

Sensedge Go for Outdoors Technical Specifications

(EK-300A & EK-300W)



Product Overview

The Sensedge Go for Outdoors is a wireless, battery-powered air quality monitor designed for flexible outdoor deployment. Durable and built to withstand various weather conditions, it pairs a robust protective housing with long-lasting battery power to provide accurate, real-time data on key air quality parameters. This wireless solution empowers real estate leaders and building managers to assess their surrounding environment without the constraints of cabling or infrastructure.

Product Features

Comprehensive monitoring

Supports monitoring for PM2.5, PM10, CO₂, Temperature, Humidity, and Air Pressure, plus critical outdoor pollutants including NO₂, O₃, and CO.

Deeper insights

No more fragmented insights. View your outdoor data alongside your indoor and in-duct metrics on the Kaiterra Data Platform, unlocking a comprehensive understanding of your complete environment.

Wireless outdoor performance

Engineered for all-weather durability, this device features Adaptive Sampling™ technology for up to 8 years of battery life. The wireless design eliminates cabling and minimizes maintenance, enabling flexible installation in any outdoor location.

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.

Sensedge Go for Outdoors is Available in 2 Models

	EK-300A	EK-300W
	Sensedge Go for Outdoors	Sensedge Go for Outdoors for WELL
CO ₂	✓	✓
Temperature	✓	✓
Relative Humidity	✓	✓
Atmospheric Pressure	✓	✓
Particulate Matter (PM _{2.5} , PM ₁₀)	✓	✓
NO ₂		✓
CO		✓
O ₃		✓

Sensor Specification

Particulate Matter Sensor

Sensor technology

Laser particle sensor (Light scattering)

Mass concentration size range

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.

Temperature Sensor

Sensor technology

Digital sensor

Measurement range

-20 to 100 °C

Accuracy

±0.2 °C

Sensor output resolution

0.1 °C

NO₂ Sensor

(Available in EK-300W)

Sensor technology

Electrochemical

Measurement range

0 - 2,000 ppb

Sensor output resolution

1 ppb

Calibration

NO₂ in clean air

Precision

0 to 100 ppb: ±10 ppb

>100 ppb: ±10 % ⁴

Sampling process

Passive

CO₂ Sensor

Sensor technology

Non-dispersive infrared (NDIR)

Measurement range

400 to 5,000 ppm¹

Up to 10,000 ppm extended range²

Accuracy

± 40 ppm ± 3%³ (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

±2 % RH

Sensor output resolution

0.1 % RH

Atmospheric Pressure

Sensor technology

Microelectromechanical systems (MEMS) sensor

Pressure Accuracy

±0.3hPa

Pressure range

300-1100hPa

CO Sensor

(Available in EK-300W)

Sensor technology

Electrochemical

Measurement range

0 to 100 ppm

Accuracy

0 to 20 ppm: ±1 ppm

>20 ppm: ±5%

Sensor output resolution

0.1ppm

Target gas

CO

O₃ Sensor

(Available in EK-300W)

Sensor technology

Electrochemical

Accuracy

0 to 100 ppb: ±10 ppb

>100 ppb: ±10 %

Measurement range

0 to 2,000 ppb

Sensor output resolution

1 ppb

Target gas

O₃

Device Specification

Power

Battery: 6 x Li/SOCI2 AA size

USB-C: 5V 0.5A (Cable not included)

PoE: Via PoE to USB-C converter (Cable not included)

Battery Life

Up to 8 years of battery life⁵ using Adaptive Sampling™ and 3.5 years using a high frequency fixed sampling rate^{6 7}

Connectivity

Frequency range (MHz):

Sub-Ghz wireless communication

IN865/EU868/US915/AU915/KR920/AS923

These frequency bands cover over 200 countries, contact Kaiterra for details on compliance in your location.

Gateway supports cellular⁸ and ethernet

Integration

BACnet/IP via Gateway

Installation

Surface mount

Post mount

Size & Weight

L155 mm (6.1 in) x H35 mm (1.4 in) x W126 mm (5.0 in)

Sensedge Go: 388 g (0.86 lbs)

Outdoor housing: 426 g (0.94lbs)

Data Logging & Storage

Data Storage:

Cloud storage

Local data storage: 0.5 days

Data sampling:

Adaptive Sampling™ to automatically adjust sampling frequency to maximize battery life.

Selected sensors support a configurable sampling rate from 1 minute to 24 hours.

Modules & Calibration

Compatible modules:

KM-300: Particulate Matter sensor module

KM-308: CO, NO₂, & O₃ sensor module

Calibration: Swappable sensor modules

Operating conditions

Operating temperature: -20 to 50 °C

Operating humidity: 5 to 95 %RH, non-condensing

Certifications

Quality: RESET Grade B

Healthy Building: Works with WELL

Environmental: ROHS, WEEE, REACH

Safety: CE (Europe), FCC (US), IC (Canada),

MIC (Japan), RCM (Australia & New Zealand),

TDRA (UAE)

1. Extended exposure to concentrations below 400 ppm may result in incorrect operation of ABC algorithm and should be avoided.
2. Sensor provides readings in the extended range but the accuracy may be lower than that specified in the table.
3. 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.
4. Sensor specifications are under controlled laboratory conditions. Field measurements may use localized ambient air quality and historical infiltration rates to enhance the accuracy and baseline readings of NO₂ concentrations. This method is effective under typical indoor conditions but may not suit environments with persistently high indoor NO₂ levels.
5. Using Adaptive Sampling™ in a building with 15 devices, located in a typical North American city with mechanical ventilation and strong wireless signal strength to the gateway.
6. During operating hours (9-5, Mon-Fri): one sample per minute for all sensors except particulate matter, and one sample every 10 minutes for particulate matter. Outside of operating hours: one sample every five minutes for all sensors except particulate matter sensor, and one sample every 60 minutes for particulate matter.
7. Actual battery life may vary based on usage, environmental conditions, and other factors. Model EK-300W has a battery life expectancy of 3.5 years. Model EK-300A has a battery life expectancy of 8.5 years.
8. Cellular is supported in select countries and regions.