ANGEL GUARD

CLARENCE

Installation Instructions

Clarence O-1 Water Monitoring Device

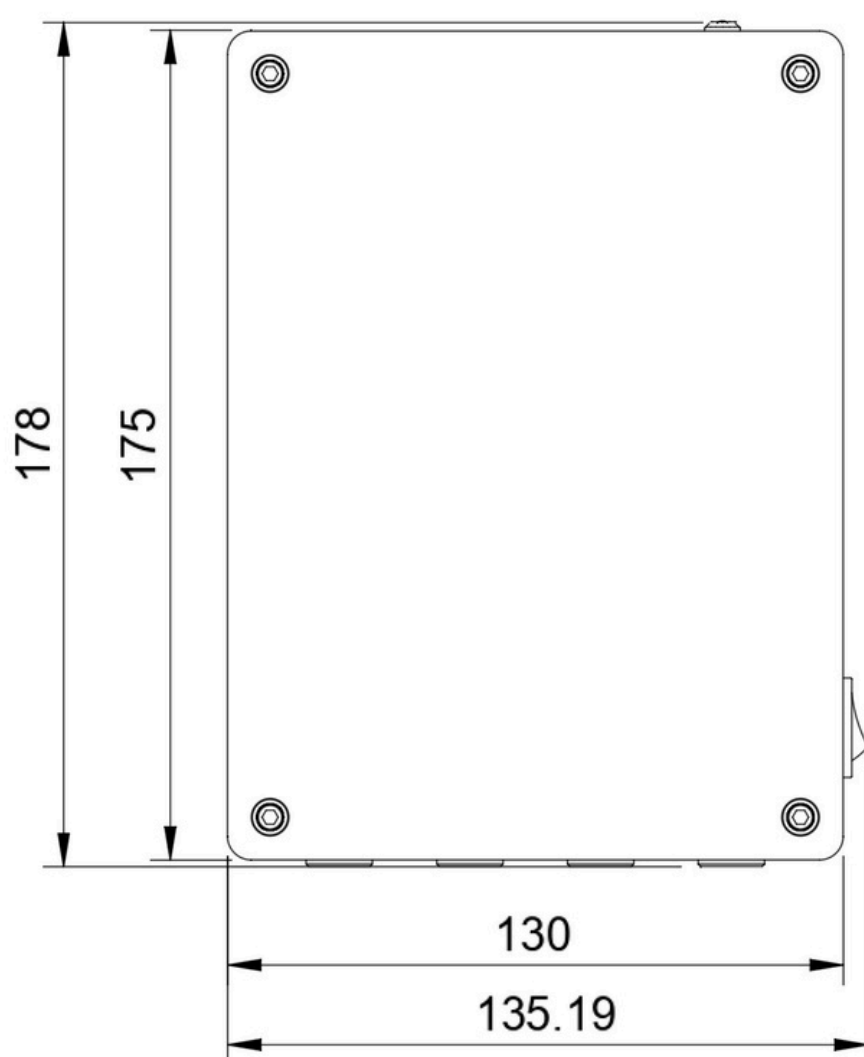IHEEM IEG Tech Awards bcia awards NTA CIBSE BUILDING PERFORMANCE AWARDS

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Clarence O-1 Remote Water Monitoring Box
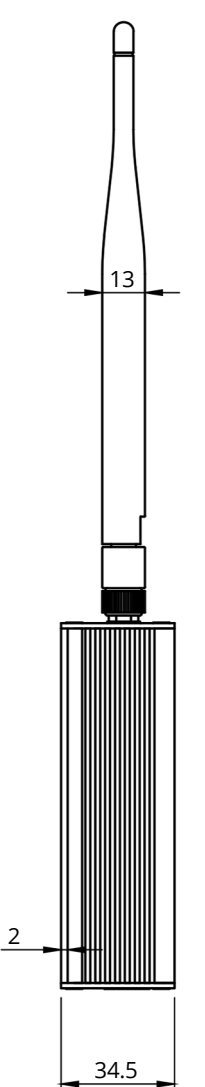
SKU	Description
C2000LW	O-1 Device with 1 Temperature/Flow
C2001EX	Sensor Additional Temperature/Flow
C2002EX	Sensor Additional Battery
C2003EX	Communication Hub #1 Communication
C2004EX	Hub #2

