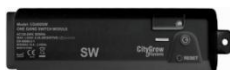


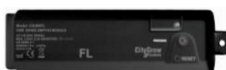
CG400 SERIES

ZIGBEE WIRELESS MODULE

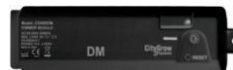
USER MANUAL



CG400S1
One Gang Switch Module



CG400FL
0 – 10V Dimming
Interface Module



CG400DM
One Gang Dimmer Module



CG400S2-CCP
One Gang Curtain
Control Switch Module

VERSION 1.1

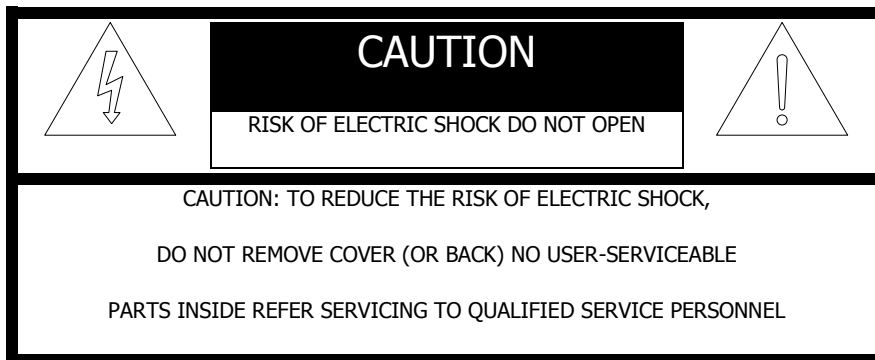
17 JANUARY, 2014



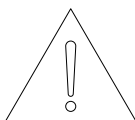
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The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

IMPORTANT SAFETY INSTRUCTIONS

READ BEFORE OPERATING EQUIPMENT

This product was designed and manufactured to meet strict quality and safety standards.

There are, however, some installation and operation precautions which you should be particularly aware of.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. If the provided plug does not fit into your outlet, consult an electrician for replacement of the outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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1. Introduction

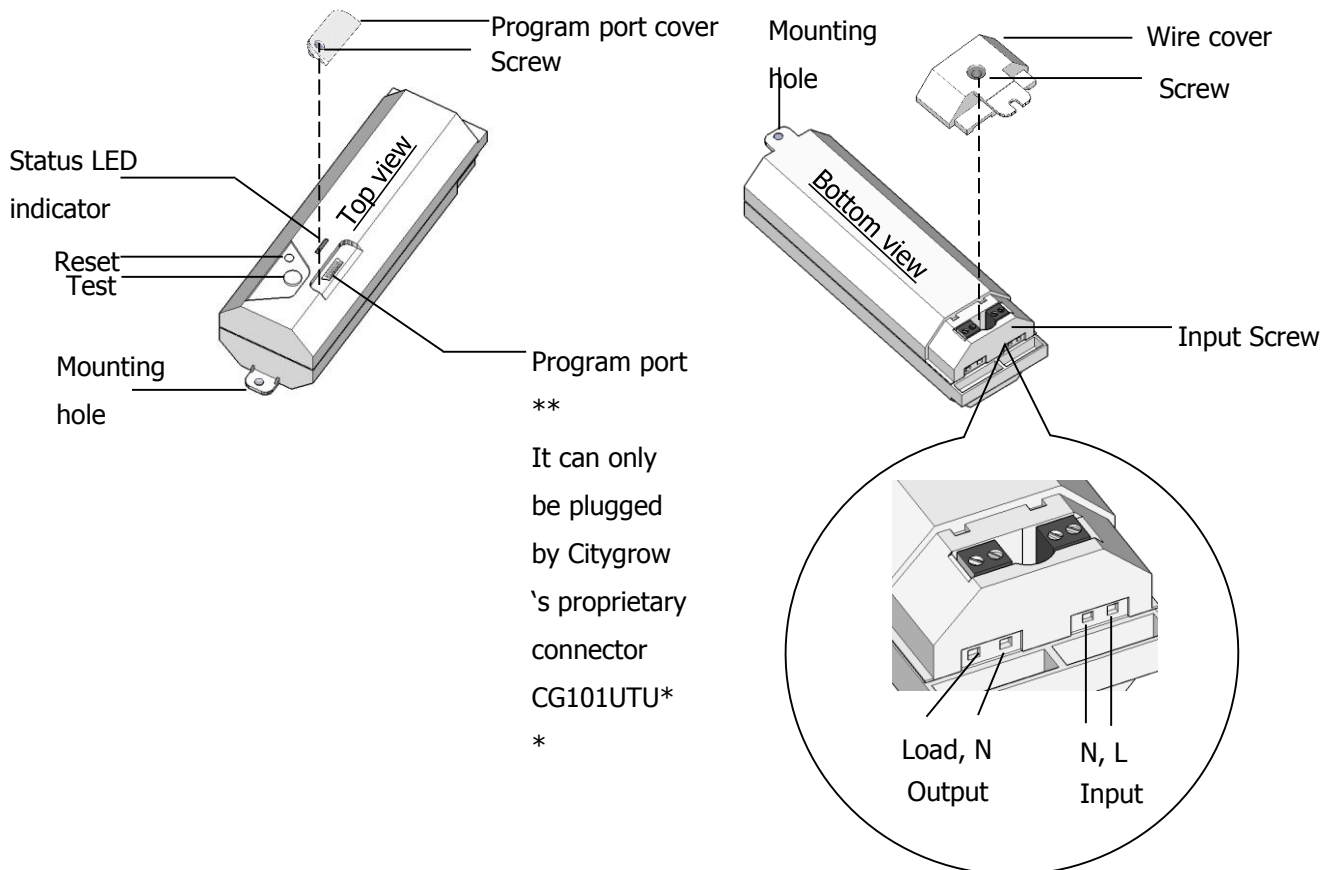
Thank you for buying Citygrow's product. CG400 Series is both powerful and easy to use and install. These products are specially designed for Home Automation and lighting control purpose.

