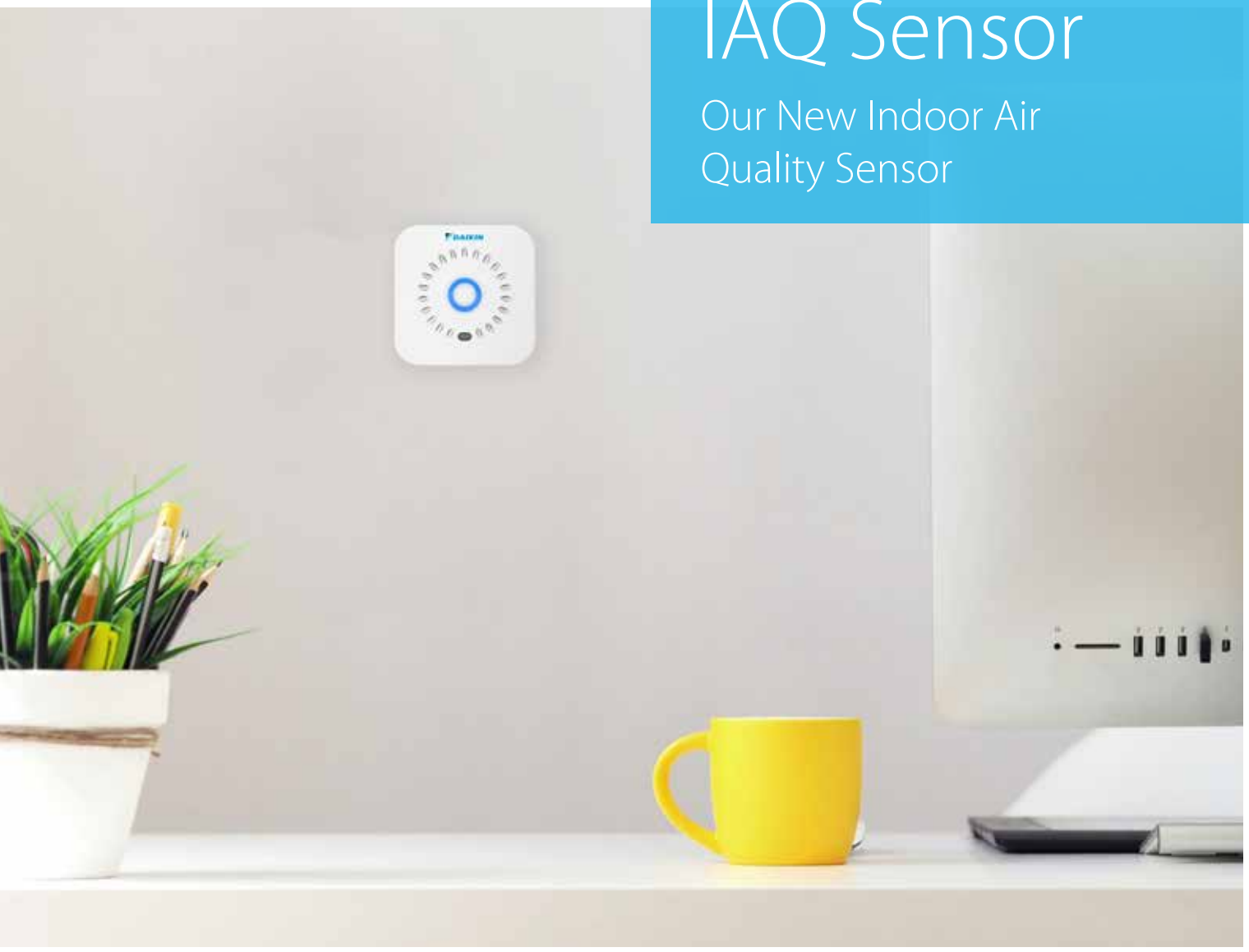
IAQ Sensor

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. 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 Certificationn

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: ±10%
Resolution: 0,1 lux

TEMPERATURE
Range: -40 °C a 85 °C
Precision: ±1 °C (nel range 0/65 °C)
Resolution: 0,1 °C

HUMIDITY
Range: 0 to 100% RH
Precision: ±3% RH
Resolution: 0,1% RH

AIR PRESSURE HPA
Range: 300 to 1100 mbar (hPa)
Precision: ± 1 mbar (hPa)
Resolution: 0,18 mbar (hPa)

SOUND PRESSURE
Range: 35 to 120 dBspl
Frequency: from 50 Hz to 20 KHz
Precision: ±1 dBspl
Resolution: 0,1 dBspl

