



# IAQ Sensor

Our New Indoor Air  
Quality Sensor



Daikin's newest device measures and analyzes your indoor environment to improve your well-being



# Why Indoor Air Quality Matters

## ✓ Indoor Air Quality

Indoor Air Quality (IAQ) refers to the quality of the air in indoor environments, which affects building's occupants during their everyday lives. When designing HVAC systems for residential buildings, schools, offices, or light commercial buildings, many things must be considered. While it is important to meet the cooling and heating demand, we should also consider aspects such as ventilation, air filtration, and indoor air quality.

Did you know that breathing indoor air, whether it is at home, at the office, or in a hotel room, can be much more polluted than outdoor air? Remember that 90% of our life is spent indoors, and indoor air quality can be 2 to 5 times worse than outdoor air.

## ✓ Indoor Air Quality components

Indoor Environment Quality (IEQ) is broader than IAQ, and includes lighting, noise, and electromagnetic fields.

### 1. Ventilation

Ensures the provision of fresh and clean air

### 2. Energy recovery

Delivers energy savings by transferring heat and moisture between airflows

### 3. Air processing

Ensures clean and healthy air by filtering out pollen, dust, and odours that are harmful to our health

### 4. Humidification

Ensures the desired moisture level in the conditioned space



## ✓ Ventilation

Ventilation systems ensure optimal climate conditions by providing a fresh, healthy, and comfortable environment for buildings of all sizes, as well as for different applications.

In a completely closed room, air cannot easily enter or leave, causing air pollutants to accumulate which could affect the health of the people who use the room. This could impact the health of people in the room. Ventilation is essential for diluting and removing these air pollutants.

A well-maintained ventilation system with an adequate air-exchange rate have been demonstrated to be an effective solution to protect people from contaminants, including viruses.

## ✓ Monitoring Indoor Air Quality

Nowadays, most things that surround us can be monitored and tracked, even Indoor Air Quality (IAQ). Monitoring and tracking IAQ values can help us to understand how our surrounding environment affects our well-being, and then take action to improve the quality of the environment in which we live, whether this is our homes, the office, a restaurant, schools, or shops.



# Daikin IAQ Sensor Features



The Daikin IAQ Sensor measures your well-being by tracking indoor air quality values, environmental comfort, and electromagnetic pollution. It is available with 12 sensors and 15 parameter measures, and connects through your Wi-Fi network or via NB-IoT technology.



## Complete Standalone Installation

The Daikin IAQ Sensor does not have to be paired with another product, for an **extremely easy and completely standalone installation** that takes about a minute. The device can be powered up with **microUSB power supply (included)**.



## Caelum Monitoring Platform

The device connects to Caelum, Daikin's monitoring platform, at [daikiniaq.com](http://daikiniaq.com). This **enables you to easily monitor Indoor Air Quality levels and create regular reports based on the data detected by the sensor**. You can even use the platform to show your indoor air quality levels to your visitors.





## Configuration App

The **configuration app** is available as **Daikin AirSense** on both **the App Store and Play Store**. Once installed on your mobile device and logged in, scan the QR code on the IAQ sensor and **the app will guide you through the entire configuration process**.



## Connectivity

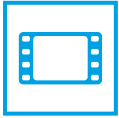
The IAQ sensor ensures **perfect integration with Daikin on Site and Daikin Cloud Service, Daikin's remote monitoring and smart maintenance platform**. It gives you perfect control over the entire heating, ventilation and air conditioning system installed in your building.



## Green Building Certification

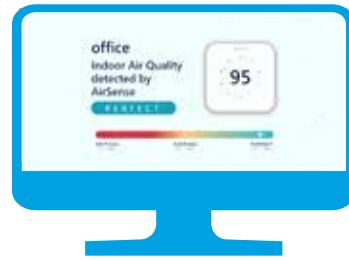
Installing the Daikin IAQ sensor can help you achieve better sustainability ratings and green building projects certified with **LEED and WELL certification** thanks to **Indoor Environmental Quality credits**.





## Video wall

The video wall is a great tool to have a general overview of the measurements conducted by the device. This screen can be shared with the occupants of the buildings to show in each moment the Indoor Air Quality status.



