



INDOOR AIR QUALITY INSTRUMENTS · PRODUCT BRIEF

iAQ-Pro-D

16-Parameter HVAC Duct Mount IAQ Monitor

Rev A · August 2026 | **Category:** Indoor Air Quality Instruments | **Interface:** Modbus / ARG Cloud (MQTT)

- 16
- 10 yr
- 7.2"
- 80–220V

OVERVIEW

The iAQ-Pro-D installs directly in HVAC ductwork to continuously measure PM, CO₂, TVOC, humidity, temperature, filter pressure drop, and air velocity — with MCERTS certified PM and 10-year factory-calibrated sensor life.

Designed for HVAC integrators and building automation engineers who need accurate, continuous IAQ data without disrupting existing infrastructure.

Real-time monitoring of PM, CO₂, VOC, humidity, temperature, filter pressure drop, and air velocity — directly in the HVAC duct.

TECHNICAL SPECIFICATIONS

Particulate Matter	PM0.5 (number conc.), PM1.0, PM2.5, PM4, PM10 — MCERTS certified; 1–1000 µg/m ³ ; ±10 µg/m ³ (0–100) / ±10% (100–1000)
CO ₂	Non-NDIR; 400–5000 ppm; ±40 ppm + 5% of reading; calibration-free
VOC	0–1000 ppm ethanol equivalents; LOD < 0.05 ppm; lifetime > 10 years
Humidity	±1.8% RH; 0–100% RH; 6 sec response (τ63%)
Temperature	±0.2 °C; 0–90 °C; 2 sec response (τ63%)
Filter Pressure	Differential across duct filter; 0–2000 mbar; ±2 mbar
Air Velocity	Differential pressure technique; 0.1–20 m/s; ±0.2% FS
Optional Sensors	Current sensors (compressor & blower motor monitoring); UV sensor (duct disinfection monitoring)
Connectivity	Hybrid Power Line + RF (zero-config); optional factory-installed cellular (LTE)
Power	80–220 VAC, 50/60 Hz, 2 W; IEC 2-pin power cord included
Enclosure	Duct mount; 7.20" × 4.54" × 4.12"

KEY CAPABILITIES

MCERTS Certified PM. PM0.5 through PM10 — MCERTS certified by the UK Environment Agency. Both mass concentration (µg/m³) and number concentration. Sensor lifetime > 10 years.

Calibration-Free CO₂ & VOC. Non-NDIR CO₂ (400–5000 ppm, ±40 ppm) — no calibration required. High-sensitivity VOC with 0.05 ppm detection limit and 10-year sensor lifetime.

Filter & Airflow Monitoring. Differential pressure sensor monitors filter condition for maintenance alerts. Air velocity from 0.1 to 20 m/s. Catch blocked filters before they waste energy.

Zero-Config Networking. Hybrid Power Line + RF — truly plug-and-play, no field wiring configuration. Powered by the ARG G3-PLC Module. Optional factory-installed cellular modem for legacy rooftop units without neutral wiring.

CONTINUOUS IAQ DATA WHERE IT MATTERS MOST.

HVAC System Management. Continuous in-duct data for building automation and preventive maintenance. Filter condition monitoring, airflow verification, HVAC fault detection, and energy efficiency optimization.

Building IAQ Compliance. Real-time data for ASHRAE 62.1, WELL Building, and LEED certification. Building commissioning, healthy building certification, tenant IAQ reporting, continuous compliance logging.

Commercial & Industrial Facilities. Scalable monitoring across large buildings using existing HVAC infrastructure. Multi-zone IAQ monitoring, no new wiring, BMS and cloud dashboard integration, retrofit without disruption.

OEM & System Integration. Hybrid PLC+RF output connects to BMS gateways and building controllers. Configurable reporting intervals, cloud or on-premises dashboard, modular sensor complement.