



# SPECIALTY SENSORS

## CARBON MONOXIDE SENSORS

### KCO SERIES

#### DESCRIPTION

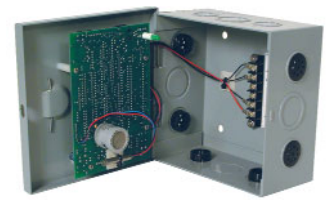
**KCO Series Carbon Monoxide Sensors** are available in analog or relay versions. The sensors are provided in heavy-duty steel enclosures, and the sensors use low-temperature components that are ideal for open parking garages in cold climates.

#### FEATURES

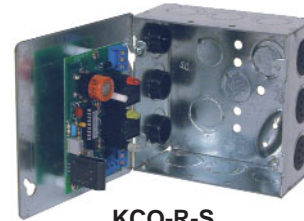
- **Two-stage alarming (KCO-R)**
- **0-200 ppm 4-20 mA output (KCO-A)**
- **Microprocessor-controlled recalibration (KCO-A)**
- **Heavy-duty enclosures**
- **Operating temperature down to -4°F (-20°C)**
- **Low-temperature option available -20°F (-29°C)**
- **Temperature and humidity compensated**



KCO-R-H



KCO-A-H



KCO-R-S

Note: Front covers are blank

#### SPECIFICATIONS

<b>KCO-R</b>		<b>KCO-A</b>	
<b>Power</b>	24 VAC/VDC ±20%, 125 mA	<b>Output signal</b>	4-20 mA into 500Ω max
<b>Power with LT option</b>	1.125A	<b>Scale</b>	0-200 ppm carbon monoxide
<b>Indicators</b>		<b>Power</b>	24 VAC ±20%, 10 VA
<b>Amber</b>	Warning	<b>Power with LT Option</b>	34 VA
<b>Red</b>	Alarm	<b>Analog resolution</b>	12 bit
<b>Flashing green/red</b>	Power on, microprocessor operating	<b>KCO-R, KCO-A</b>	
<b>Warning stage delay</b>	30 sec	<b>Operating temp</b>	-4° to 185°F (-20° to 85°C)
<b>Range</b>	0-250 ppm	<b>Sensor type</b>	Solid-state metal oxide semiconductor
<b>Response time</b>	Under 30 sec	<b>Humidity</b>	5% to 95% noncondensing
<b>Relay contacts</b>	120 VAC, 2A resistive	<b>Enclosure dimensions</b>	
<b>Setpoints</b>	Warning 25 ppm, alarm 50 ppm adjustable (reset 5-10 ppm change) (50/100 ppm optional)	<b>S (screw cover)</b>	4.81"H x 4.81"L x 2.25"D (12.2 x 12.2 x 5.7 cm)
		<b>H (hinged cover)</b>	6.25"H x 6.125"L x 3"D (15.9 x 15.6 x 7.6 cm)
		<b>Accuracy</b>	±5%
		<b>Sensor drift</b>	±10% 2 years
		<b>Sensor life</b>	10 years

#### INSTALLATION

##### **KCO-R**

The **KCO-R** is a two-stage carbon monoxide sensor with a relay output for each stage. If the CO level rises above the warning stage setpoint for over 30 seconds, the warning relay, amber warning LED, and a three-minute minimum "on" timer will activate. Once below the setpoint, the relay and LED will reset. If the concentration continues to rise and exceeds the alarm stage setpoint for 10 minutes, the alarm stage relay and red LED will activate.

##### **KCO-A**

The **KCO-A** is a microprocessor-controlled sensor with a 4-20 mA analog output based on a 0-200 ppm sensing range. The microprocessor controls the heating of the sensor and subsequent reading of the CO level. The microprocessor compensates for any drift in the sensor over time. The microprocessor system includes self-diagnostic, self-restarting, and remote failure reporting. The output signal will drop below 4 mA if a fault is discovered. If power problems cause the unit to malfunction, the unit will self-check and restart. Calibration of the unit requires the application of a **hydrated** test gas, and the push of a button performs the recalibration.



# SPECIALTY SENSORS

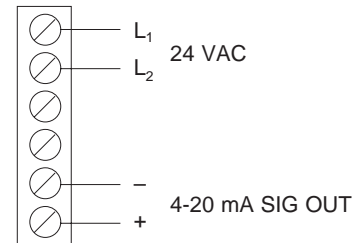
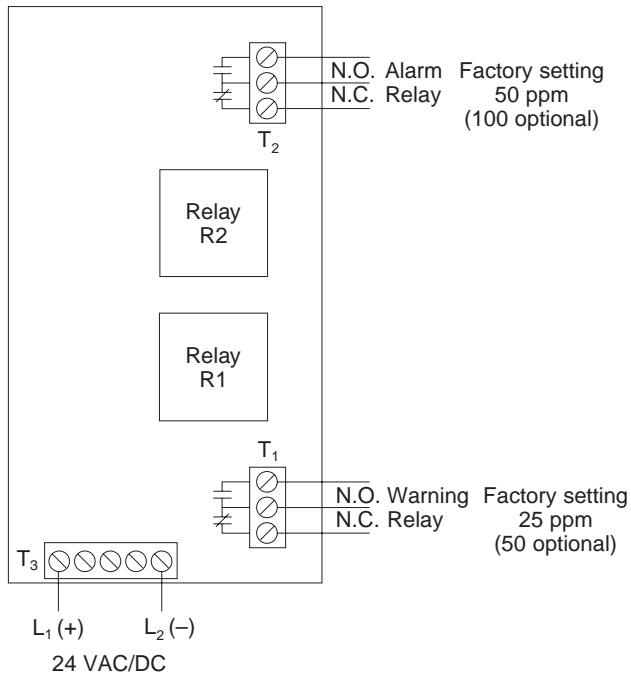
## CARBON MONOXIDE SENSORS

### KCO SERIES

#### INSTALLATION

The **KCO Series** senses levels of CO for up to 5000 ft<sup>2</sup> (465m<sup>2</sup>) of coverage if there is normal air circulation within the area. Mount on a wall or column approximately 5' (1.52m) above the floor. The sensors should not be mounted in corners where airflow could be restricted.

#### WIRING



SPECIALTY SENSORS

#### ORDERING INFORMATION

MODEL	DESCRIPTION
KCO	<b>R</b> Relay output carbon monoxide sensor
	<b>A</b> Analog output carbon monoxide sensor
	<b>S</b> Screw-cover enclosure (KCO-R only)
	<b>H</b> Hinged-cover enclosure
	<b>LT</b> Low-temperature option (-RH, -AH only) -20°F (-29°C)
	<b>25 ppm</b> 25/50 ppm relay settings (KCO-R only)
	<b>50 ppm</b> Optional 50/100 ppm relay settings (KCO-R only)

**KCO - R - S - 25 ppm** Example: **KCO-RS-25 ppm** carbon monoxide sensor with relay output and screw cover enclosure.