Indoor Air Quality (IAQ) Desktop Display

User Manual

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Important changes are listed in Document Revision History at the end of this document.

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What is the IAQ?

The Indoor Air Quality (IAQ) desktop unit displays a variety of air quality measures, and alerts you when those measures are out of their defined range.

Requirements

- Building automation system v7.0 or later with the latest cumulative patch installed.
- USB-C power supply (included)
- BACnet/WiFi (if desired to connect to a BAS)

Air quality measures descriptions

See the table below for a description of the air quality measures the IAQ displays.

Measure	Description
CO2	Carbon dioxide (CO2) is a gas we exhale. Because carbon dioxide is a result of human metabolism, concentrations within a building are often used to indicate if enough fresh air is supplied to the space. Concentrations between 350-1000 ppm are normal for an adequately ventilated space. Higher concentrations usually indicate a need for more fresh air.
HCHO	This is indoor air formaldehyde. It is gas that comes from many things like smoking, natural gas, building materials and indoor furnishings. Moderate concentrations can give off a strong chemical odor. As higher concentrations can cause health issues, it is an important gas to monitor. One can expect higher concentrations in newer buildings. Concentrations between 15-50 ppb are normal for an adequately ventilated space.
TVOC	Total Volatile Organic Compounds refers to the total concentration of multiple airborne gasses present in the air. These gasses can come from smoking, natural gas, building materials and indoor furnishings. As higher concentrations can cause health issues, TVOC becomes an important aspect of air to monitor. One can expect higher concentrations in newer buildings. Normally acceptable levels of TVOC range from 0.3 to 0.5 ppb.
PM2.5	Particulate Matter (PM) is a mixture of solid and liquid particles that are suspended in the air. PM2.5 refers to very small particles that remain suspended in air longer. Fine dust, spores and pollen are some examples. Forest fires and smog also contribute to PM2.5 in the air. Normally acceptable levels of PM2.5 range from 10-30 $\mu g/m^3$. Some people may experience health issues as concentrations rise above 35 $\mu g/m^3$ and even more health issues above 100 $\mu g/m^3$.

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To install the IAQ

Follow the steps below to install your IAQ.

1. Connect the power supply to the IAQ.
2. Configure your *WiFi connection* (page 3).
3. Follow the installation wizard on the IAQ for the first boot of the device.
   - You must select a 4 to 10 digit numerical PIN. Record this PIN, as it will be required to modify the settings later.
   - The IAQ automatically locates and connects to your building automation system.
4. Calibrate your *CO2 sensor* (page 3).

You can now begin using your IAQ.

To configure the IAQ

Follow the instructions below to customize the settings on your IAQ.

To adjust the brightness

Brightness setting

1. Tap the **Settings** icon .
2. Tap **Brightness**, and move the brightness slider to the desired position.
3. Tap the **Back** icon when you are finished.

Automatic dimming setting

Automatic dimming causes the IAQ to dim when not in use, and brighten when your hand come close to the screen.

1. Tap the **Settings** icon .
2. Tap the **Automatic Dimming** toggle to turn automatic dimming on or off.
3. Tap the **Back** icon when you are finished.

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To calibrate CO2

Before using your IAQ, follow the steps below to calibrate your CO2 sensor.

1 Tap the **Settings** icon .

2 Tap the **CO2** icon

, and follow the directions on the device (see below).
   a) Place the product outdoors for five minutes.
   b) Tap **Calibration**.

3 Tap the **Back** icon when you are finished.

To set the WiFi and BACnet configuration

NOTES

- The BACnet Device Instance and device name can only be edited with the Access PIN that is set at the first boot of the IAQ.
- The default BACnet Instance is automatically generated on the first boot.
- The BACnet Instance must be a numeric value between 0 and 4,194,302. This number must be unique within the BACnet network or the device will shut down BACnet communications until a unique number is assigned.
- The default name name is "IAQ Desktop Sensor". This field must be populated for BACnet communication to function.

1 Tap the **Settings** icon .

2 Tap the **WIFI** icon

.

3 Complete the information required, as described below.
   a) Next to **WiFi**, in **Available Networks**, select your WiFi network.
   b) Next to **BACnet**, note that the **Device Instance** is automatically generated as described in **NOTES** above. You can change the **Device Instanc**e once the entire building is assigned BACnet Instance numbers for all devices.
   c) To change the **Device name**, tap in the field and enter a new name.

4 Tap the **Back** icon when you are finished.

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To change your PIN

1 Tap the **Settings** icon .

2 Tap the **About** icon

.

3 Click **Change Pin** and follow the directions on the screen. The **PIN** must be 4 to 10 numeric characters.
NOTE You must enter the current PIN to change the **PIN**.

4 Tap the **Back** icon when you are finished.

To change fahrenheit / celsius

There are two methods of changing the temperature units that appear on the IAQ.

From the Main screen

1 Tap the temperature reading.

2 Tap the **Fahrenheit / Celsius** toggle to select the desired unit.

3 Tap the **Back** icon when you are finished.

From Settings

1 Tap the **Settings** icon .

2 Tap the **Units** icon

.

3 Tap the **Fahrenheit / Celsius** toggle to select the desired unit.

4 Tap the **Back** icon when you are finished.

To change threshold limits

See *Air quality measure descriptions* (page 1) for more details on the available measures.

1 Tap the **Settings** icon .

2 Tap the **Units** icon

.

3 Enter your **PIN**.

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4 Enter the threshold limits you require. Be aware that these limits only change the color of the display for that measure (text turns red when the measure is beyond the threshold limit). It does not affect your building automation system settings in any way.
   - Temp
   - Temperature Offset
   - Humidity
   - CO2
   - HCHO
   - TVOC
   - PM2.5

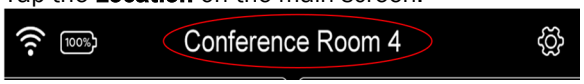
5 Tap the **Back** icon when you are finished.

To change the IAQ location name

There are two methods of changing the IAQ location name.

From the Main screen

1 Tap the **Location** on the main screen.



2 Enter the desired location name (limited to 25 characters).

3 Tap the **Back** icon when you are finished.

From Settings

1 Tap the **Settings** icon .

2 Tap the **Location** icon

.

3 Enter your **PIN**.

4 In the **Device Location** dialog box, enter the desired location name (limited to 25 characters).

5 Tap the **Back** icon when you are finished.

To change the logo

1 Tap the **Settings** icon .

2 Tap the **Logo** icon

.

3 To display a logo, or hide the logo, tap the **On/Off** toggle as desired.

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4 If you chose to display a logo, tap the radio button next to the logo you want displayed on the front of your IAQ.

5 Tap the **Back** icon when you are finished.

To reset your IAQ to factory defaults

1 Tap the **Settings** icon .

2 Tap the **About** icon

.

3 Click **Factory Reset** and enter your **PIN**.

4 Follow the directions on the screen.

CAUTION Be aware that this deletes *all* settings in the device.

5 Tap the **Back** icon when you are finished.

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Document revision history

Important changes to this document are listed below. Minor changes such as typographical or formatting errors are not listed.

Date	Topic	Change description	Code*
		No changes yet	

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