## Communication capability

**IoTNB:** Good penetration. Complete standalone installation. This is a perfect solution for service purposes where access to local Wi-Fi is not allowed or not available.

**Wi-Fi:** Easy. Complete standalone installation.



85 x 85 x 60 mm

## Sensor characteristics

### AMBIENT LIGHT

Range: 0 lux to 120000 lux  
Precision:  $\pm 10\%$   
Resolution: 0,1 lux

### TEMPERATURE

Range:  $-40\text{ }^{\circ}\text{C}$  a  $85\text{ }^{\circ}\text{C}$   
Precision:  $\pm 1\text{ }^{\circ}\text{C}$  (nel range 0/65  $^{\circ}\text{C}$ )  
Resolution: 0,1  $^{\circ}\text{C}$

### HUMIDITY

Range: 0 to 100% RH  
Precision:  $\pm 3\%$  RH  
Resolution: 0,1% RH

### AIR PRESSURE HPA

Range: 300 to 1100 mbar (hPa)  
Precision:  $\pm 1$  mbar (hPa)  
Resolution: 0,18 mbar (hPa)

### SOUND PRESSURE

Range: 35 to 120 dBspl  
Frequency: from 50 Hz to 20 KHz  
Precision:  $\pm 1$  dBspl  
Resolution: 0,1 dBspl

### FINE DUST

Concentration Measure PM10/PM2.5:0  $\mu\text{g}/\text{m}^3$  to 1000  $\mu\text{g}/\text{m}^3$   
Precision: (from 0  $\mu\text{g}/\text{m}^3$  to 100  $\mu\text{g}/\text{m}^3$ ) :  $\pm 15\text{ } \mu\text{g}/\text{m}^3$   
Precision: (from 100  $\mu\text{g}/\text{m}^3$  to 1000  $\mu\text{g}/\text{m}^3$ ) :  $\pm 15\%$   
Resolution: 1  $\mu\text{g}/\text{m}^3$

### ELECTROSMOG

LF Range: 0-400000 nT - Range: 5 Hz - 120 Hz  
Precision:  $\pm 5\%$  - Resolution: 25nT  
HF Range: 0 - 10 V/m - Range: 50 MHz - 300 GHz  
Precision:  $\pm 10\%$  - Resolution: 0,1 V/m  
Measurements performed on 3 axes

### AIR QUALITY

Range: 0 to 500  
Precision:  $\pm 10\%$   
Resolution: 0,1

### CO<sub>2</sub>

Range: 0 to 5000 ppm  
Precision:  $\pm 30$  ppm (da 0 a 1000 ppm)  
 $\pm 3\%$  (over 1000 ppm)  
Resolution: 1 ppm

