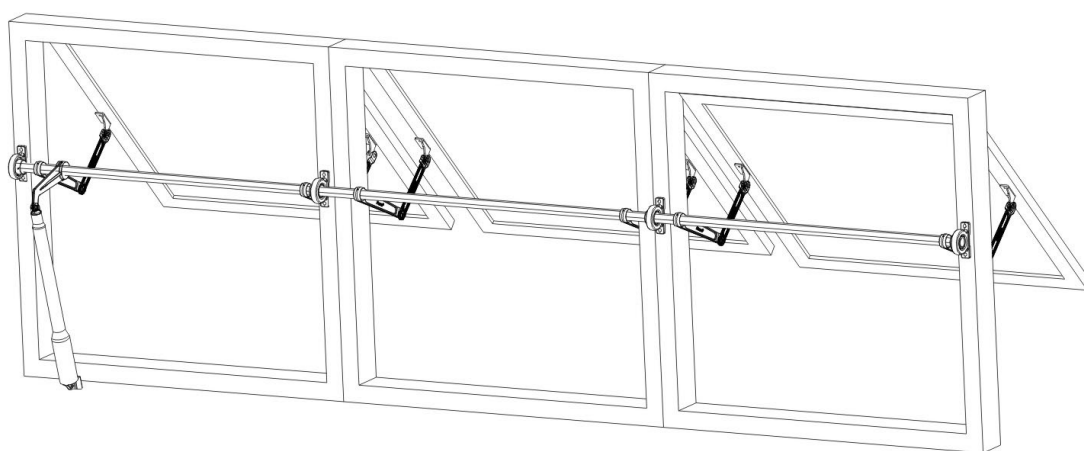


Installation Guide

Version 1.01

TC

Automatic Window Actuator



LOHAS A HOUSE

TC

General Safety Regulations

Please read and understand the following instructions. Incorrect installation or incorrect use of the product could cause serious harm to people and the product itself.

1. All installation, adjustment, repair and service work must be carried out by a suitably qualified person.
2. The installer should explain and demonstrate the method of operation and manual operation of the product in case of emergency to the owner.
3. Do not allow children or any unauthorized person to be around during the installation.
4. Do not in any way modify the components of the product.
5. Before installation, make sure that the mains power supply meets the requirement of the automated system with well-constructed earthing system.
6. Before attempting any work on the system, cut off the power supply to the operator.
7. Regular check up is recommended to ensure the system works in good condition.
8. AHOUSE does not accept any liability caused by improper use of the product, safety problem caused by using spare parts that are not produced by our factory or for use other than that for which the automated system was intended.
9. As there are limited installation dimension examples in this manual, other installation dimensions should be based on actual window size and owner's requirement.
10. The installation manual should be kept in appropriate place for further reference.

Preparation of site

1. Make sure the window is vertically on level.
2. The window can be pushed easily by hand without using much force, open/ close smoothly and silently.
3. The opening angle of the window is related to the fixing position of the bearing bracket. Thus, please read through "Installation 5" to ensure sufficient opening angle and force needed.

1. Features:

1. DC24V Motor
2. Piston stroke can be manually adjusted
3. Build-in over current safety cut-off feature
4. Suitable for all dimensions of vent window and roof light
5. Build-in control panel, easy installation
6. Can be controlled by wall switch or remote control, control group by one remote control.
7. Various piston stroke to be selected
8. Complete supporting bracket kit, suitable for all window type
9. Operating temperature: -25℃ to +50℃

2. Technical Specification

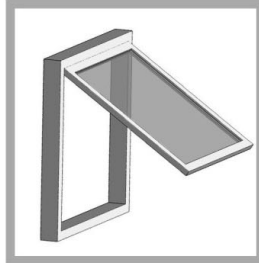
■ Electrical

| | |
|-------------------|-------------------------------|
| Supply Voltage | AC110V~240V |
| Operating Voltage | DC 24V |
| Safety Detection | Over Current Detection |
| Optional Device | Heat Detector/ Smoke Detector |
| Controller | Build-in Controller |
| IP Rating | IP66 |

