GOOIL SOLUTION GIS-2011 EC Controller User Manual

May 14, 2025

Order Number : GETEC-C1-24-705 FCC Part 15

Test Report Number : GETEC-E3-24-125

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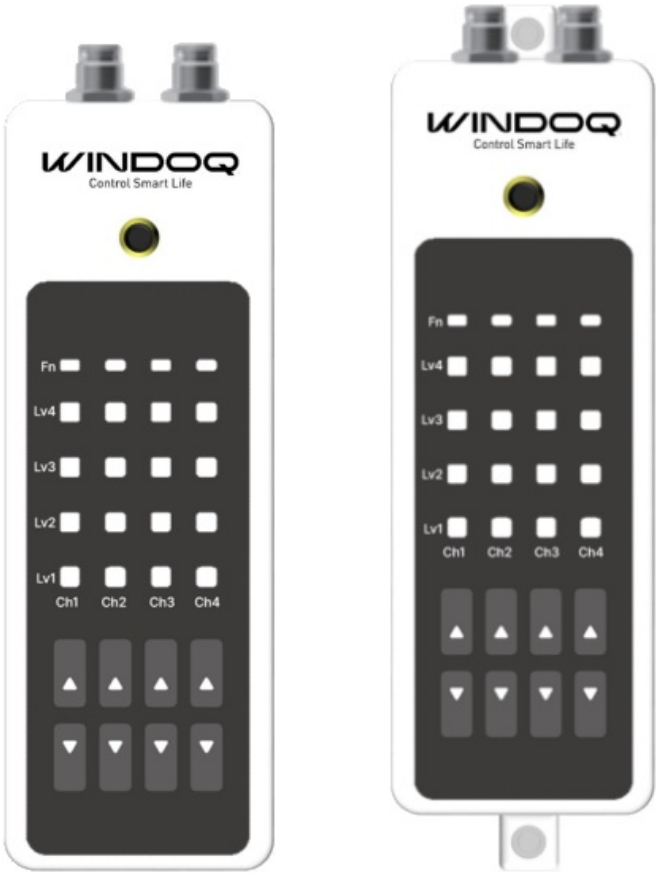
APPENDIX H
: USER'S MANUAL

EUT Type: EC Controller

FCC ID.: 2BHKM-GIS-2011

EC Controller User Manual

GIS-2011 **GIS-2011A**



GOOIL SOLUTION Co., Ltd.

● Product overview

- EC Controller is a simple way to control EC Smart Windows.
- This product can block ultraviolet rays or visible light from entering the interior by adjusting the transmittance of EC glass windows.
- Can adjust the transmittance of EC smart window in four steps, and a total of 4 channels can be controlled
- Can remote control with a dedicated `Web and App’

● Product configuration

● GIS-2011

EC Controller 1EA

● GIS-2011A

EC Controller 1EA

※ Power adapter must be purchased separately.

The product must be used by certified AC adapter according to EN 62368-1 or IEC 62368-1.

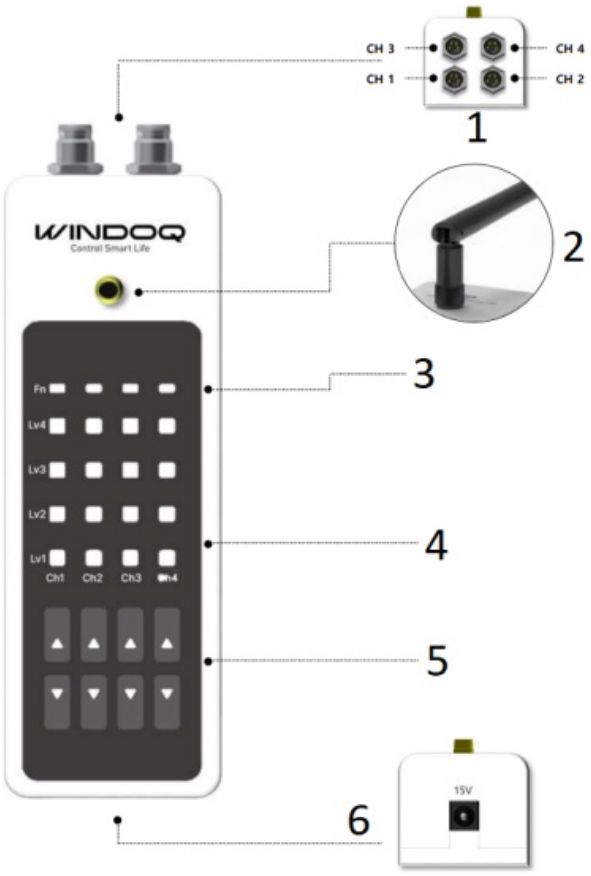
- DC 15V/2A
- Connector dimensions
  – Outer diameter : 5.5mm
  – Inner diameter : 2.1mm

