



GS-AQD Series

Duct Air Quality Sensors



Overview

The GS-AQD, Indoor Air Quality Sensor uses an advanced MEMS metal oxide semiconductor sensor to detect poor air quality. The sensor reacts quickly to detect a broad range of VOCs such as smoke, cooking odors, bio-effluence, outdoor pollutants and from human activities. The sensor captures all VOC emissions that are completely invisible to CO₂ sensors. The GS-AQD provides a linear analog signal output of 0-5 or 0-10 Vdc for connection to a building automation system, as an analog stepped output of 0-10 Vdc as well as an adjustable relay output. Optional temperature output is available.

Applications

- Schools
- Office buildings
- Parking garages
- Washroom ventilation fans
- Cigarette smoke detectors

Features & Benefits

- True Air Quality Monitor
- Microprocessor based controller
- Analog, Stepped & Relay Output options
- 10 bit resolution
- Able to detect one cigarette in 15 m³ (530 cu. ft.) room

Model Selection

GS-AQDX	Duct Air Quality Monitor, 0-2000 ppm CO ₂ Equivalent
GS-AQDT	Duct Air Quality Monitor, 0-2000 ppm CO ₂ Equivalent, 10kΩ, Type II thermistor

Product Specifications

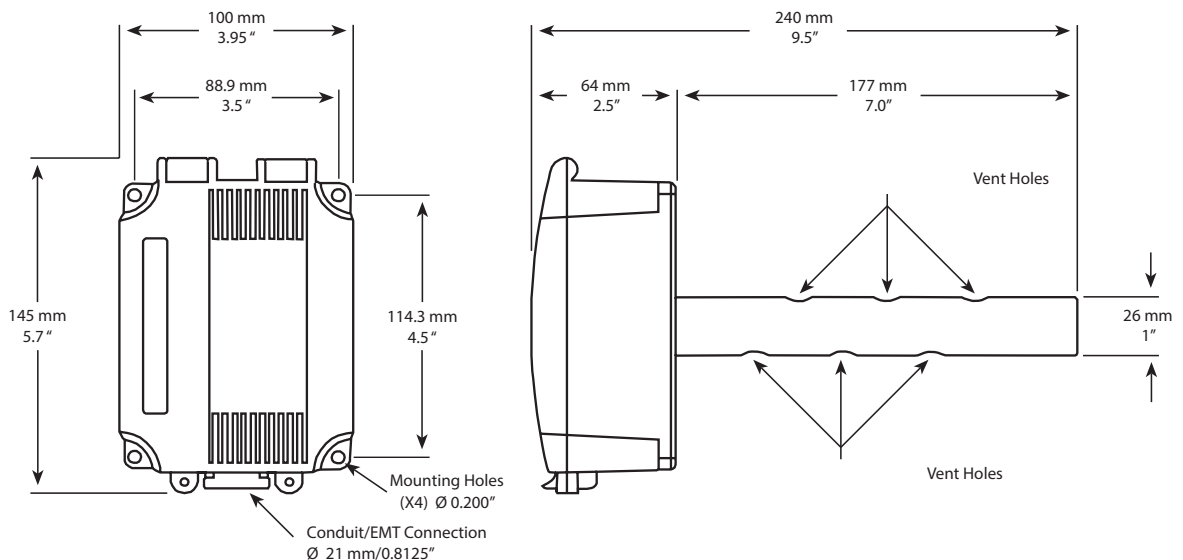
Sensing Technology	MEMS metal oxide semiconductor VOC sensor
Measurement Range	450-2000 ppm CO ₂ equivalent or 0-100% (menu selectable)
Drift Compensation	Automatic baseline correction
Power Supply	20-28 Vac/dc (non-isolated half-wave rectified)
Consumption	35 mA max @ 24 Vdc
Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected, over voltage protected
Operating Conditions	0-50 °C (32-122 °F) 5-95 %RH non-condensing
Linear Output Signal	0-5 / 0-10 Vdc (menu selectable) = 0-2000 ppm CO ₂ equivalent
Analog Stepped Output Signal	Three steps representing Good, Fair and Poor air quality (each step is independently adjustable from 0-10 Vdc)
Output Drive Capability	10 KΩ minimum
Programming and Selection	Via internal push-buttons and LCD menu
Warm-up Time	5 minutes
LCD Resolution	1 ppm / 1 %
LCD Size	1.4" W x 0.6" H (35 x 15 mm) alpha-numeric 2 line x 8 characters
Wiring Connections	Screw terminal blocks (14 to 22 AWG)
Enclosure	ABS, UL94-5VB, IP65 (NEMA 4X)
Dimensions	Enclosure: 145 W x 100 H x 64 D mm (5.7"W, x 3.95"H x 2.5"D) Probe: 177 mm (7") long x 25.4 mm (1") diameter
Weight	290 gm (10.2 oz)
Relay Output	Form A contact (N.O.) 2 Amps @ 140 Vac, 2 Amps @ 30 Vdc (trip point and hysteresis set via menu)

Temperature Sensor

Type ¹	10kΩ NTC thermistor, Type 2
Accuracy	±0.2°C; ±0.36°F

1. Temperature sensor type stated is standard. Other temperature sensor types are available.

Dimensions



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