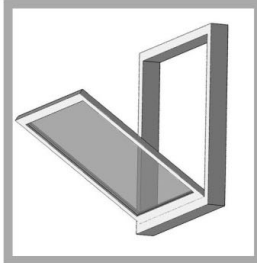
■ Mechanical

| Model | TC3 | TC2 |
|----------------------|----------------------------------|--------|
| Max. Piston Stroke | 300 mm | 200 mm |
| Max. Length of motor | 900 mm | 720 mm |
| Max. Force | 1000 N | 800 N |
| Frame Housing | Stainless Steel / Aluminum Alloy | |
| Driving Method | Screw Driven Piston Type | |
| Opening Degree | 0 to 65 Degree | |
| Stroke Speed | 30mm/s | |
| Temperature | -25℃ to +50℃ | |

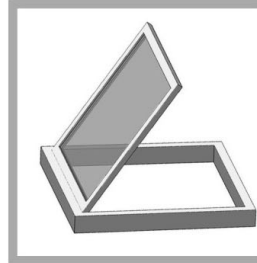
3. Suitable window type



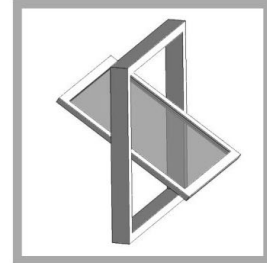
up-suspend window



hopper window

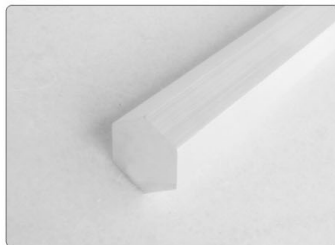


skylight

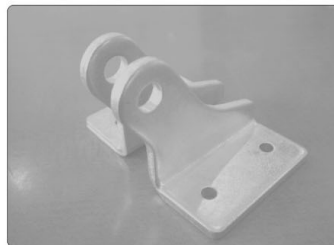


top-hung window

4. Accessories



hexagonal bar



stand bar



bearing housing



driver arm



long connector arm



short connector arm

The number of accessories will depend on the quantity of window
Accessories calculation example (for inner installation)

We have two types of Hexagonal bar :
2.1M/pc, 1.1M/pc

The number of the driver arm will be same as
the number for motor

| | |
|----------------------------|------------------|
| Window width (W) | |
| Window NO (N) | |
| Hexagonal bar length (L) | $L=W+6\text{cm}$ |
| Short connector arm NO (Y) | $Y=N*2$ |
| Long connector arm NO (X) | $X=N*2$ |
| Bearing housing (M) | $M=N+1$ |

※ For example: Window of size
80cm (wide) * 60cm (high) X 3 units require :

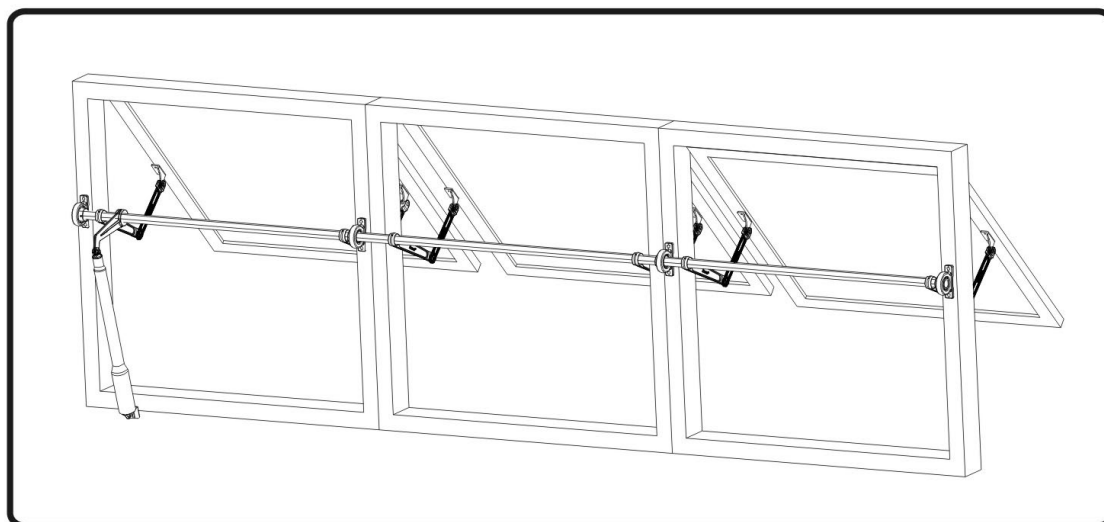
| | |
|----------------------------|-------------------------|
| Window width (W) | W=80cm |
| Window NO (N) | N=3 |
| Driver arm | 1 pc |
| Hexagonal bar length (L) | $L=80*3+6=246\text{cm}$ |
| Short connector arm NO (Y) | $Y=3*2=6\text{ pcs}$ |
| Long connector arm NO (X) | $X=3*2=6\text{ pcs}$ |
| Bearing housing (M) | $M=3+1=4\text{ pcs}$ |