FINE DUST
Concentration Measure PM10/PM2.5:0 µg/m^3 to 1000 µg/m^3
Precision: (from 0 µg/m^3 to 100 µg/m^3) : ±15 µg/m^3
Precision: (from 100 µg/m^3 to 1000 µg/m^3) : ±15%
Resolution: 1 µg/m^3

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

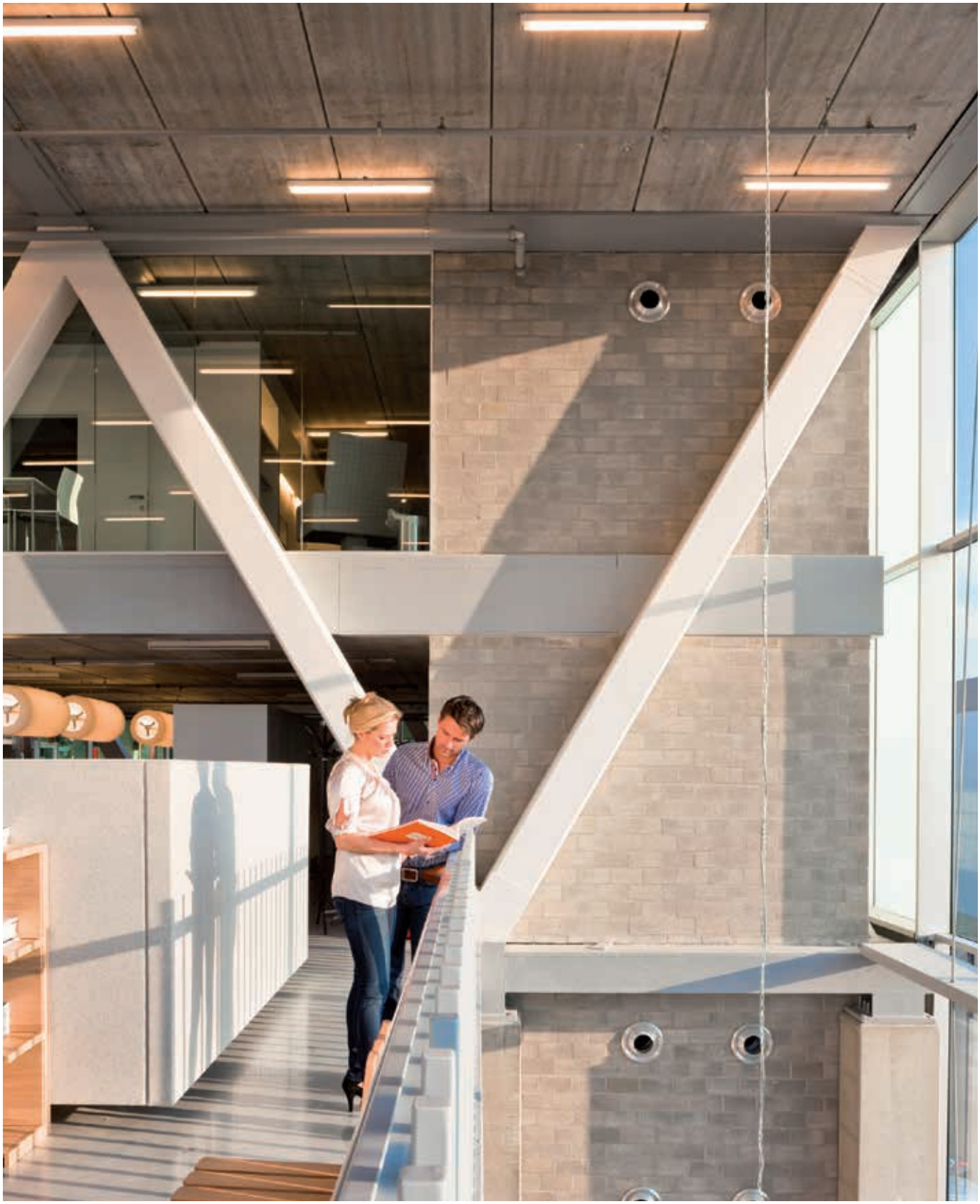
AIR QUALITY
Range: 0 to 500
Precision: ±10%
Resolution: 0,1

CO_2
Range: 0 to 5000 ppm
Precision: ±30 ppm (da 0 a 1000 ppm)
±3% (over 1000 ppm)
Resolution: 1 ppm

TVOC
Range: 0 ppb to 1187 ppb
Resolution: 1 ppb
Precision: ±10%

CO_2e
Range: 400 to 8192 ppm
Precision: ±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)



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