Cosy Electric

Installation guide

geotogether.com

Contents

Safety Notice

This system requires a professionally made installation.
See elsakerhetsverket.se what applies for electrical installation and also their e-tool to find installation companies close to your location.

This installation guide is intended for installation engineer use only

It is important to observe some simple safety precautions when installing and using this product. Read this information before continuing. Safe operation of the product is impaired if not used or installed in a manner specified by the manufacturer

- This device is intended to be installed and configured by a competent person only
- Keep electrical products away from water and other liquids. Disconnect from the mains power supply before cleaning (with a soft, dry cloth only)
- Do not mix old and new batteries as this may cause leakage. Do not leave flat batteries inside the unit as this may result in leakage. Refer to the product technical specification for replacement of the correct battery type
- The Hub must be located in an easily accessible location for the purposes of disconnection from the mains
- No user serviceable parts
- If any component appears damaged or faulty do not use device
- In-line Switch must not be used to isolate connected equipment from the mains supply during any activity which requires connected equipment to be safety isolated from the mains supply.
- Do not cover any device
- Use supplied mains adaptor only
- This device is not a toy and may contain small parts which could present a choke hazard to small children. Keep out of reach of children

Isolate mains supply before removing any covers. When connected to a live mains supply, all internal parts are at mains potential. No user serviceable parts inside

For use in dry, indoor environments only

At the end of its life please recycle at a suitable recycling factory. Do not place in general waste

These products are CE approved

Hub

In-line Switch

Sensor

High Voltage In-line switch

Hub

The central controller in the system. It communicates with the Internet via the customers router and with the controllers and sensors via radio

In-line Switch

A mains-powered wireless controlled switch, suitable for any domestic 230V mains powered application up to 16A. It is fitted in-line with the device power cable

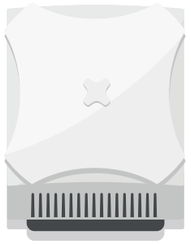
Sensor

Measures temperatures and is a battery operated device (batteries supplied). Every heating zone in the heating system must also have a Sensor

High Voltage In-line Switch

A single in-line switch that can control the supply to 2 phase devices at 400V up to 2.4KW

Transmitter + LED sensor



Under Floor Heating Controller

Heat Pump (IR sensor)

geo Home app

Transmitter + LED sensor

A battery powered device which sends energy data wirelessly to the Hub. The LED Sensor attaches to the front of the electricity meter and connects to the transmitter

Under Floor Heating Controller

A drop-in replacement for existing controllers and is designed to use the existing wiring and floor sensor (where fitted)

Heat Pump (IR sensor)

Controls the Air Source Heat Pump via its infrared window and connects to the customers WiFi

geo Home app

Providing visibility and control of energy.

Available from: Download on the App Store · GET IT ON Google Play

Hub

Install the Hub by connecting its power and connecting the supplied Ethernet cable between the Hub and the internet router. Once connected the cloud LED should turn green

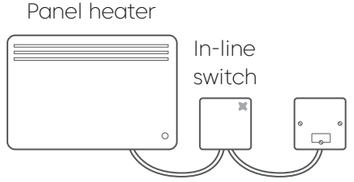
geo Home app

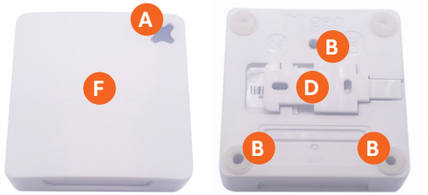
Download the geo Home app from the Android or iOS app store. Once the Hub is installed create a geo account using the geo Home app and link it to the Hub by following the instructions in the app

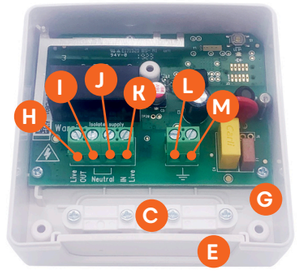
Isolate mains supply before continuing with the installation

In-line Switch

1. Identify the desired mains-powered device to be controlled, inspect the mains cable to be cut for any damage or degradation. If any is present, the install must be aborted, and the end user informed
2. Open the In-line Switch enclosure by unscrewing the three screws B
3. Remove the cable clamp C
4. If wall mounting, select a mounting location for In-line Switch that allows easy connection of the mains cables. They must not be pulled tight. The installations must be located and carried out such that it does not present a hazard to the end user
5. Using the drill guide on the reverse of the Safety Notice, secure the wall mount bracket D to the wall, using fixings provided