5、 Installation(for up-suspend window)

5. 1 Tools

- | | |
|-----------------------------------|--------------------------|
| ① measuring tape x 1 | ⑦ hand drill x 1 |
| ② scaffolding x 1 | ⑧ impact drill x 1 |
| ③ adjustable wrench x 1 | ⑨ plier x 1 |
| ④ rivet gun(with rivet nails) x 1 | ⑩ No. 5 expansion bolt*1 |
| ⑤ cross screwdriver x 1 | ⑪ ladder x 1 |
| ⑥ flat screwdriver x 1 | ⑫ pencil x 1 |

5. 2 Drawing:



The difference for interior installation and exterior installation:

Interior installation: the bearing housing should be installed on the window frame

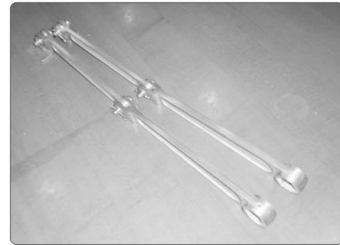
Exterior installation: the bearing housing should be installed on the wall

*According to the actual situation to decide interior or exterior installation

For exterior installation, hexagonal bar length should be : window width+10cm

5. 3 Connect the short and long arms

Connect short arms and long arms together with stand bar



* Please pay attention to the direction of bracket

5. 4 Connect motor and driver arm

Manual release the motor and turn to the minimum stroke

Remove the connecting bolt, then connect the driver arm, lock the bolt



5. 5 Connect hexagonal bar and driver arm , long arm bearing housing

Put the long arm, driver arm and bearing housing through the hexagonal



5. 6 Confirm the fixing position for the accessories and do the marking

1. Open the window to your desired angle and make it hold open by inserting a wooden block/stick in between the window and the fixed frame.
2. Put the pre-installed set of hexagonal bar with connector arms at the window (Figure 1), confirm the fixing position of the bars and do the marking.
3. Close the window(Figure 2), turn the motor to the maximum stroke, confirm the position of the end bracket for the motor and do the marking.
4. Put all the accessories to the marked location, open and close the window for several times to make sure to be installed at right position.



Figure1

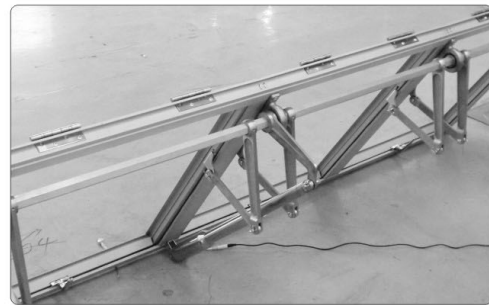


Figure2

*Make sure the window be opened to the desired angle, meanwhile, try to put the hexagonal bar in the middle of the window, make sure the motor is supported with force.