Description

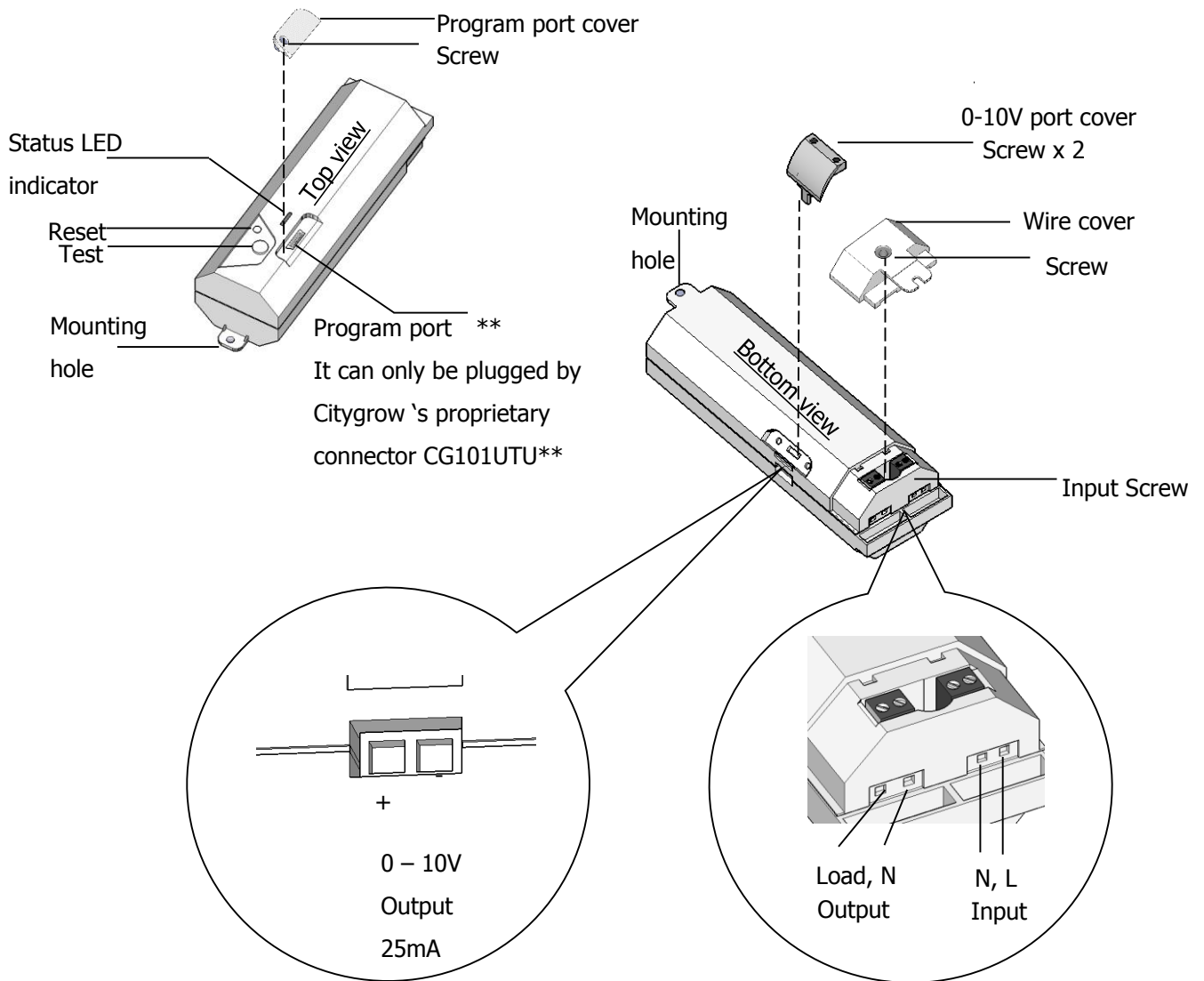
1. ZigBee wireless remote control.
2. Based on IEEE 802.15.4.
3. 2.4GHz radio frequency.
4. LED for status indication.
5. Local Test button.
6. Local Reset button.
7. Compact size and easy to be located in false ceiling
8. Direct AC 220V input.
9. CG400S1 for on/off control.
10. CG400FL for 0-10V dimming.
11. CG400DM for leading edge dimming.
12. CG400S2-CCP for open/close control for electronic curtain / window blind.
13. All the modules can be remote controlled by Citygrow's ZigBee devices/ panels.
14. iPhone/ iPad/ Android mobile control is supported if CG102BS Base-station is purchased.

