# GAS & SPECIALTY SENSORS

## COMBINATION CARBON MONOXIDE SENSOR WITH CO2, RH, OR VOC

### KCOC SERIES

## DESCRIPTION

The **Kele KCOC Series Combination Carbon Monoxide Sensors** pair a CO sensor with a CO2, RH, or VOC sensor in the same enclosure-reducing installation time and space required. The unit provides visual indication and analog output of CO levels in enclosed spaces such as schools, offices, malls, and theaters. Each transmitter is available with either a 0-10V or 4-20 mA and is scaled from 0-200 ppm of CO and all outputs will use the same output. They are designed with push button calibration and an easily accessible calibration port for field maintenance. Optional audible alarm indication, LCD display, or relay output is available. The optional relay option closes at 30 ppm and opens at 20 ppm, and the audible alarm will sound at 50 ppm.

The **KCOC Series Carbon Monoxide Detectors** are designed to be used as part of a control system that helps to prevent the formation of a hazardous environment when properly installed and maintained. For more information on the proper application and use of this product please read "Environmental Safety Devices" in our technical reference section.



Wall Mount    Wall Mount with Display    Duct Mount

## FEATURES

- **Combines CO sensor with CO2, RH, or VOC sensor**
- **LED status indication**
- **0-10V or 4-20 mA output**
- **Optional relay output**

- **Isolated power and output**
- **Simple push button calibration**
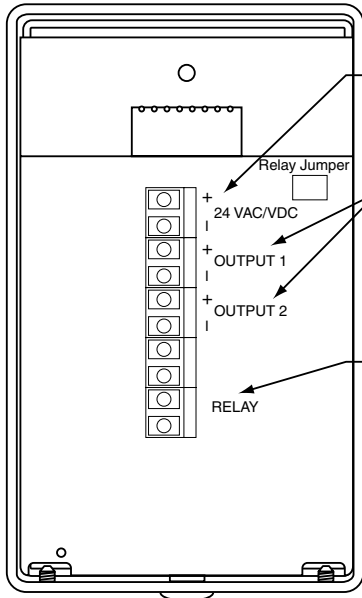- **Optional audible alarm**
- **Optional LCD display**

## SPECIFICATIONS

| | | | |
|---|---|---|---|
| **Supply Voltage** | | **VOC** | Sintered metal oxide |
| KCOC | 18-28 VAC @ 2.5 VA, 50/60 Hz or 18-30 VDC @ 104 mA | **Visual Indication** | LED Flashes above 20 ppm of CO Display Optional, four-digit LCD |
| VOC | 18-28 VAC @ 4 VA, 50/60 Hz or 18-30 VDC @ 166 mA | **Warm Up Time** | <15 minutes (maximum accuracy) |
| **Accuracy** | | **Relay Output** | Optional, SPST 2A @ 24 VAC/VDC, closes <\>>20 ppm |
| CO | ±2.5% full scale | **Alarm Auditory Levels [Db]** | |
| CO2 | ±3% of reading or ±40 ppm | | Optional, 65 dB, set at 20 ppm of CO |
| RH | 5% of reading 20% to 80% RH | **Operating Temperature** | 32° to 122°F (0° to 50°C) |
| VOC | ±10% ethanol equivalent | **Operating Humidity** | 0% to 99% RH (noncondensing) |
| **Signal Output** | Analog 4-20 mA @ 600Ω, 0-10V | **Dimensions** | |
| VOC | Stepped output (4, 12, 20 mA) (0, 5, 10V) | Wall | 4.5"H x 2.8"W x 1.0"D (11.4 x 7.3 x 2.54 cm) |
| **Measurement Range** | | Duct | 4.5"H x 2.8"W x 6.9"D (11.4 x 7.3 x 17.5 cm) |
| CO | 0-200 ppm | Duct Probe | 1.7" (4.3 cm) diameter, 6.25" (15.9 cm) long |
| CO2 | 0-2000 ppm | | |
| RH | 0 to 100% RH | **Weight** | |
| VOC | 0-1000 ppm ethanol equivalent | Wall | 0.3 lb (0.14 Kg) |
| **Sensing Technology** | | Duct | 0.55 lb (0.25 Kg) |
| CO | Electrochemical | **Warranty** | 1 year |
| CO2 | Non-dispersive IR (NDIR) | | |
| RH | Capacitive | | |