Your paragraph text

63.7

178
175

130
135.19

63
71.8

O-1
Device

197.5
317.5
120
6.5
137
165

13
2
34.5

Communication Hub
#1

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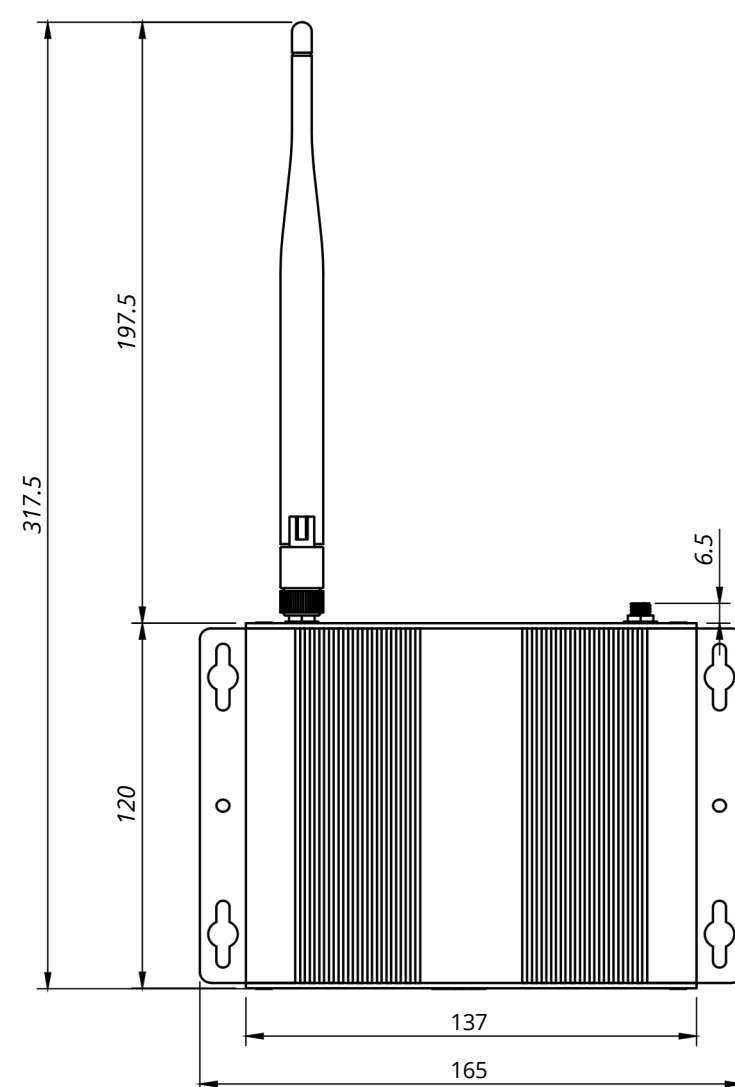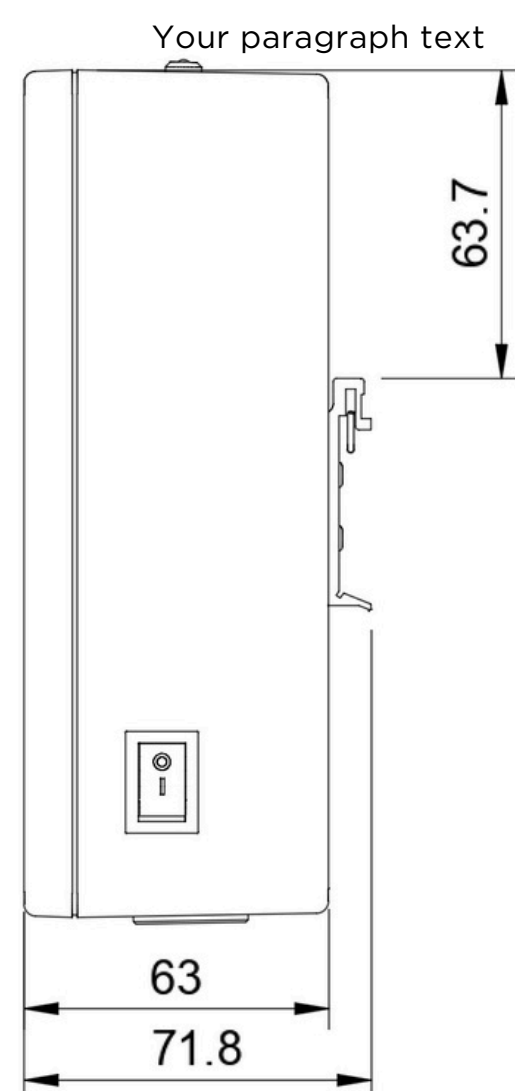
These products are designed for hot and cold water services, with the ability to monitor hot/cold/mixed/return water.

All monitoring devices should be installed and used in accordance with appropriate specifications or codes of practice and Angel Guard technical recommendations.

Electrical connections (where applicable) –all installations must be correctly earthed. If in doubt, the installation should be handled by a qualified electrician in accordance with current regulations.

Installation of the device should becarefully planned to ensure that existing joints and pipework are not disturbed or stressed.

Installation should be carried out in accordance with all current water supply (water fittings) regulations and all relevant building regulations.

General Information

Angel Guard Clarence water monitoring devices are tested and comply with the requirements of current United Kingdom Water Regulations/Bye-laws (Scotland).

