

### 4 CO<sub>2</sub> AUTOMATIC BACKGROUND CALIBRATION (ABC)

ABC calibration is required to stabilise the CO<sub>2</sub> measurement to achieve optimum accuracies. This is catered for via the ABC process.

The auto-calibration period within the sensor is set to perform every 24 hours after power up. After initial calibration, over time, the zero point of the sensor needs to be re-calibrated to maintain the long term stability of the sensor. In many applications, this can happen automatically using the built in auto-calibration function.

For the ABC function to operate correctly, it is important that the sensor is exposed to a low, unoccupied background CO<sub>2</sub> level at least once during the auto-calibration period.

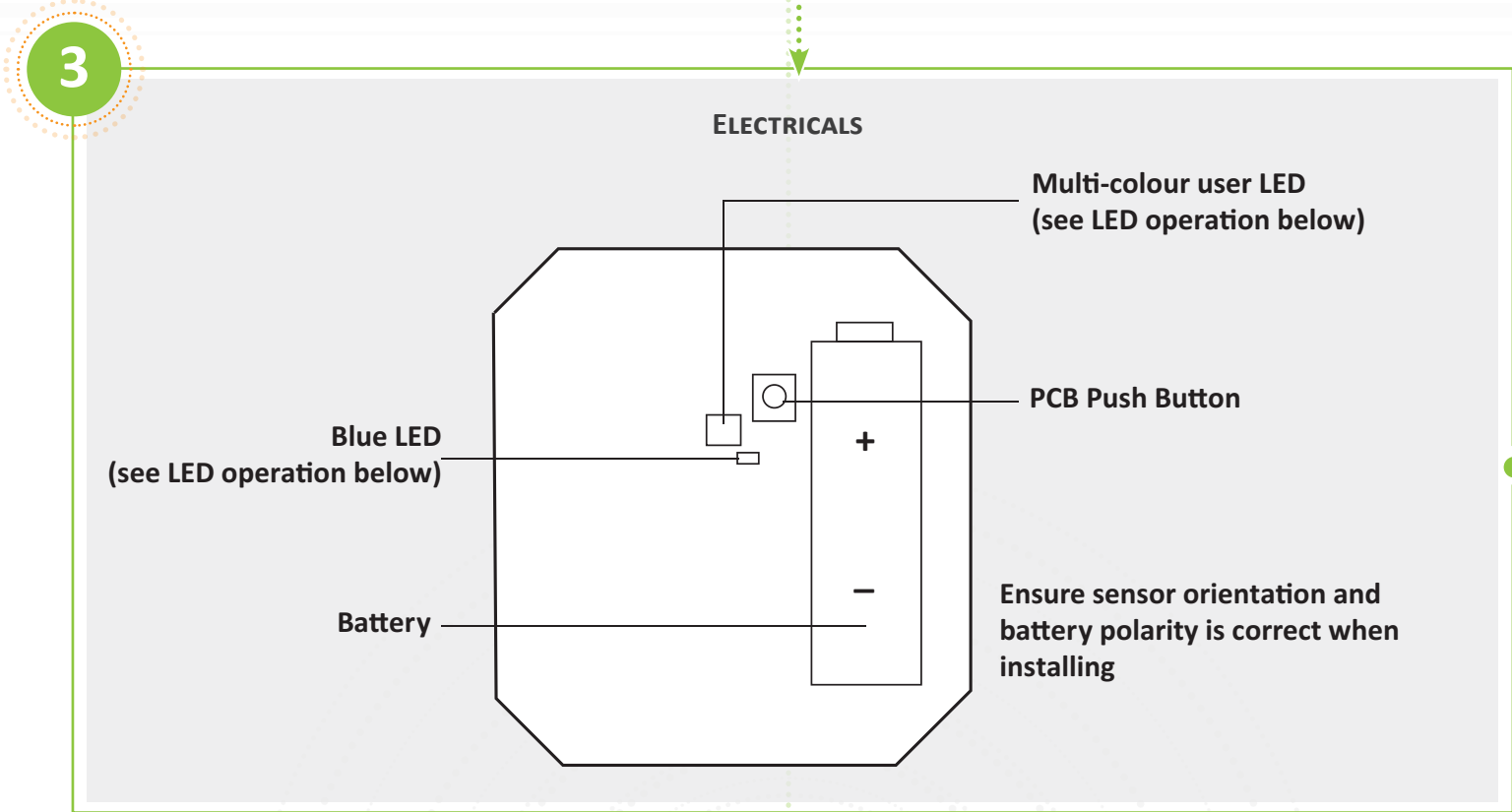
### 1

On the provided list of device serial numbers, add the location for each of the products

## EXAMPLE

MAC:0000000000000000

**Note:** Identifying MAC address is located inside the device, please note during installation.



**LED INDICATION**

Do not insert the sensor battery until the device is ready for commissioning and the WAC/Co-ordinator is powered up and available to pair with the wireless sensors.

If there are several sensors that need commissioning onto the same network then these should be powered up and paired one at a time.

When the sensor is initially powered up with the battery inserted it will be un-paired and the multi-colour LED will flash Red every second. This shows that the sensor is searching for an available network and attempting to join/re-join.

Implementing Base Device Behaviour (BDB), if no network is found after power up, the sensor will sleep for 60 seconds before attempting to search for an available network again. If no network is found in the first 10 minutes, the sensor will extend the sleeping period from from 60 seconds to 5 minutes in order to preserve battery life.

It is possible to force specific features within the sensor by holding the PCB push button and releasing at certain points of the BLUE LED sequence. To perform one of the below tasks, press and hold the PCB button, the LED will begin to flash every 1 second, release at the relevant point of the sequence to perform the associated task.

Once the sensor has joined the network the LED will operate as below.

Blue LED Timing	Feature