A	On/Off Button
B	Screws holes, screws hold case together
C	Cable clamp
D	Wall mount bracket
E	Cable end plate
F	Lid
G	Base
H	Live out
I	Neutral out
J	Neutral in
K	Live in
L	Earth
M	Earth

6 Cut the power cable where you wish to place the In-line Switch

7 Drill appropriately sized holes in the cable end plate **E** and thread the cables through

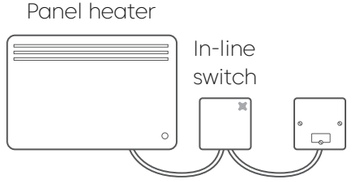
8 Strip back the wires to the appropriate length – recommended strip length is 6-7mm

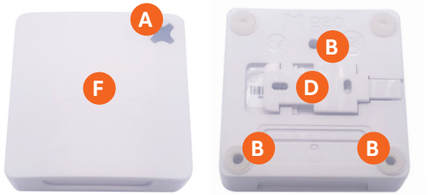
9 Wire the cables into Live In, Live Out, Neutral and Earth terminal blocks (See **H** **I** **J** **K** **L** **M**)

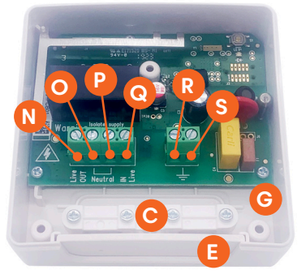
10 Use the cable clamp **C** to secure cables. The cable clamp is designed to clamp the outer sheath of mains flex cable, not the individual wires

11 Securely screw the lid back on and either set the In-line Switch to the surface, or attach it to the wall bracket

12 Restore mains to the circuit and test the In-line Switch







A	On/Off Button
B	Screws holes, screws hold case together
C	Cable clamp
D	Wall mount bracket
E	Cable end plate
F	Lid
G	Base
N	Phase 1 In (L1 in)
O	Phase 2 In (L2 In)
P	Phase 2 Out (L2 Out)
Q	Phase 1 Out (L1 Out)
R	Earth
S	Earth

Isolate mains supply before continuing with the installation

High Voltage In-line Switch

1 Identify the desired mains-powered device to be controlled, inspect the mains cable to be cut for any damage or degradation. If any is present, the install must be aborted, and the end user informed

2 Open the High Voltage In-line Switch enclosure by unscrewing the three screws **B**

3 Remove the cable clamp **C**

4 If wall mounting, select a mounting location for the High Voltage In-line Switch that allows easy connection of the mains cables. They must not be pulled tight.

The installations must be located and carried out such that it does not present a hazard to the end user

5 Using the drill guide on the reverse of the Safety Notice, secure the wall mount bracket (D) to the wall, using fixings provided

6 Cut the power cable where you wish to place the High Voltage In-line Switch

7 Drill appropriately sized holes in the cable end plate (E) and thread the cables through

8 Strip back the wires to the appropriate length – recommended strip length is 6-7mm

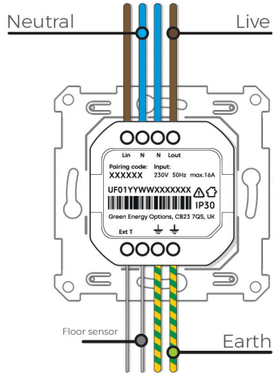
9 Wire the cables into L1 & L2 In, L1 & L2 Out and Earth terminal blocks (See (N) (O) (P) (Q) (R) (S)), recommended torque is 0.4 Nm.

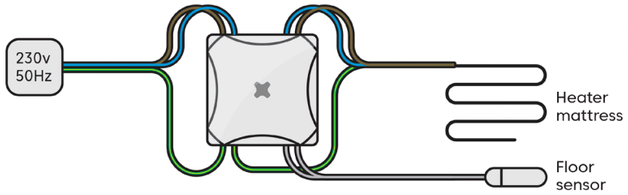
10 Use the cable clamp (C) to secure cables. The cable clamp is designed to clamp the outer sheath of mains flex cable, not the individual wires

11 Securely screw the lid back on and either set the High Voltage In-line Switch to the surface, or attach it to the wall bracket

12 Restore mains to the circuit and test the High Voltage In-line Switch

13 Once all devices are installed, the installer should follow the instructions in the app for pairing it to the Heating system and configuring it for use. See the app recommendations section.





NOTE: The device should be provided with an over current protection device compatible with the electrical load.