● Before you start

※ Please read the precautions before using.

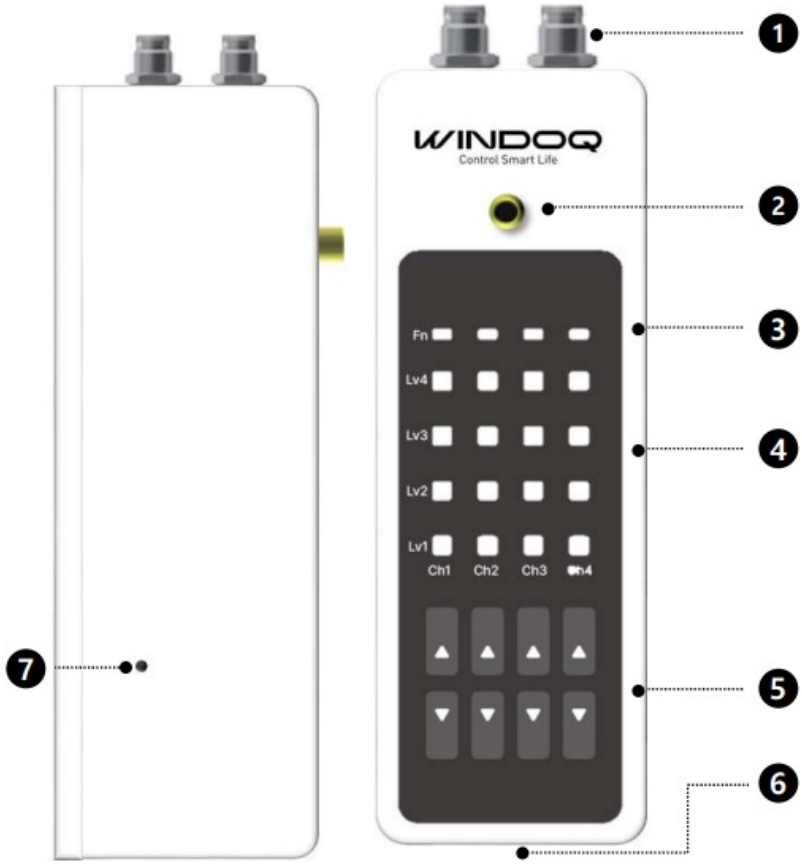
- After using it, be sure to turn off the power and unplug the power adapter.
- Short circuits and electrical short can occur if they are aged after prolonged use..
- Abnormal pressure by bending or twisting the area where the controller and cable are connected can cause short circuits and faults. Please be especially careful.

● **The name and function of each part**



1. **Output Connector**
   It consists of a total of 4 units, and the output voltage ranges from -3.3V to + 3.3V.
2. **Antenna**
3. **Status display (Fn)**
   - Beginning Initial : Blue LED blink
   - Standard Mode : LED Off
   - Initial Mode : Blue LED On
   - Loop Mode : Red LED On
4. **Level display**
5. **Level button**
6. **Input Connector**

● **How to operate and use the product**



(1) This is the terminal that output voltage.
It consists of a total of 4 units, and the output voltage ranges from -3.3V to + 3.3V.