2. Understanding of the product

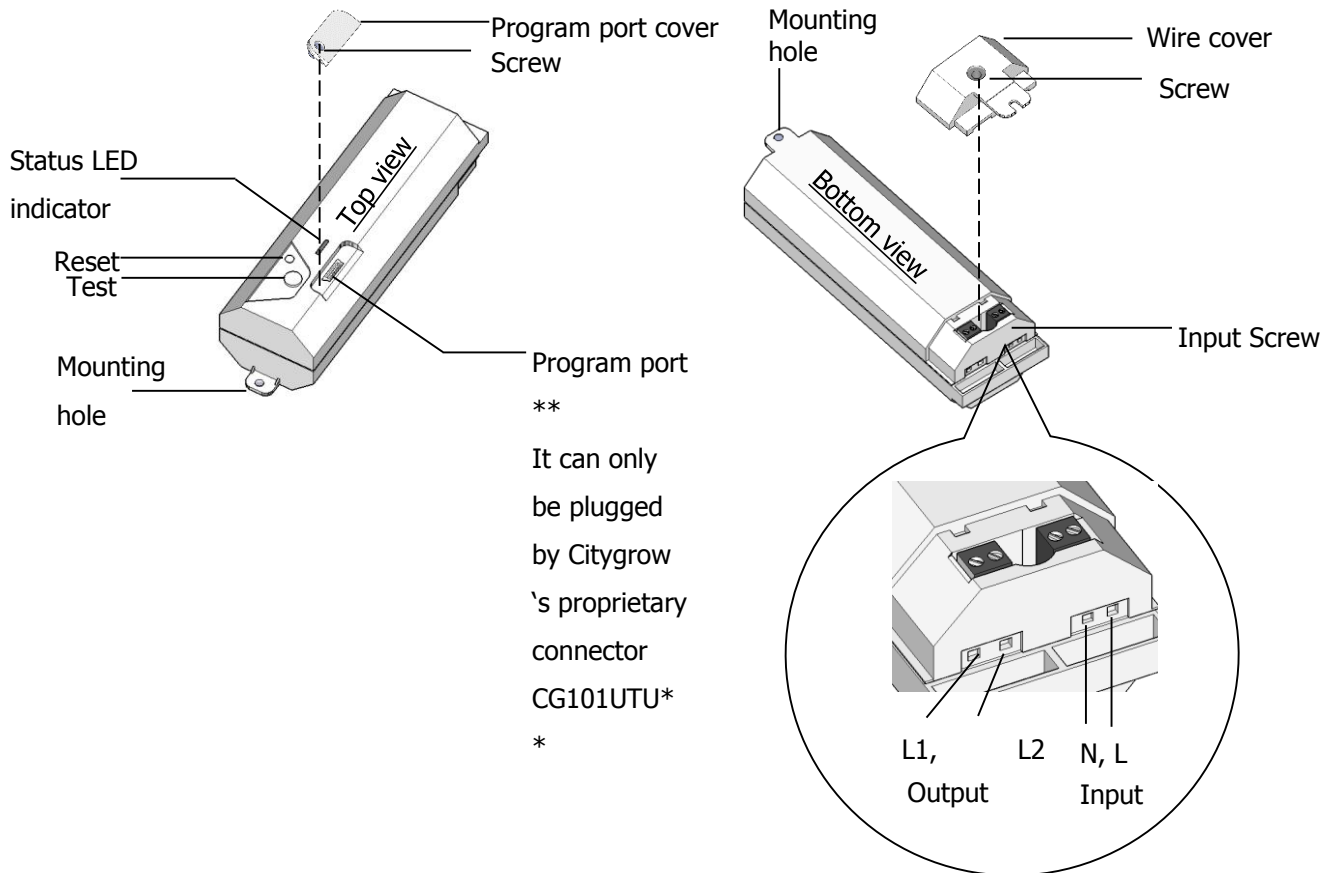
2.1. CG400S1, CG400DM.