Underfloor Heating Controller

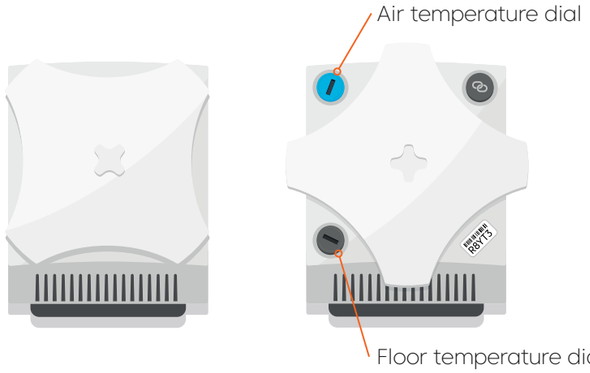
1 Equipment is to be installed in compliance with local wiring regulations, including suitable means of disconnection from supply

2 The unit must be installed in an easily accessible and dry indoor location which meets the requirements of IP30

3 The unit must only be installed in the appropriate back-box with surround (Not supplied with the unit)

4 Un-clip the front plate from the back plate using a flat headed screwdriver. Undo the ribbon cable from the top PCB

5 Connect the supply Live, Neutral, Earth as labelled and connect the underfloor heating load as labelled



6 Connect the external thermistor (if installed) wires as labelled. Write down the type of thermister that is installed, you will need this information during the configuration. You will need this information during configuration

7 Set the desired maximum floor temperature using the floor temperature dial, if no thermistor is fitted this can be ignored

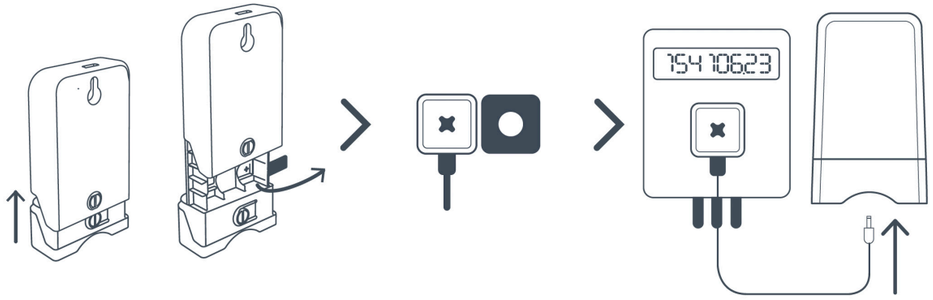
8 Set the desired ambient temperature to be used when the device is in manual mode

9 Screw backing plate into the wall and replace the surround

10 Install front plate, connecting the ribbon cable to the connector on the front PCB

11 Restore mains to the circuit and test the Underfloor Heating Controller once it is installed. The installer should follow instructions in the app for pairing it to the heating system and configuring for use.

NOTE: Make sure you select the correct value for your floor sensor. An incorrect setting may cause damage to your floor. This is done via the geo Home app and is in the commissioning guide.



NOTE: In order to complete the setup of the LED transmitter within the app, there are two pieces of information that are required:

1. The number of LED flashes per kWh (usually denoted as imp/kWh)
2. Your energy tariff

Transmitter + LED Sensor

1 Attaching the LED Sensor
Prior to using the velcro, make sure you write down the number of impulses/kWh as the LED sensor might obscure the value.

2 Find the pulse output on the electricity meter.

3 Stick one half of the square velcro around the pulse output on the meter.

4 Stick the other half of velcro onto the LED Sensor.

5 Stick the LED Sensor onto the velcro on LED pulse output on the meter, ensuring that the geo logo is facing you.

6 Insert the other end of the LED cable to the bottom of the transmitter.

7 Before turning on the Transmitter please ensure the Hub is connected and that the paring code for the Transmitter has been entered into the geo Home app. This will ensure automatic pairing occurs when the Tranmitter is powered up.

8 The Transmitter comes with batteries pre-installed, to activate, remove the protective battery tab.

9 Slide open the Transmitter by pressing the cover release button on the back and pulling the cover upwards

10 Remove battery tab to turn on the Transmitter

11 The LED will flash to indicate the Transmitter is powered and has entered pairing mode. Once the device has paired, the LED will turn off to conserve the batteries.

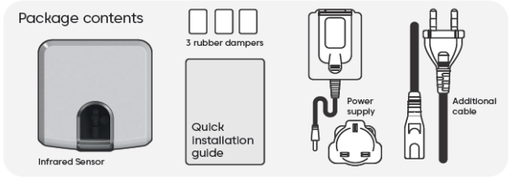
12 Replace cover and place in suitable position next to the meter.