(2) Connector that connects an antenna for wireless communication

(3) Displays the current status.

(4) Displays the current level. In the Power Off state, the LED is not illuminated.
The LED illuminates according to the Level (1~4)

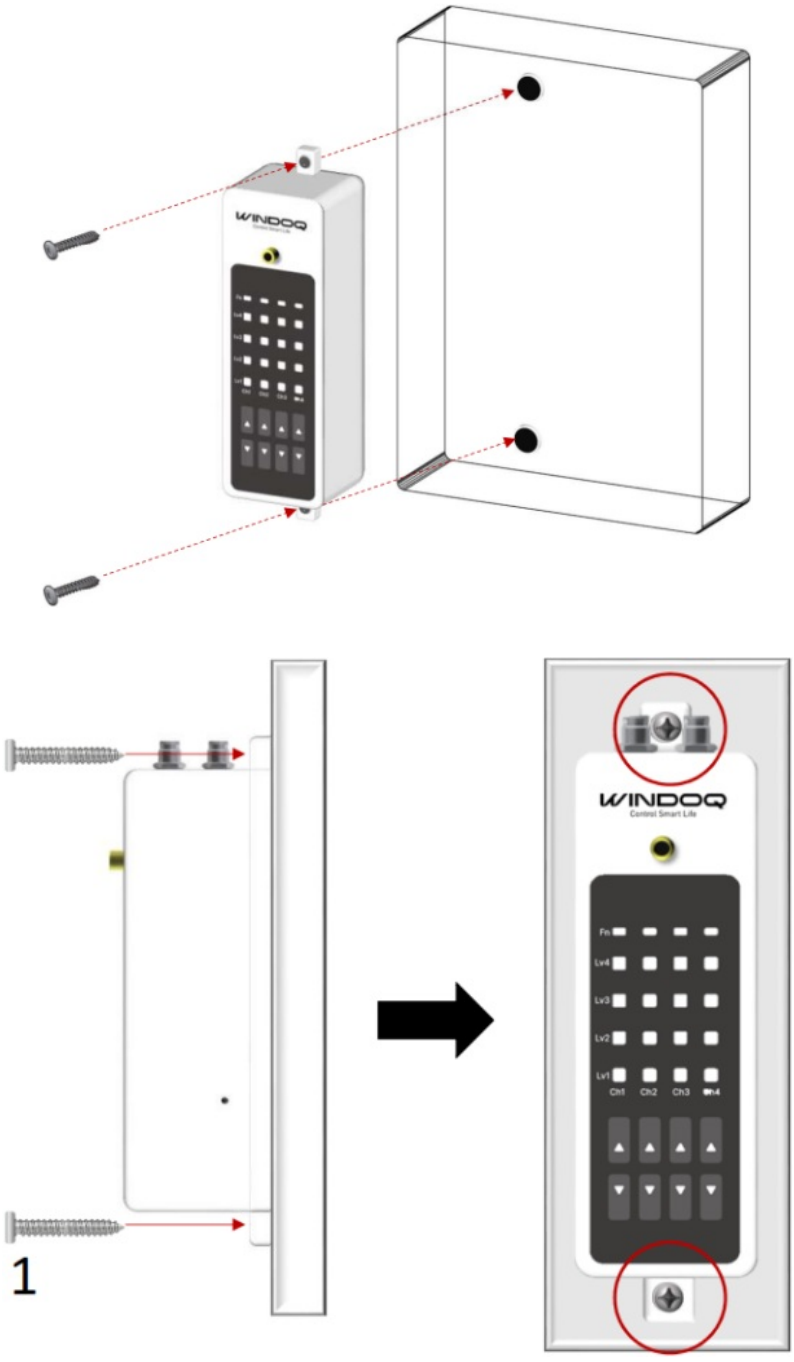
(5) Can adjust the level by pressing the Level button. You can raise the level with the top button ( ) and lower the level with the bottom button ( ).

(6) This is the connector that supplies the input power. Apply power of 15V/2A or higher.