The shorter the distance between the hexagonal bar with the top line of the window frame, the bigger angle the window can be opened, and the motor require bigger force.

5.7 Fixing bearing housing

First pick up two bearing housings from the hexagonal bar, then fix one of the bearing housing (according to the mark made by step 5.6), connect the hexagonal bar(with long arms and driver arm on it) to the fixed bearing housing, then fix the other bearing housing.

* Please make sure two bearing housings are installed at the same level



5. 8 Connect stand bar to the window frame, fix short arms and driver arm

Attach the other end of the short connector arm (with window bracket previously connected) to the window frame .After confirm the position, mark the stand bar holes on the window frame, and drill with hand drill. Fix the bracket onto the frame by using rivet nails.

*Position the stand bar to the window frame as high as possible to ensure biggest opening angle.

Adjust long arms and driver arm to the suitable location, lock them.

*Before tightening the screw lock, make sure the long arms are in vertical level.

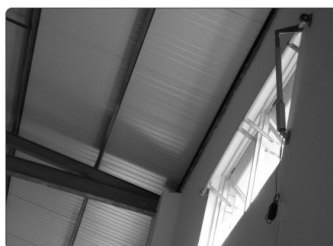


5. 9 Fix the end bracket of the motor

According to the mark made, fix the end bracket of the motor firmly

After finish above, lock all the screws tightly.

Connect the power adapter to the motor, then connect to power supply and start setting the motor.



Control panel setting

1. Remote control setting and washing code

Remote control setting

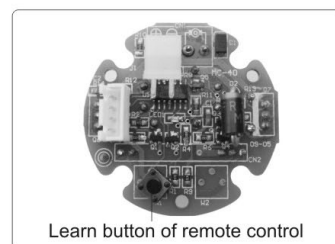
Press the learn button on the control for more than 1 second and release it, then press any button on the remote control for about 2 seconds, remote control setting is done.

(Can set 3 pcs of remote control at most)

Erasing the code of remote control

Use the same remote control to check code for 3 times continuously, then the erasing code is successful.

No other remote control can be valid except this one



2. The setting and adjustment of force for opening and closing the window (□ + □ / □)

Force adjustment for window open when meet obstacle

First keep pressing the "□ Stop" button on the remote control, meanwhile press the "□ Open" button until the motor start to operate. Release both buttons, the motor will operate with low speed till the end and stop, the setting is done.

Force adjustment for window close when meet obstacle

First keep pressing the "□ Stop" button on the remote control, meanwhile press the "□ Close" button until the motor start to operate. Release both buttons, the motor will operate with fast speed till the end and stop, the setting is done.

*The process of the motor starts to operate till the end must be done within 7 seconds, otherwise the setting won't be successful.

Suggestion: Before the setting, the consumer can open or close the window manually to some degree to make sure the window can be open/close to the end within 7 seconds. Make sure the window can finish the setting within 7 seconds when it operate to the end.

The window can open and close with low and fast speed, the low speed is during start and end operation.



3. The setting of the total time of opening and closing the window (Ⓟ + Ⓜ/Ⓜ)

Total timer setting- Open window

First press the "Ⓟ Function" button on the remote control, meanwhile press the "Ⓜ Open" button until the motor start to operate. Release both buttons, the motor will operate with low speed till the end and stop, the setting is done.

Total timer setting- Close window

First press the "Ⓟ Function" button on the remote control, meanwhile press the "Ⓜ Close" button until the motor start to operate. Release both buttons, the motor will operate with fast speed till the end and stop, the setting is done.



*The default setting of total time for both closing and open the window is 1 minute.
The total time setting must be done after the successful setting of the over current setting.
After the total time setting finished, the system will automatically memorize the operating time and allocate the time for slow speed and fast speed operation.

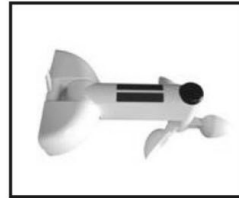
Optional Devices



Heat Detector



Smoke Detector



Rain Detector



Push Button



Window Opener