position.

3. Then move the front bracket (attached to the motor piston) back by 10mm. Mark the position of the bracket on the gate.

4. Move the gate and the motor piston into the fully open position. The bracket should correspond to the same marking on the gate. If it does not please recalculate A and B dimensions.

You should now be able to move the gate manually. Slowly fully open and close the gate manually. If the gate fully opens and closes the installation of the brackets was done correctly.

Make sure the iS250 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.



G. EMERGENCY RELEASE

In case of power failure, the unlocking KEY can be used to unlock the operator and the gate can be moved manually. Turning the key by 90° will unlock the operator.



H. OPEN MECHANICAL STOPPER

The mechanical stopper is adjusted from underneath the motor. Release the screw on the mechanical stopper and move it to the fully open and closed position of the gate.

* The position of the front and rear mechanical stopper indicates the fully Open/Close positions of the gate.

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	50 Watts
Peak Thrust	3000N
Nominal Thrust	3000N
Stroke Length (CD)	545mm
Power Supply	240 Volts AC
Nominal Input Current	3 Amps
Maximum Operating Current	5.5 Amps for maximum 10 sec
Maximum Gate Weight	300 kg per leaf
Maximum Gate Length	2.5 metres
Duty Cycle	20%
Operating Temperature	-20°c ~ +50°c
Dimension	1010mm x 88mm x 88mm
Weight	6.5 kg



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



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