(7) Press and hold the ‘Reset Button’ for more than 5 seconds and then release it to reset

● **Product fixation and fastening : GIS-2011A**

Insert screws into the top and bottom holes of the EC Controller bottom plate and secure it firmly.



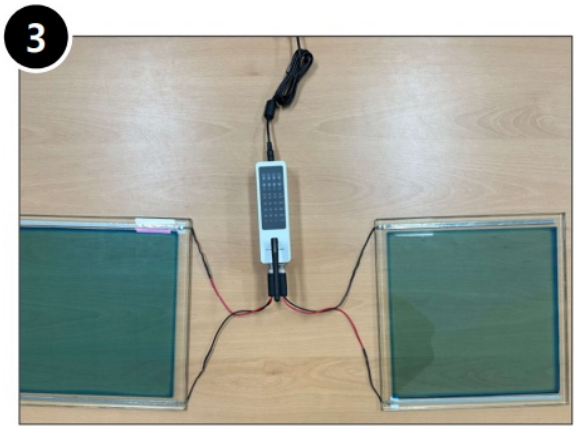
1. ※ Size : M3 x 16mm

- **How to use the product**

EC Controller & Window Setting

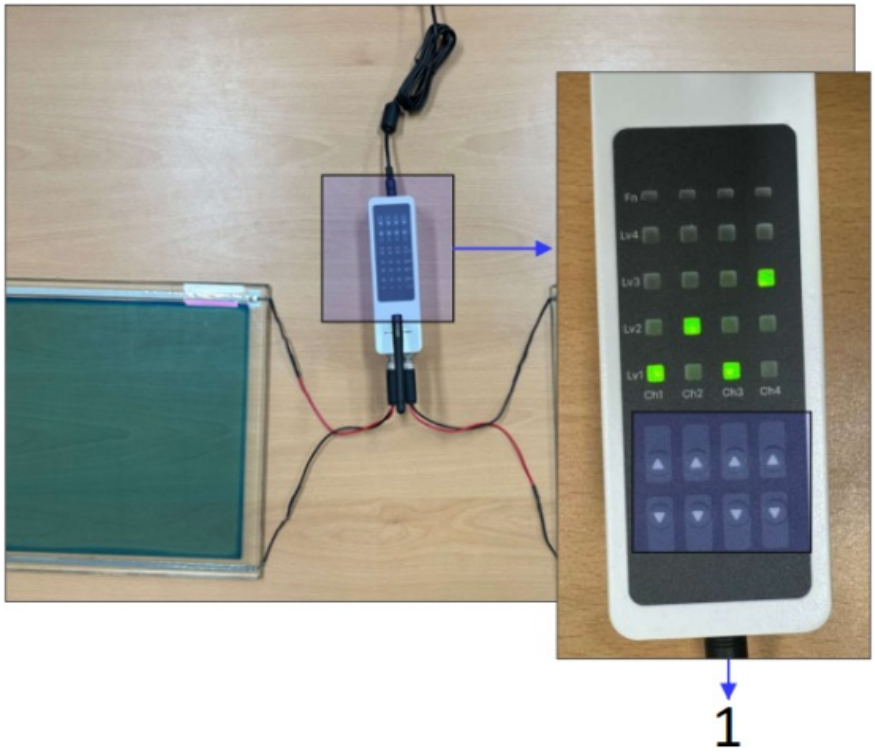
① Connect the power adapter to the controller’s ‘Input connector’

② After connecting the adapter, wait until the ‘Status display’ stops blinking blue.



③ Connect EC Window to the ‘Output connector’ of the controller

Manual Control

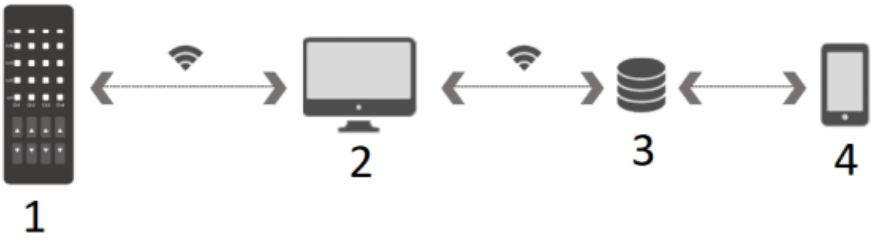


1. **Change the level of the desired window using the ‘level button’**

- As the level increases, the transmittance of the window decreases. (It gets dark)
- A total of 4 channels of windows can be connected per controller.

