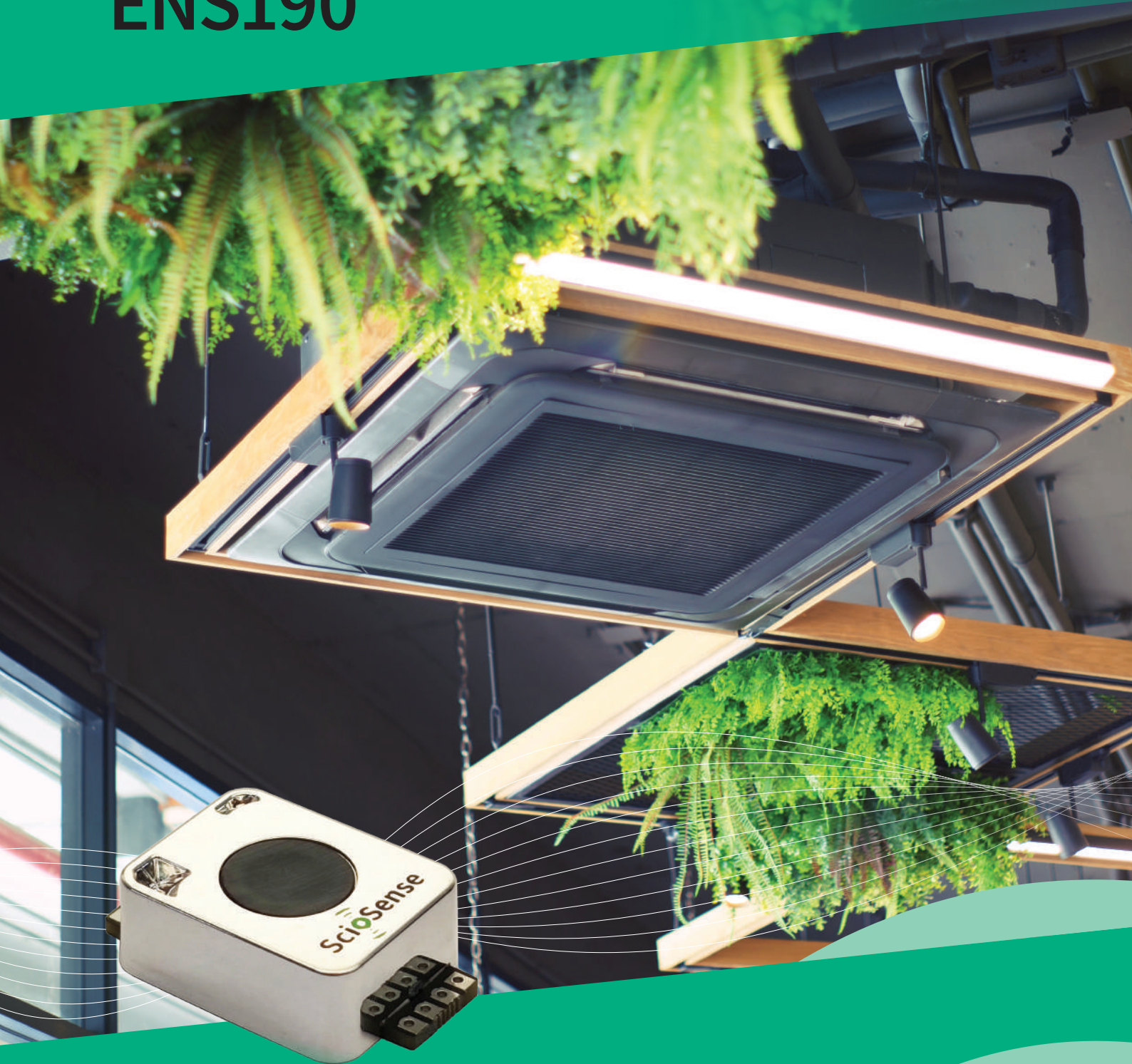


ENS190



NDIR CO₂ Sensor

- High accuracy and stability
- Compliance with industry standards
- Fast response time

ENS190

NDIR CO₂ Sensor

The ENS190 is a high-performance, non-dispersive infrared (NDIR) CO₂ sensor designed for precise and reliable carbon dioxide measurement.

At the core of the ENS190 is its patented "M-shaped" long optical path gas chamber, a uniquely engineered design that maximizes the effective optical path within a compact air cavity. This innovation, combined with a self-developed fully automated high-precision

calibration system, ensures exceptional accuracy, consistency, and a wide measurement range. With its advanced sensing capabilities and robust design, the ENS190 provides a solution for applications demanding high-precision CO₂ monitoring.

It complies with key regulatory standards such as WELL, RESET, California Title 24, and latest ANSI/ASHRAE Addendum d to Standard 62.1-2022.

Key Features

- Highly accurate CO₂ measurements over extended range
- Compliant with WELL, RESET, California Title 24, and ASHRAE 62.1-2022 Addendum d
- Enlarged air intake aperture
- Automatic High-Precision Calibration

Properties

- Accuracy: $\pm(30\text{ppm} + 3\% \text{ MV})$
- Measurement range 400 – 10,000ppm CO₂
- Alarm output
- UART, PWM, RS485 and Modbus communication
- Lifetime: >15 years
- Supply Voltage: 4.5V to 5.5V
- Average current consumption: < 15mA
- Dimensions: 33 x 20 x 9.6 mm³

Key Benefits

- Reliable, multi-purpose air quality monitoring
- Meets current regulatory requirements
- Fast response times
- Consistent performance over time without intervention

Typical Applications

- HVAC / Demand Controlled Ventilation (DCV)
- Home and Building automation
- Home appliances / air purifiers
- IoT devices / air quality monitors
- Agriculture / greenhouses

Application Circuit