## COMBINATION CARBON MONOXIDE SENSOR WITH CO2, RH, OR VOC
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### WIRING

Power input
12-30 VDC
20-28 VAC
(Polarity matters for VDC only)

Relay Jumper

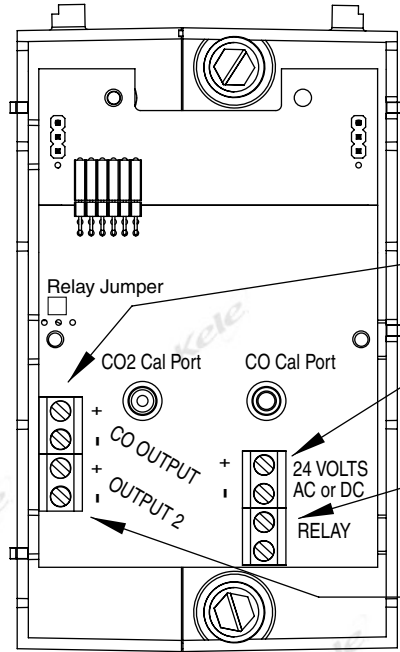+ | 24 VAC/VDC
+ | OUTPUT 1
+ | OUTPUT 2

RELAY

Voltage or current outputs.
All outputs are same type

Not all outputs are used on
every unit. See product manual
for output assignments.

All '–' terminals are electrically
connected, but isolated from
power supply.

Dry contact rated
24 VAC, 2A max

Relay is optional and
may not be present.

**Wall Mount**

Relay Jumper

CO2 Cal Port     CO Cal Port

+ CO OUTPUT
+ OUTPUT 2

+ | 24 VOLTS AC or DC

RELAY

Voltage or current outputs.
All outputs are same type.

All '–' terminals are electrically
connected, but isolated from
power supply.

Power input
18-30 VDC
20-28 VAC
(polarity applies to VDC only)

Dry contact rated
24 VAC, 2A max

Relay is optional and may not
be present.

2nd sensor output.
See product manual for
output type.

**Duct Mount**

### ORDERING INFORMATION

| MODEL | DESCRIPTION | | | | |
|---|---|---|---|---|---|
| **KCOC** | CO sensor with LED indication | | | | |
| | **OPTIONAL ADDITIONAL SENSOR (limit of 2)** | | | | |
| | **CO2** | Carbon dioxide sensor | | | |
| | **RH** | Relative humidity sensor | | | |
| | **VOC** | Volatile organic compound sensor | | | |
| | | **MOUNTING** | | | |
| | | **W** | Wall mount | | |
| | | **D** | Duct mount | | |
| | | | **ANALOG OUTPUT** | | |
| | | | **A** | 4-20 mA output (VOC - stepped 4, 12, 20 mA) | |
| | | | **V** | 0-10V output (VOC - stepped 0, 5, 10V) | |
| | | | | **OPTIONS (Can be combined)** | |
| | | | | **A** | Audible alarm |
| | | | | **LCD** | Four-digit LCD display |
| | | | | **R** | SPST relay output (for CO or VOC) |

| KCOC | – | RH | – | W | – | A | – | LCD |
|---|---|---|---|---|---|---|---|---|

**Example:  KCOC-RH-W-A-LCD**  Wall mount CO and RH
transmitter with 4-20 mA output, and LCD display

### ACCESSORIES

| | |
|---|---|
| **691-K0A** | Control transformer, 120:24 VAC, 40 VA, Class 2 |
| **DCP-1.5-W** | Power supply, 24 VAC IN to 24 VDC OUT |
| **DCPA-1.2** | Power supply, 120 VAC IN to 24 VAC/24 VDC OUT |
| **GAS-CO-25** | 25 ppm carbon monoxide (CO) in air, 17L |
| **GAS-CO2-2000** | 2000 ppm carbon dioxide (CO2) in nitrogen (N2), 17L |
| **UCK-1** | Universal calibration kit for non-corrosive gases (N2, CO2, CH4, H2, O2, CO, and refrigerants) |