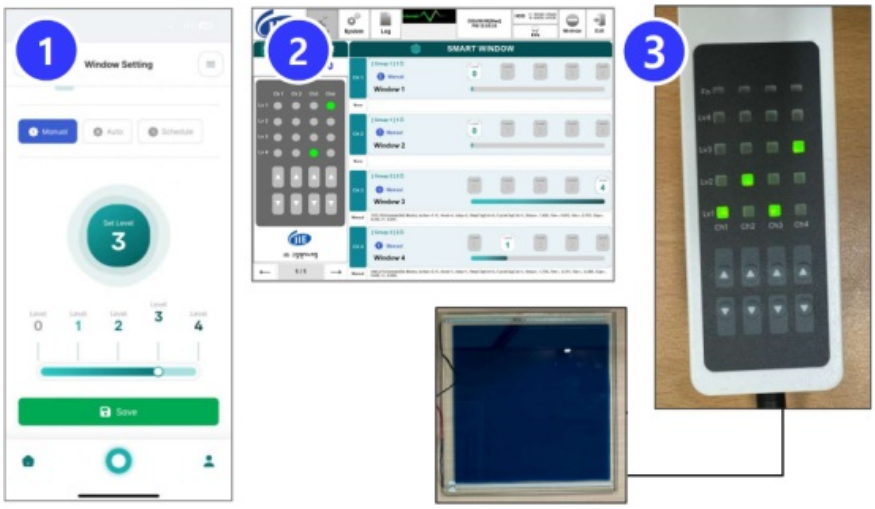
Wireless Control

Diagram – Wifi



1. **EC Controller**
2. **Integrated Control PC**

3. **Server**
4. **App/Web**



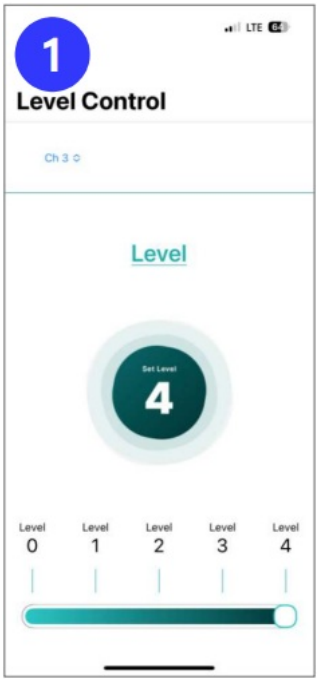
(1) Change the level of the window using a dedicated app of web

(2) Transfer the changed level value from the integrated control PC to the controller

(3) Apply the changed level in controller

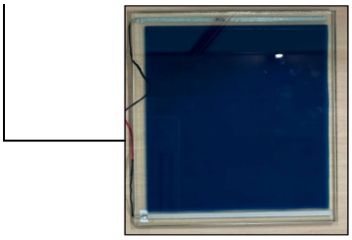
Diagram – Bluetooth

1. **EC Controller**
2. **App**



(1) Controller connection and level control using a dedicated app

(2) Level changes as data is received via Bluetooth



- **What to keep for safety**

- In order to use this product safely and properly, please read part **● What to keep for**

safety carefully and fully understand before using it.

- The precautions indicated here are intended to prevent damage or loss to oneself or others by using the product correctly.
- If this device is improperly used or is not used in accordance with the instruction manual, the warranty will be invalid and we may refuse to be responsible for the device.
- The use of this product prohibits the use of persons with motor, sensory or intellectual degradation and experience and knowledge (including children) unless the person in charge manages and instructs them on safety.
  Make sure that the child does not play with this product.
- We have set up situations that may occur if the product is not used correctly and marked **[Warning]** and **[Caution]**.
  Both of which are important to safety, so please be sure to follow them.