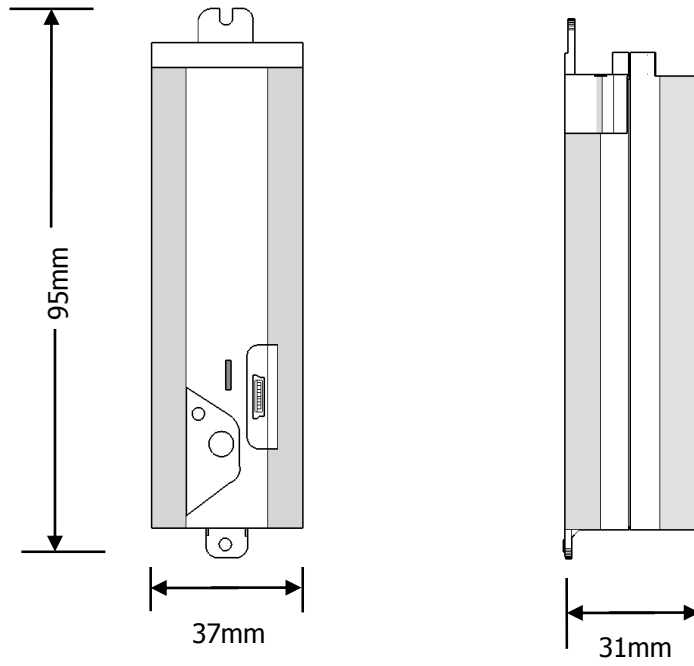
2.2. CG400FL



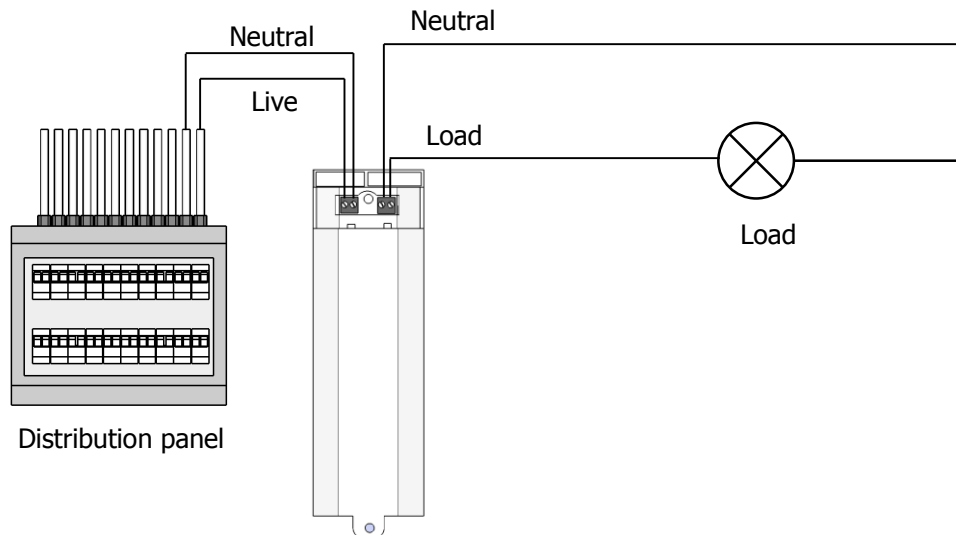
2.3. CG400S2-CCP



3. Dimensions



4. Wiring-CG400S1, CG400DM



Before getting started



WARNING! It must be installed by a qualified electrician in accordance with all applicable regulations and building codes. Improper wiring can result in personal injury or damage to control units or other equipment. Always turn off circuit breaker or remove main fuse from power line before doing any work. To avoid overheating and possible damage to equipment.



WARNING! Do not operate when any lamps removed or burned out; replace any burned out lamps immediately; use only transformers that incorporate thermal protection or fused primary windings. ! This product is designed for residential and commercial use, for indoor use only.



WARNING! Install in accordance with all national and local electrical codes.