### TVOC

Range: 0 ppb to 1187 ppb  
Resolution: 1 ppb  
Precision:  $\pm 10\%$

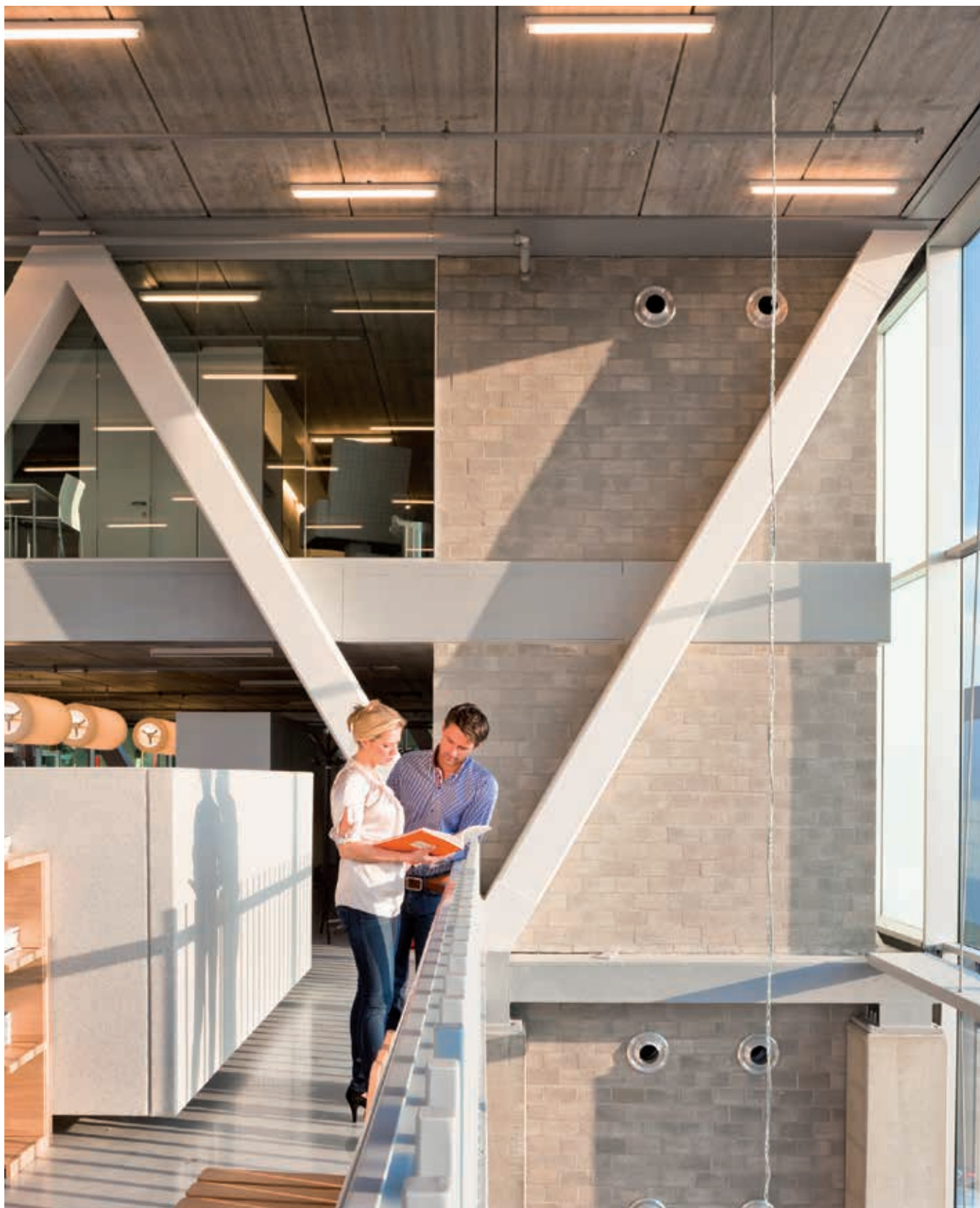
### CO<sub>2</sub>e

Range: 400 to 8192 ppm  
Precision:  $\pm 10\%$   
Resolution: 1 ppm

### Wi-Fi NETWORKS & LEVEL (2,4GHz band)

Detects Access Point n° in band 2.4Ghz and overall signal level (from 0 to -100 dBm)





**DAIKIN AIRCONDITIONING CENTRAL EUROPE HandelsgmbH**

Lemböckgasse 59/1/1, 1230 Vienna, Austria · Tel.: + 43 (0) 1 253 21 11 · e-mail: office@daikin-ce.com · www.daikin-ce.com

Daikin products are distributed by:



Daikin Europe NV participates in the Eurovent Certified Performance programme for Fan Coil Units and Variable Refrigerant Flow systems. **Daikin Applied Europe SPA** participates in the Eurovent Certified Performance programme for Liquid Chilling Packages, Hydronic Heat Pumps and Air Handling Units. Check ongoing validity of certificate: [www.eurovent-certification.com](http://www.eurovent-certification.com)

The present publication is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V. / Daikin Central Europe HandelsGmbH, Daikin Europe N.V. / Daikin Central Europe HandelsGmbH have compiled the content of this publication to the best of their knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. / Daikin Central Europe HandelsGmbH explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this publication. All content is copyrighted by Daikin Europe N.V.

Daikin IAQ Sensor brochure 2021-2022 | Version June 2021  
We reserve the right for printing errors and model changes