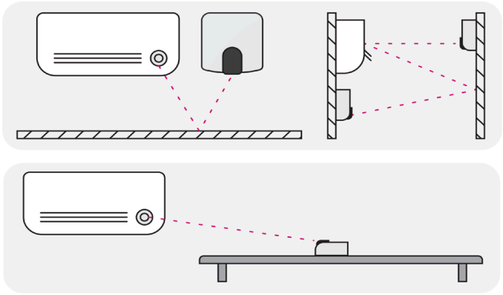
13 Manual pairing can be achieved by pressing and holding the button on the Transmitter until the LED flashes.

14 Follow the above instructions to open the transmitter when replacing the batteries.

Please dispose of used batteries in an environmentally friendly way.

NOTE: some meters, like smart meters, may have an optical reader port for the utility provider, this looks very similar to the LED pulse output. Wait until you see the LED flash before attaching the velcro; If you are unsure which is the LED pulse output, turn the kettle on and the flash rate should increase.





Heat Pump (IR sensor)

1 This device is used to control the air source heat pump. Ensure it is positioned so that the IR sensor can interact with the air source heat pump as shown above

2 Once the device is powered on it must be connected to the the users WIFI network. This can be done via a mobile phone or by another wireless computer. Before starting, ensure you have the name and password of the WIFI network that the sensor will connect to.

3 Using a phone or other device connect to the WIFI by searching for WIFI networks. The sensor will have a network name something like “INTESISHOME....”

4 Once your device is connected to the WIFI, open a web browser and navigate to “ihconfig.com” and follow the instructions.

5 For further information please go to: https://www.intesishome.com/docs/IntesisHome_DeviceConfig.pdf

Do not pull the rear tab out of the device until the sensor is ready to pair. This will save you time during the commissioning process

Sensors

The Sensor can be wall mounted using the hanging hole in the rear of the device it can also be mounted anywhere that is out of the direct sunlight and away from draughts. Once mounted please follow the instructions in the app

When everything is installed use the app to add and pair the devices and configure it for use.

- Sensors will attempt to pair for 5 mins after they are powered up, after which manual pairing will be required
- The led will flash amber until it is paired
- When the pairing is complete the led will change to flashing green for a short time, then go off

Product	Hub	In-line switch	Sensor
Model	MHx	IS1	WL1
Input	Voltage 5Vdc (use supplied adaptor only)	-	1 good quality Alkaline AA Battery, typically 2200mAh or better
Input and switching Capacity	-	16A 230V ~ 50Hz	-
Switch safety cut-out	-	>24A >20A for Approx. 1s >16A for Approx. 5s	-
Power Consumption	1W (typical)	1W (typical)	
Ingress protection rating	-	IP40	IP30
Operating Temperature Range	0 to +40°C	0°C to +35°C	0 to +40°C
Operating Humidity Range	10 to 85% RH (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)

Product	Transmitter + LED sensor	Under Floor Heating Controller	Heat Pump (IR sensor)
Model	LT1	UF1	
Input	3 x AA (LR6) Alkaline Primary Cells	-	
Input and switching Capacity	-	16A 230V ~ 50Hz	
Switch safety cut-out	-	>16A for Approx. 5s	
Inrush current	-	25A for 3 seconds	
Power Consumption	-	1W (typical)	
Ingress protection rating	-	IP30	
Operating Temperature Range	-10 to +40	0°C to +35°C	
Operating Humidity Range	10 to 85%, (non-condensing)	5% - 90% (non-condensing)	
Storage Temperature Range (°C)	-10 to + 55	-	
Storage Humidity Range (% RH)	Storage Humidity Range (% RH)	-	

For manual pairing:

- Sensor: Press and hold the button on the back of the Sensor until the led flashes again. This will start pairing for another 30 seconds
- In Line Switch: press and hold the button for between 3 and 6 seconds and then release the button. This will start pairing for 30 seconds

For manual control

- A simple quick press for on, another for off. Manual control will be active until next change in schedule. If you set to off, the LED will turn Red, if on the LED will turn Green
- To override the device press and hold the button for >6 second. The device will be set to “always on” and you need to control your heat source manually. The LED will turn solid Amber. To return to Cosy control, press the button for >6 seconds

Manufacturer

Green Energy Options Ltd (geo), CB23 7QS, UK

CE Declaration

Hereby, Green Energy Options Ltd. (geo) (UK) declares that the radio equipment enclosed (identified by the product type numbers on the product label) are in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available online at: www.geotogether.com/cedoc

RF Transmitter Information

These devices operate at 868.3MHz (+/- 80kHz). The transmit duty cycle is less than 1%. The peak emitted power does not exceed 25mW.

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