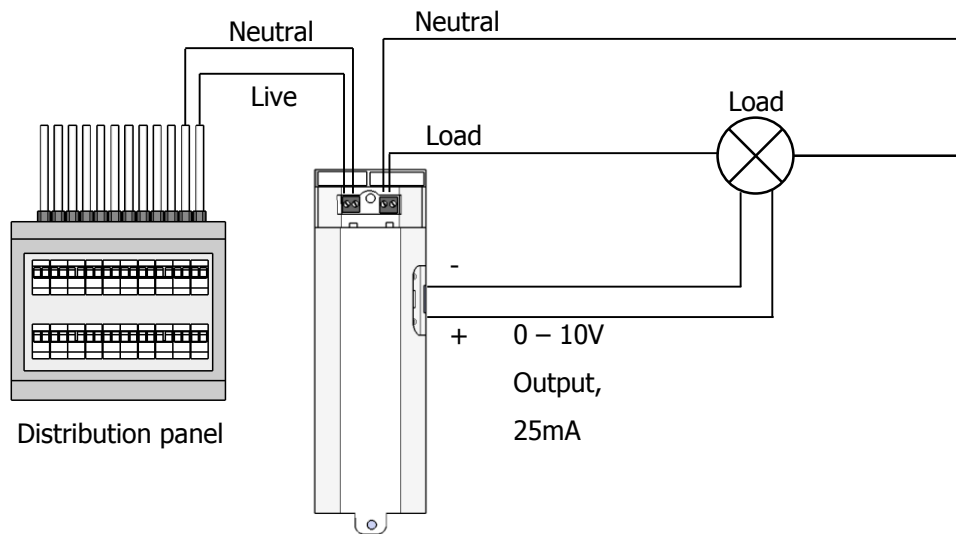


IMPORTANT! Citygrow® is not liable for any damage incurred with the misuse of this product.

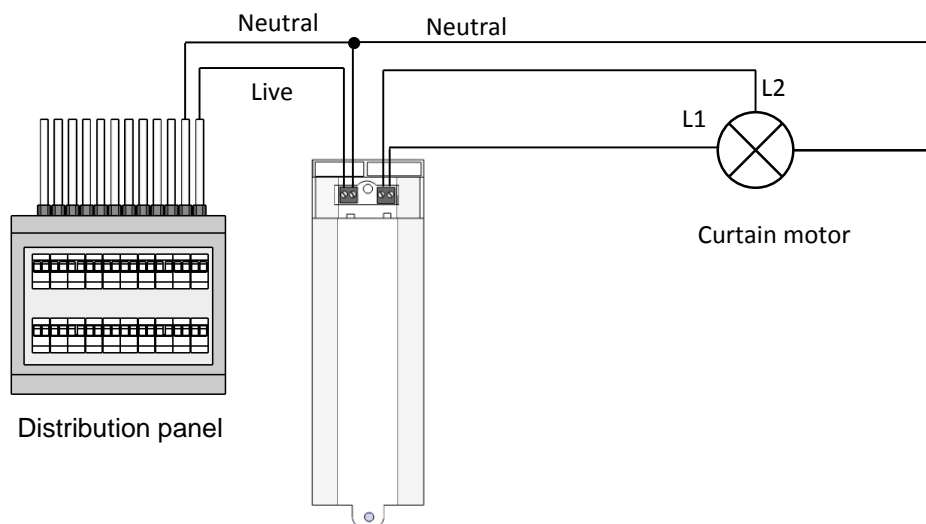


IMPORTANT! Pre-setup can only be done by a professional worker or manufacturer agent.

5. Wiring-CG400FL



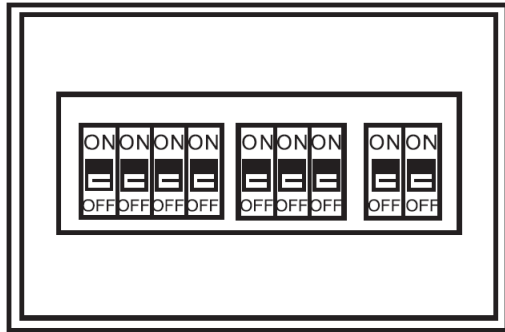
6. Wiring-CG400S2-CCP



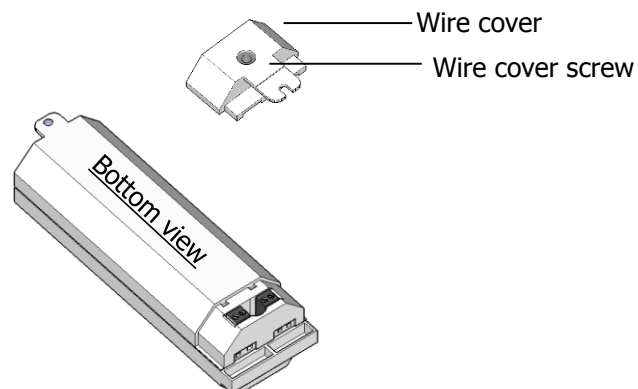
7. Installation

In order to install the product correctly, please follow the below steps:

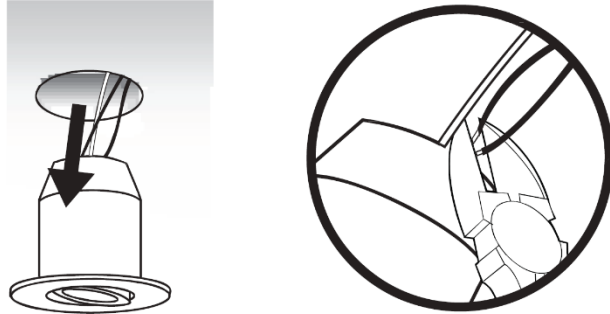
STEP 1: IMPORTANT! Turn off main power at the main switch board.



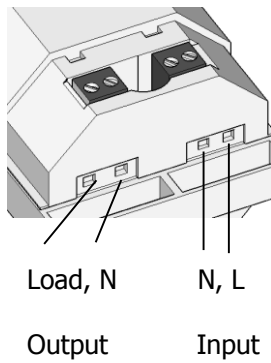
STEP 2: With a torx 1mm screw driver, remove the wire cover by loosening the wire cover screw on the top of the module and remove the wire cover as shown on figure below.



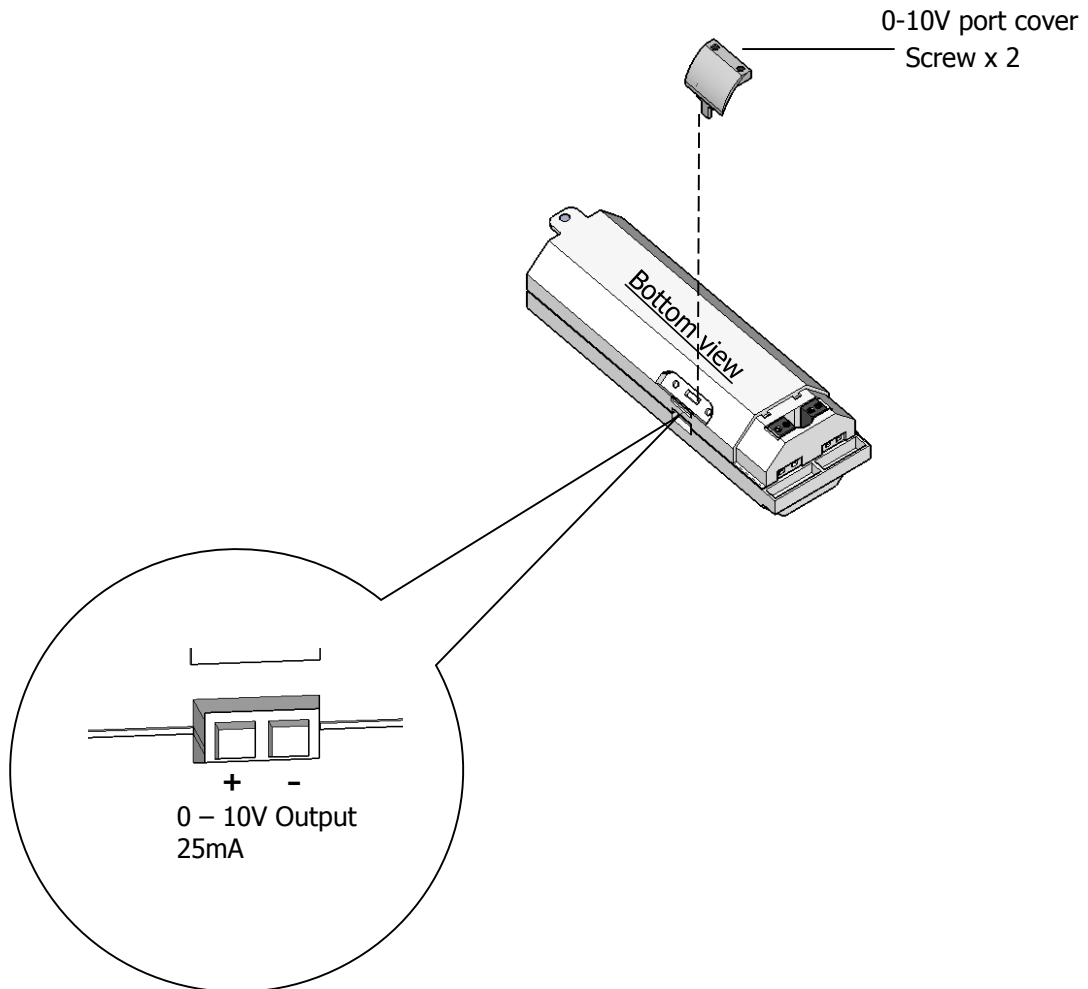
STEP 3: Remove the light fixture from the ceiling and cut the original wiring going to the light, approximately 10 to 15 cm from the light fixture. (Load and Neutral).



