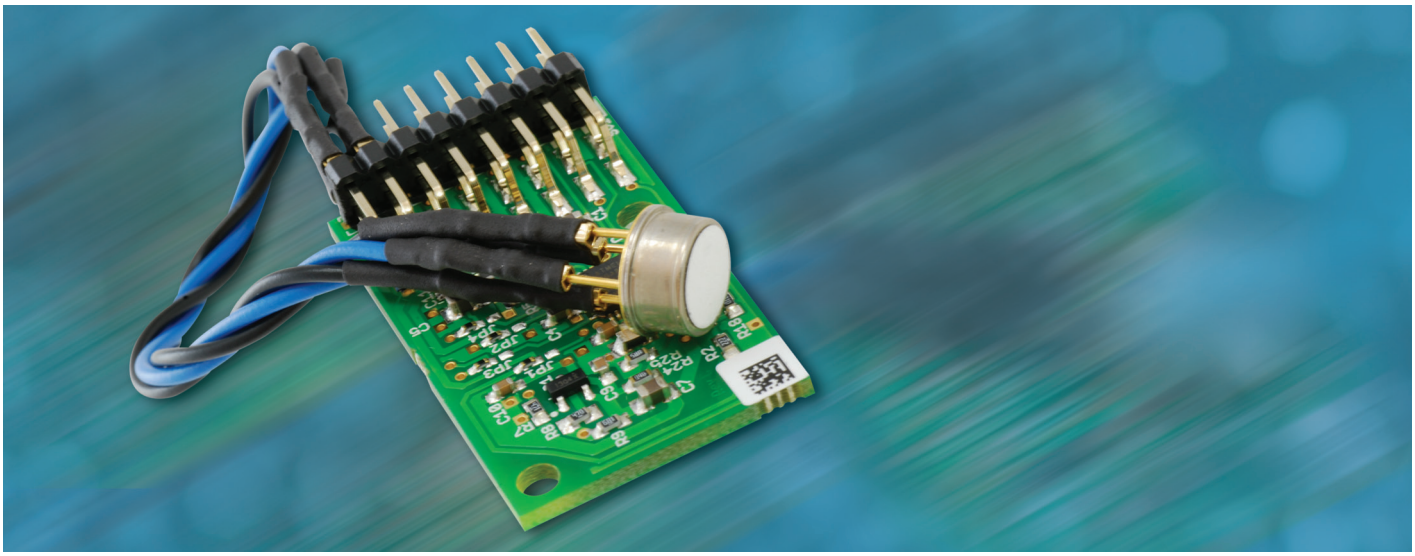
AppliedSensor

Intelligent air quality... beyond CO_2

Indoor Air Quality Duct Kit



iAQ-Duct Kit

Intelligent air quality prediction – now in air ducts

Based on the successful iAQ-2000 OEM-module for indoor air quality prediction beyond CO_2, the iAQ-Duct Kit enables the integration of a complete air duct sensor into a demand-controlled ventilation (DCV) system. The kit includes an iAQ-2000 controller board, a ready-made connection cable, and a metal oxide semiconductor (MOS) sensor to detect and respond to a broad range of volatile organic compounds in surrounding air. The sensor is assembled on a standard TO-39 header with a cap and protective diffusion membrane.

Flexible customization

The sensor on the TO-39 header is designed for probe-tip integration, while the controller board can be located in a housing outside the air duct. Both are connected via the customized cable.

Key Benefits

- Complete kit for air duct sensor integration
- Based on iAQ-2000 technology
- Modular for convenient installation

Substances Detected

- Alcohols
- Aldehydes
- Aliphatic hydrocarbons
- Amines
- Aromatic hydrocarbons
- CO, CH_4, LPG
- Ketones
- Organic acids

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Features

Sensor

Sensing technology	MEMS metal oxide semiconductor
Sensing range	450-2000 ppm CO_2 equivalents
Module	Automatic baseline correction
	Flexible communications

Electrical

Power supply	5.0 ± 0.25V, max. 20 mV ripple
Power consumption	30 mA
Output signal options	TTL
	RS232 (TTL level)
	I^2C
	0-5V
	PWM
First functional reading after startup	15 minutes

Environmental

Temperature range:	
Operation	0 to 50°C
Storage	-25 to 50°C
Humidity range	5 to 95% r.h., non-condensing

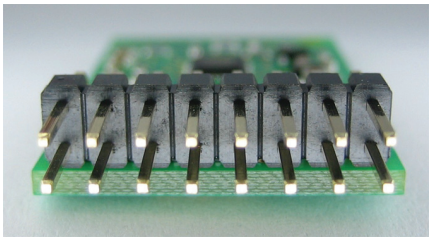
Cable

4-strand shielded, twisted-pair cable with 4-pin female connector for controller board connection and TO-39 female connector for sensor connection.

Order Information

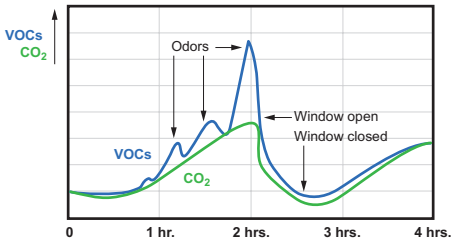
Specification	Order Number	Contents
iAQ-2000 Duct Kit Complete	PN40-0300	iAQ-2000 – Cable – Sensor on TO-39 header
iAQ-2000 Duct Kit Sensor	PN40-0350	iAQ-2000 – Sensor on TO-39 header
iAQ-2000 Standard	PN40-0100	iAQ-2000 – Sensor on board

PCB / Connector Pin Out



I/O	I/O	RXD	TXD	SDA	SCL	R_H	R_S
Reset	I/O	GND	0-5V	PWM	VCC	R_S	R_H/GND

Comparison of Air Quality Measurement in Meeting Room



Traditional carbon dioxide sensors do not respond to changes in air quality caused by odors, cigarette smoke, and other volatile organic compounds.

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