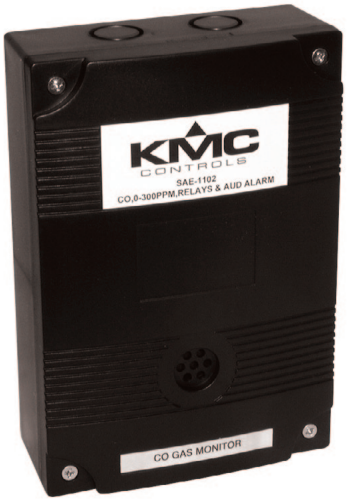
SAE-1100 Series
Carbon Monoxide (CO) Detectors

Description

The SAE-1100 series detectors are designed to sense and transmit CO (carbon monoxide) gas levels to any compatible electronic analog control or DDC automation system for the control of ventilation equipment in industrial and commercial applications. Such information is crucial to demand controlled ventilation that ensures adequate indoor air quality while minimizing the energy costs of conditioning outside air.

The KMC SAE-1100 series environmental, industrial, and commercial indoor detectors are available in both space and duct mount versions. They are for use in any industrial or commercial indoor environment where accurate CO detection is required.



CE

RoHS COMPLIANT

Features

- Electrochemical sensing elements with range of 0–300 ppm and 5% accuracy
- Field replaceable calibrated sensor module
- Optional audible alarm (SAE-1102/1152)
- Optional on-board relays with field-adjustable trip points (SAE-1102/1152)
- Powered by either 15–30 volt AC or DC source with no change to circuit required
- Choice of field-adjustable analog output signals, linearized over full range
- Menu-driven configuration set-up and testing (using the IEI-1001 LCD Display Module)

Models

SAE-1101	Space CO sensor
SAE-1102	Space CO sensor with two relays and audible alarm
SAE-1151	Duct CO sensor
SAE-1152	Duct CO sensor with two relays and audible alarm

Accessories

IEI-1001	LCD Display Module (required for configuration beyond the defaults)
XEE-6111-040	Transformer, 120-to-24 VAC, 40 VA, **single**-hub
XEE-6112-040	Transformer, 120-to-24 VAC, 40 VA, **dual**-hub

Specifications

Gas Detected Carbon Monoxide (CO)

Sensing Element Electrochemical (field replaceable)

Range 0–300 ppm

Sample Method Diffusion or flow-through, sample tube for duct

Accuracy ±5 ppm or 5% of reading for 0-300 ppm (whichever is greater) @ 32 to 122° F (0 to 50° C)

Operation Conditions –4 to 122° F (–20 to 50° C), 10 to 90% RH, non-condensing

Temperature Dependence < 0.2% full scale per °C

Stability < 5% signal loss/year

Response Time < 35 seconds for 90% step change

Warm-up Time 200 seconds

Typical Coverage Area 7500 ft^2 (700 m^2)

Power Supply 15–30 VAC/VDC (non-isolated half-wave rectified)

Consumption 80 mA max. @ 24 VDC with all options on, 150 mA average @ 24 VAC

Input Voltage Effect Negligible over specified operating range

Protection Circuitry Reverse voltage protected and output limited

Programming and Selection Via internal push-buttons, with LCD display option and jumpers

Wiring Connections Screw terminal block (14–22 AWG)

Output Signal 4–20 mA active (sourcing), 0–5 VDC, or 0–10 VDC, jumper selectable

Output Drive Capability 550 ohm max. for current output, 10K ohm min. for voltage output

Output Resolution 10 bit PWM (±0.4 ppm)

Relay Outputs

Configuration: Two form "C" contacts (NO and NC), 5 A @ 250 VAC, 5 A @ 30 VDC, power factor = 1

Trip Point: Relay 1: Programmable 25 or 40–350 ppm in 10 ppm increments

Relay 2: Programmable 100–400 ppm in 10 ppm increments

Hysteresis/Deadband: Programmable 10, 15, 25, 50, or 75 ppm

Enclosure Ratings IP21, NEMA 1

External Dimensions

Space: 4.9" W x 7.22" H x 1.69" D (124 mm x 183 mm x 43 mm)

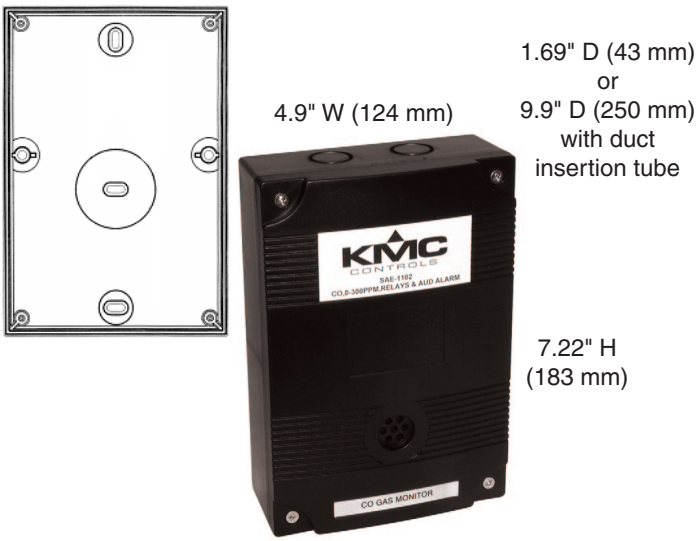
Duct: 4.9" W x 7.22" H x 9.9" (with duct insertion tube) D (124 mm x 183 mm x 250 mm)

Weight 1.05 lbs. (0.47 kg)

Regulatory UL Recognized Component for ANSI/UL-2034, UL-2075, E240671
CE and RoHS Compliant

Manufacturing ISO 9001 registered quality system

Case Dimensions and Mounting



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