Step 4: Connect the main power cable to the Live and Neutral terminals and the load cable to the Load terminals at the rear cabinet of the product.



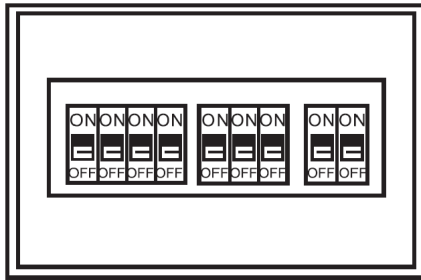
***** For CG400FL, connect 0-10V DC dimming voltage output to the corresponding input of the lamp/ lamp driver. See following diagram**



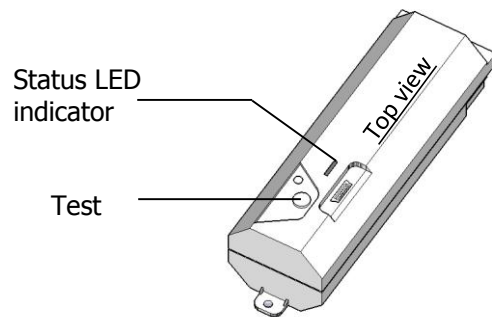
Step 5: Fasten the screws of all wire connectors and ensure that the in and out wires are properly secured.

Make sure to respect the marking on the module and do not switch around the Loads and Neutrals. Then, place the wire cover back to the terminals with screw to securely fix it.

Step 6: Make sure once more that all connections are secure and turn the main power on at the main switch board.

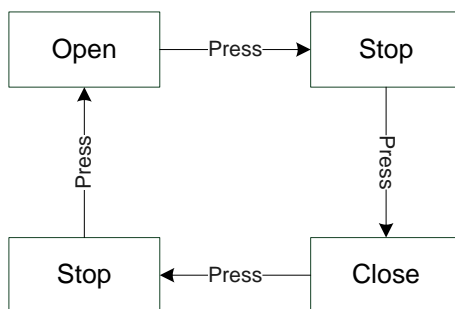


The module is now powered up and the orange LED will blink. Test the main module by pushing the test button.



8. Programming the curtain travelling distance

The factory default travel time of the CG400S2CCP is 20 seconds and the user may use the TEST button to re-program the travel time. The operation of the TEST button in the press action is:



Following is the procedure to program travel time of CG400S2CCP:

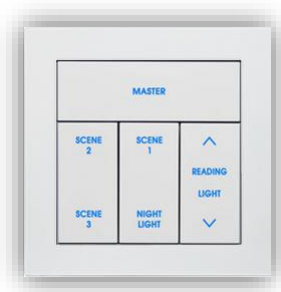
1. Press the TEST button until the curtain is fully closed.
You may have to press the button many times in a sequence of "Open → Stop → Close (20 second and stop automatically) → Open → Stop → Close (20 second and stop automatically) →..." in order to fully close the curtain.
2. When the curtain is fully closed, press and HOLD the TEST button until the curtain is starting to open.
3. When the curtain is opening, release the TEST button.
4. When the curtain is fully opened, press and release the TEST button to complete the programming of travel time.

9. Application notes

CG400 series is designed to be used in combination with other Citygrow's product. For example....

- Using CG100H4-MD as remote control panel mounted on the wall, the remote control signal will be wirelessly sent to CG400 series to drive the load on/ off / dim.

CG400 series module will be directly connected to the lamp/lamp driver or AC curtain motor. The CG400 modules can be located inside the false ceiling of your house.



CG100H4-MD
4 Button Mood Control Panel



CG400S1
One Gang Switch module

- Using iPhone to control the lamp. Since iPhone is a WiFi device that you will need to add a CG102BS ZigBee Base station to convert the WiFi signal to ZigBee signal and so CG400 module can receive the commands from iPhone. The iPhone should be pre-installed with Citygrow's HomeNET App.