WARNING Negligence of this could lead to death or serious injury of an operator

① If this device is improperly used or is not used in accordance with the instruction manual, the warranty will be invalidated and we may refuse to be liable for any damage.

② To avoid the risk of electric shock, keep the device, cable, adapter, etc. from getting wet with water or other liquids.
※ There is a risk of fire due to electric shock, short circuit, etc.

③ Do not assemble or disassemble.

④ After using it, be sure to turn off the power and unplug the power adapter.
※ It can cause fire, electric shock, and injury
(Please check that even a free repair period will be paid for any disassembly or renovation.)

⑤ Do not use gas stoves, etc. where sparks are present, where flammable substances (gasoline, benzene, thinner, gas, etc.) are present, or where moisture or water droplets may splash

※ There is a risk of electric shock or fire.

⑥ When unplugging a wire from the controller, be sure to hold the connector and not the wire
※ For ‘Output connector’, turn the connector and the pull it out

⑦ If the product is damaged or drowned, stop using it and contact the warranty center.

⑧ In addition, in case of abnormality or failure, stop using it and contact the A/S center immediately.

CAUTION Negligence of this could lead to an injury of an operator or cause damage to your properties..

※ Damage to properties refer to extended damage to a house, crayfish or livestock or pets.

① Do not damage, force, bend, pull, twist, wrap around the product, apply high-temperature heat, or damage the wire.
※ Wire damage can cause disconnection, fire, and ignition.

② When connecting the product, check the parameter values and connect
※ Parameter values must be changed depending on the size of EC Glass
※ Contact the engineer for parameter values

③ Do not drop the product or give it a strong impact.
(Stop using it as soon as it does not work properly and contact the consumer counseling office.)

● Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not

installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

● FCC Caution

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

■ This device may not cause harmful interference

■ This device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

● Federal Communication Commissions (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

● Product information

- Company name : GOOIL SOULTION Co., Ltd.
- Date of manufacture : Separately marked
- Manufacturer : GOOIL SOULTION Co., Ltd.
- Manufacturer’s address
  : 55, 5gongdan 5-ro, Sandong-eup, Gumi-si,

Gyeongsangbuk-do, Republic of Korea

- Country of manufacture : Republic of Korea
- Importer :
- Importer’s address :

● Product specifications

Separation		Contents
Product name		EC Controller
Model name		GIS-2011 / GIS-2011A
Dimension (Excluding antenna)		GIS-2011 – 146mm (L) x 47mm (W) x 44mm (H) GIS-2011A – 171.5mm (L) x 47mm (W) x 44mm (H)
Control steps		4 Steps (1~4 Level)
Control channel		4 Channel
Control Inputs		– External button – 2.4GHz RF transmitting / receiving (BLE) – 2.4GHz Wi-Fi transmitting / receivin g
Antenna		– 3DBI ESP-02 2.4G – 9mm (Outer) x 110mm (L)
Rated input Voltag e (V)	Input Terminals	DC Connector (Outer 5.5mm Inner 2. 1mm)
	Input voltage to control	DC 15V, 2A

Output voltage (V)	Output terminals	Panel attached shield M8 connector
	Output voltage range (per port)	DC +3.3V, 0.91A DC -3.3V, 0.91A
Control	External buttons	OFF and 4-step control with external buttons
	Wireless Control	Control with a dedicated ‘Web & App’ and S/W
Addition	Operating temperature range	-20 – 50°C
	Operating humidity range	0 – 90%

Documents / Resources

	GOOIL SOLUTION GIS-2011 EC Controller [pdf] User Manual GIS-2011, GIS-2011 EC Controller, EC Controller, Controller

References

- User Manual

GOOIL SOLUTION controller, EC Controller, GIS-2011, GIS-2011 EC Controller, GOOIL SOLUTION

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