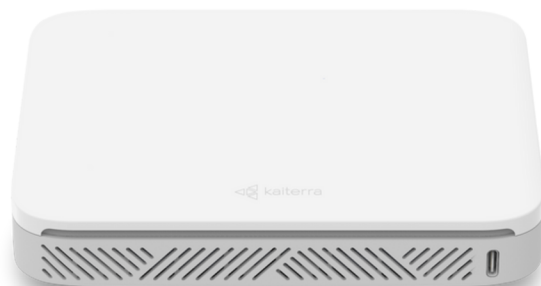


Sensedge Mini Technical Specifications

(SE-200 & SE-200P)



Product Overview

RESET Grade B certified and part of the Works with WELL catalog, the Sensedge Mini is a compact indoor air quality monitor made for commercial buildings and modern workplaces. It offers both cloud-based analytics and BMS integration, making it a perfect fit for those looking for in-depth insights and building automation.

Product Features

Default sensors

Particulate Matter (PM_{2.5}, PM₁₀), TVOC, CO₂, Relative Humidity, Temperature

Additional sensors

O₃ (KM-207)

Cloud + BMS integration

Send air quality data both to the cloud for detailed analysis and to the BMS via BACnet/IP for powerful automation and control.

Replaceable sensor modules

Modules can be swapped in seconds providing a cost-effective way to maintain long-term accuracy and avoid the traditional calibration process.

Minimal, unobtrusive design

Sleek and compact design that blends into any space effortlessly.

Sensor Specification

Particulate Matter Sensor

Sensor technology

Laser particle sensor (Light scattering)

Mass concentration size range

PM₁: 0.3 to 1.0 µm

PM_{2.5}: 0.3 to 2.5 µm

PM₁₀: 0.3 to 10.0 µm

Mass concentration range

0 to 1,000 µg/m³

Mass concentration accuracy for PM_{2.5}

0 to 30 µg/m³: ±3 µg/m³

30 to 1000 µg/m³: ±10 % m.v.

Mass concentration accuracy for PM₁₀

0 to 30 µg/m³: ±3 µg/m³

30 to 1000 µg/m³: ±15 % m.v.

Sensor output resolution

1 µg/m³

Calibration

Calibrated against standardized aerosol mix

WELL specification requirements

Adjustable particle density (K-factor) to accommodate project/region specific particulate profile.

Complies with [WELL Performance Verification Guidebook](#) to be used in WELL certification.

Ozone Sensor (Available with KM-207 module)

Sensor technology

Electrochemical

Measurement range

20 to 2,000 ppb

Accuracy

±10%

Sensor output resolution

1 ppb

Target gas

O₃

Temperature Sensor

Sensor technology

Digital sensor

Measurement range

-40°C - 125 °C

Accuracy

±1 °C

Comply with WELL⁵

Sensor output resolution

0.01 °C

TVOC Sensor

Sensor technology

Multi-pixel metal oxide sensor (MOx)

Target gas profile

Complex mixture of 22 VOCs¹ as defined by Molhave et al.

Measurement range

0 - 60,000 ppb

Accuracy

±15 % ±8 ppb

Sensor output resolution

1 ppb

Calibration

Calibrated against ethanol

Sampling process

Passive

WELL specification requirements

Calibration gas: ethanol

Target gas profile (ppb=µg/m³ conversion

factor under STP): 22 VOC mixed per Molhav et al. (1 ppb = 4.57 µg/m³)

Complies with [WELL Performance Verification Guidebook](#) to be used in WELL certification.

CO₂ Sensor

Sensor technology

Non-dispersive infrared (NDIR)

Measurement range

400 to 2,000 ppm²

Up to 10,000 ppm extended range³

Accuracy

± 40 ppm ± 3%⁴ (Comply with ANSI/ASHRAE Standard 62.1-2022)

Sensor output resolution

1 ppm

Target gas

CO₂

Relative Humidity Sensor

Sensor technology

Digital sensor

Measurement range

0 - 100 %RH

Accuracy

±5 % RH

Sensor output resolution

0.01 % RH

Device Specification

Power

USB-C: 100 - 240 V AC: (5V 1.8A DC)
Direct Wiring: 12 - 30 V DC
PoE (Available for model SE000200P):
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IEEE 802.3af (PoE), Class3
IEEE 802.3at (PoE+), Class3
PD maximum power ≤ 10 W
PSEs: Midspan & endspan supported Cable: Cat5
(Cat5e, Cat6, and Cat6a)
Power Consumption:
Average: 1.7W
Peak: 4~5W

Connectivity

Wi-Fi:
2.4 GHz 802.11 b/g/n
Security supported: 64/128 WEP, WPA-PSK,
WPA2-PSK, WPA, WPA2 Personal
Ethernet:
IEEE 802.3
Data rate: Up to 100 Mbps

Integration

BACnet/IP
RS-485 Modbus/RTU
Cloud MQTT
On premise MQTT
Open API

Installation

Methods:
Surface mount
Drywall mount
Electrical box mount

Data Logging & Storage

Frequency of readings (Log interval):
1 minute, 1 hour, 1 day
Data push interval: 1 minute⁶
Onboard memory: 1 hour of data

Modules & Calibration

Compatible modules:
KM-200: Particulate Matter (PM_{2.5}&PM₁₀)
KM-203: TVOC
KM-207: TVOC, Ozone
Calibration: Swappable sensor modules

Security

Kaiterra's platform architecture meets the most stringent security standards and is regularly subjected to 3rd party penetration tests. Read more about our security [here](#).

Certifications

Quality: RESET Grade B
Building Automation:
BTL: Certified under the BACnet Smart Sensor (B-SS) device profile
Healthy Building: Works with WELL

Size & Weight

155 mm x 129 mm x 34 mm (6.1" x 5.1" x 1.3")
370 g (0.82 lbs)

Operating conditions

Operating temperature: 0 - 50 °C
Operating humidity: 5 to 95 %RH, non-condensing

1. n-Hexane, n-Nonane, n-Decane, n-Undecane, 1-Octane, 1-Decene, Cyclohexane, m-Xylene, Ethylbenzene, 1,2,4-Trimethylbenzene, n-Propylbenzene, α -Pinene, n-Pentanal, n-Hexanal, Iso-propanol, n-Butanol, 2-Butanone, 3-Methyl-3-butanone, 4-Methyl-2-pentanone, n-Butylacetate, Ethoxyethylacetate, 1, 2-Dichloroethane
2. Extended exposure to concentrations below 400 ppm may result in incorrect operation of ABC algorithm and should be avoided.
3. Sensor provides readings in the extended range but the accuracy may be lower than that specified in the table.
4. The accuracy specification covers environments ranging from 0-50°C and 0-80% RH, and complies with indoor air quality standards ANSI/ASHRAE Standard 62.1-2022 at 25°C.
5. As a RESET Certified Grade B air quality monitor, this device automatically meets technical requirements for this parameter.
6. Customizable upon request