iPhone



HomeNET
App



CG102
Base
Station



CG400S1
One Gang
Switch
module

10. Adding the product to your Home Wireless ZigBee Network

<p>The diagram shows a three-step process. Step 1: A rectangular product with a USB socket on its front panel, indicated by a blue arrow labeled '2'. Step 2: A CG101UTU cable is plugged into the product's USB socket, and its other end is plugged into the mini USB end of a CG101UTC cable, also indicated by a blue arrow labeled '2'. Step 3: The CG101UTC cable is plugged into the USB port of a laptop, indicated by a blue arrow labeled '3'.</p>	<p>STEP 1</p> <p>Open the front cover, you will see an USB socket.</p> <p>STEP 2</p> <p>Plug the CG101UTU cable into the USB socket of the product, and then plug the other end of the CG101UTU cable into the mini USB end of the CG101UTC cable.</p> <p>STEP 3</p> <p>Plug the CG101UTC cable into the USB port of a PC that is installed with Citygrow’s HomeNET Planner Software.</p> <p>STEP 4</p> <p>Refer to the user manual of “HomeNET Planner” Software to program and set the address of the product.</p>
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11. Clear Memory

Clearing the memory inside of the product will result in:

1. The product will no longer reply to any Panels that it had previously bound to.
2. The product will no longer reply to any Remotes that it had previously bound to.

In order to perform the Clear Memory function, please follow the below steps:

	<p>STEP 1</p> <ul style="list-style-type: none"> - Press and HOLD the TEST Button.
	<p>STEP 2</p> <ul style="list-style-type: none"> - CONTINUE holding onto the TEST Button. - Press and release the Reset Button once.
	<p>STEP 3</p> <ul style="list-style-type: none"> - Wait until the LED Indicator begins BLINKING. - Release the TEST Button.

	<p>STEP 4</p> <ul style="list-style-type: none">- Press and release the TEST Button again to stop blinking.
	<p>STEP 5</p> <ul style="list-style-type: none">- Press and release the Reset Button.- The memory inside of the CG400 has now been cleared.

12. Specification

	CG400S1	CG400DM	CG400FL	CG400S2-CCP
Description	One Gang Switch Module	One Gang Dimmer Module (Leading Edge Dimming)	0-10V Dimming Interface Module	One Gang Curtain Control Switch Module
Operating voltage	AC 220-240V, 50Hz			
Function	1. Build-in Relay to control on/off for load. 2. Support wireless remote control by Cityrow's ZigBee control panels/ devices	1. Dimming of light. 2. Support wireless remote control by Cityrow's ZigBee control panels/ devices	1. DC 0 – 10V output to interface with 3 rd party dimming driver. 2. Build-in Relay to control on/off for load. 3. Support wireless remote control by Cityrow's ZigBee control panels/ devices	1. To control open/close /stop for electronic curtain. 2. Build-in two Relays to control forward and backward motion for AC motor for electronic curtain. 3. Preset curtain open/close travel time. 4. Support wireless remote control by Cityrow's ZigBee control panels/ devices.
Control communications	ZigBee, IEEE 802.15.4	ZigBee, IEEE 802.15.4	ZigBee, IEEE 802.15.4	ZigBee, IEEE 802.15.4
Radio frequency	2.4 GHz, 15 channel			
Radio reception range	100M (line of sight)			
Operational temperature	0 deg C to 40 deg C			
Humidity	5% to 95% non-condensing			
Storage	-20 deg C to 70 deg C			
Dimension L X W x D (mm)	140x37x31	140x37x31	140x37x31	140x37x31

****Remarks:**

1. The maximum load requirements for fluorescent, CFL and LED loads can vary greatly depending upon the specific fixture and /or bulb being used.
2. When dimming transformer is connected to CG400DM, make sure "dimmable" and "leading edge" type is used. Furthermore, the dimming performance varies greatly from manufacturer to manufacturer of the bulb and the dimming transformer. It is recommended to test the matching performance before mass deployment.

	CG400S1	CG400DM	CG400FL	CG400S2-CCP
Description	One Gang Switch Module	One Gang Dimmer Module (Leading Edge Dimming)	0-10V Dimming Interface Module	One Gang Curtain Control Switch Module
Resistive load 1. Incandescent 2. Halogen 3. Electronic low voltage – ELV transformer	1000W	400W		
Inductive load 1. Magnetic low voltage – MLV transformer. 2. Iron core / Inductive transformer	1000VA	400VA		
Fluorescent	700W		1. 700W 2. 25mA max. for 0-10V DC output 3. Max. 24pcs 0-10V dimming interface	
Compact fluorescent - CFL	400W Max. 24 pcs CFL**	250W Dimmable CFL Max. 20 pcs CFL**		
LED – GU10	200W	40W		
LED – MR16, MR11 With electronic low voltage LED driver	400W Max. 24 pcs CFL**	80W Max. 15 pcs ELV LED driver**	400W 25mA max. for 0-10V DC output Max. 24pcs 0-10V LED dimming interface	
LED strip With electronic low voltage driver	400W Max. 10 pcs ELV LED driver**		400W 25mA max. for 0-10V DC output Max. 10pcs 0-10V LED dimming interface	
Exhaust fan	300VA			
3 wire type AC curtain motor				300VA
Minimum load		5W / gang		