Release after 1st LED flash	Force wake and poll parent for messages.
Release after 2nd LED flash	Reports the current temperature, humidity, CO2 and Power configuration value. The corresponding clusters need to be bound.
Release after 3rd LED flash	Not used
Release after 4th LED flash	Not used
Release after 5th LED flash	Initiate OTA update process
Multi-Colour LED indication	Sensor Status
LED Flashing RED every seconds	Sensor is not paired and is searching for a network.
LED Flashing YELLOW every 0.5 seconds	Sensor Identify Mode (See Identify Cluster)

**DEFAULT AND RECOMMENDED SETTINGS**

Setting	Factory Default	Range
Minimum Reporting Interval	60 seconds (Temperature and Humidity) 600 seconds (Co2)	0-65536 seconds
Minimum Reporting Interval	300 seconds (Temperature and Humidity) 1800 seconds (Co2)	0-65536 seconds
Delta Change Reporting Threshold	Temperature = 0.5°C Humidity = 3% Co2 = 50ppm	N/A
Polling during normal operation	6 Seconds (Default). The polling rate can be altered via the Long Poll Interval attribute within the Poll Control Cluster. Please note accelerated polling will occur once OTA is initiated.	16-1200 16 = 4 seconds 1200 = 5 minutes (range specified in 0.25 seconds)

**FACTORY RESET INSTRUCTION**

To reset an end device; remove the battery, press and hold the PCB push button down while re-inserting the battery. Once the battery is inserted, release the PCB push button.

Upon resetting, the device will restore the factory default settings for the minimum, maximum and delta change reporting along with the polling intervals. Once reset the device will search for strongest Zigbee 3.0 network and attempt to join as described above.

**SERIAL NUMBER INFORMATION AND TRACKING**

The serial number or ID of a device is used to track device installation locations and details for the commissioning process. The identification information for each device should be tracked in a meaningful way, many devices include duplicate 'stickers' with this information. Autani provides an iOS app to assist with the process.



For help getting starting with the iOS Commissioning App please see Autani's User Guide for the iOS Commissioning App.



Once commissioning details are collected, either through the iOS Commissioning App, or by tracking identifiers on drawings/spreadsheets. Please provide this information to support@autani.com to begin the commissioning process.