Product Performance:

Ambient operating temperatures between 5°C to 55°C

Approximately 90% of Clarence devices and components can be recycled after use

Guarantee:

Angel Guard products carry a 5-year guarantee against manufacturing defects when installed in accordance with these installation instructions and guidelines.

Installation

Screwdriver Tape
Measure
DIN Rail
(fitted in position with
appropriate fixings for
the type of wall/surface)

Marker/Pen Digital
Temperature Probe
(suitable for measuring the
surface temperature of a
pipe)

Digital Temperature
Probe

Screwdriver

DIN Rail

Marker/Pen

Measuring Tape

It is intended that a technically competent installer should undertake installation.

When you are ready to start, ensure that you have the right tools to hand.

Hub Installation

1. When considering the location for the O-1 Communication Hub, be mindful of the positioning of the O-1 devices, all within a reasonably close proximity of the Hub.

2. If necessary, to fit the hub to the wall, (using the dimensions for the hub see page 3) mark the positions for the wall fixings and secure the Hub to the wall in position.

3. Plug in the hub using the power supply and power on.

4. The supplied hub will connect automatically with in-range O-1 devices, however, pre-configuration of backhaul (outgoing communication from hub) options are to be considered as following:

   1. 4G: Supplied pre-configured. SIM pre-installed. No further setup required.

   2. Ethernet: Supplied pre-configured. Connect to appropriate port using suitable cable. Considerations need to be made for firewall and communication configurations client-side.

   3. Wi-Fi: Supplied pre-configured, however, configuration requires SSID and password information to be supplied.

5. Upon the completion of setup, hub connection can be verified by checking the relevant (power, network & LoRa) lights are active on the hub.

6. Once the Hub has been installed and set up, move on to the installation of the O-1 devices (found on the next page).

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O-1 Device

1   When considering the location for the O-1 device, use the information found in the "Location Advice" document (which can be found on the Angel Guard website).

2   Using the dimensions for the O-1 device (see page 3), mark the positions for the wall fixings (for the DIN Rail).

3   Secure the O-1 to the wall in the pre-marked position where you have fitted the DIN Rail.

4   Connect Temperature Sensors to the Controller Box, using the supplied cables. The sensor(s) can then be fitted to the pipework using the built-in strap.

5   Turn the switch found on the side of the device to supply power to the O-1 box.

6   Check to see that the LED found on the O-1 device is lit once power has been supplied to the unit.

7   Once a successful connection to the hub has been made, the LED will begin flashing for a few moments and then go off. If no network connection is made, the LED will remain lit. In the case of no connection, you should then seek further advice using the contact details found within this document.

8.   Once power has been supplied and connection verified, move on to the commissioning step (found on the next page).

Follow these steps to commission your O-1 device:

1. Scan the QR code on your device, which sends you to the login portal.

2. Enter login details to gain access to the commissioning page.

   Fill in the information requested on the

3. commissioning page ensuring the ID no. matches the one on the device.

4. The final step in the commissioning is to undergo a temperature calibration. The steps for this are found on the next page.

The final step of the commissioning process is the calibration of your temperature readings. To do so:

1. Click on the calibration button found on the commissioning page.
2. Run the water until the temperature has reached a stable level (leave the water running until you have finished the calibration).
3. Using the digital temperature probe, take a reading of the outside of the pipe where the temperature sensor is fitted.
4. Enter this temperature into the calibration page for the correct sensor probe.
5. Submit your reading.
6. Repeat these steps if calibrating additional temperature sensors.

You have now completed the commissioning process, and your Clarence O-1 device will now be fully operational.

The calibration process can also be manually initiated, when required, from the device dashboard. To do so, find the Calibration button on the device page, and follow the same steps as listed above.

Care & Maintenance

Regular care and maintenance requirements have been kept to a minimum, but the following will help to ensure the devices have a long life and will provide trouble-free operation.

Every 12 months:

1. Check that the outer box looks to be in good condition, cleaning the outside faces of the box using a clean cloth. Calibrate your device's temperature sensors to ensure accurate readings.

2. You will be alerted when 12 months have passed without a calibration.
   Follow the steps previously detailed in the Calibration section.

Via Seraph Protect, information on battery life of the O-1 device will be provided, notifying the user when required to replace the batteries. To do so, follow the steps below:

1. Turn off power to the device via the switch on the side of the device, ensuring this has been placed into the off position.

2. Open the device box to gain access to the internals, containing the batteries.

3. Carefully remove each battery.

4. Replace with fresh batteries, ensuring the positive and negative ends align correctly within the battery holder.

5. Close the device box.

6. To check power, turn device on using the switch. The green light on the side should then light up.

You have now completed the replacement of device batteries. You should check the readings on the Seraph Protect dashboard, ensuring that the device is outputting regular readings shortly after completion.