



SPECIALTY SENSORS

CARBON DIOXIDE SENSOR

MODEL CD-A

DESCRIPTION

The Kele **Model CD-A** represents a new level of economy in reliable, non-dispersive infrared carbon dioxide sensors. It measures environmental carbon dioxide levels for use in demand-controlled ventilation, air-quality monitoring, and other HVAC applications in accordance with ASHRAE standards.

Fully isolated analog outputs and a convenient center wiring terminal make installation both simple and trouble-free. The analog output is jumper-selectable, 4-20 mA or 0-10 VDC, over the industry standard 0-2000 ppm CO₂ range. Models are also available with an optional LCD display and/or control relay with adjustable setpoint.

FEATURES

- 24 VAC/VDC power
- 0-10 VDC or 4-20 mA analog output, jumper selectable
- 0-2000 ppm CO₂ range
- Wall-mount and duct-sampling versions
- Isolation of output and power
- Compact, attractive enclosure
- Optional control relay with adjustable setpoint
- Simple single-point calibration



CD-AW-LCD

CD-AD-LCD



CD-AD
Duct Probe Assembly
(included)

- Optional LCD display
- Factory calibrated

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SPECIFICATIONS

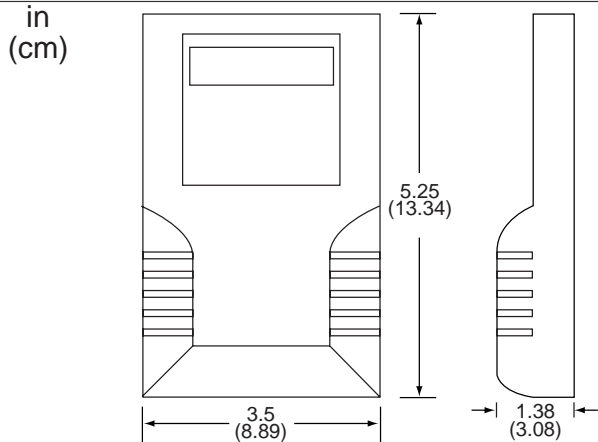
Power requirements	20-30 VAC, 18-30 VDC	Calibration verification procedure time	10 min. typical
Power consumption	Less than 2.5W @ 24 VAC	Analog output	0-10 VDC (factory setting) 4-20 mA (field selectable), 500Ω max
Operating principle	Non-dispersive infrared (NDIR)	Warm-up time	3 min.
Measuring range	0-2000 ppm CO ₂	Weight	12 oz (0.35 kg)
Max drift (per year)	±75 ppm	Optional digital display	0.35" LCD (0.88 cm), 4 digit
Accuracy	±5% of reading or ±75 ppm, whichever is greater	High limit alarm relay (optional)	
Repeatability	±20 ppm	Factory setpoint	1000 ppm (field adjustable) 700-1300 ppm
Recommended calibration interval	Three years	Deadband	50 ppm
Response time	Less than 1 min.	Contact polarity	N.O. (N.C. field selectable)
Operating temp	32° to 122°F (0° to 50°C)	Contact rating	2A @ 24 VAC
Operating humidity	0% to 90% RH noncondensing	Operating life expectancy	10 years typical
Storage temp	-22° to 140°F (-30° to 60°C)	Duct sampling option	Includes duct inlet and outlet ports, filter, tubing, and hardware
Calibration adjustments	Span only (automatic electronic zero adjustment)		



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DIMENSIONS

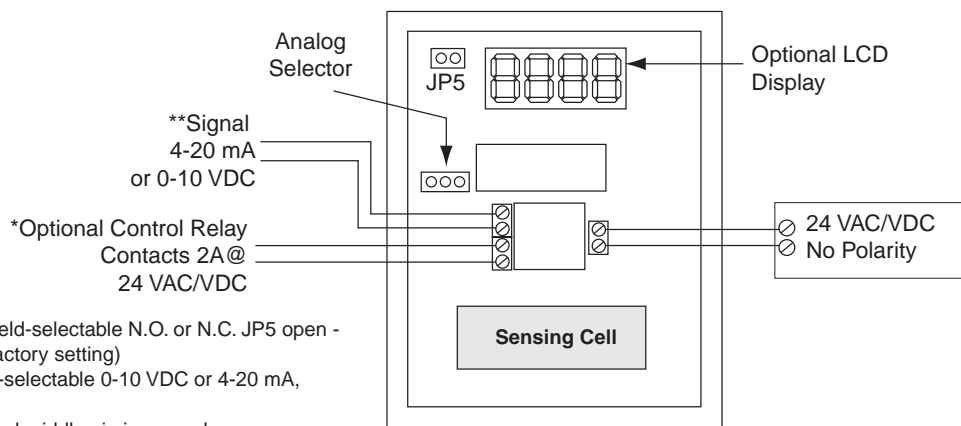


INSTALLATION

The wall-mounted **CD-AW** must be placed in an area that is representative of the entire conditioned space. Recommended mounting height is 4' to 6' (1.21 to 1.83m) above the floor. Avoid drafts for locations where occupants may routinely breathe toward the sensor.

The duct-sampling style **CD-AD** requires a minimum air velocity of 400 fpm (3 m/s). Complete installation and configuration instructions are included with each unit shipped.

WIRING



* Relay contacts are field-selectable N.O. or N.C. JP5 open - N.C. closed - N.O. (factory setting)

** Output signal is field-selectable 0-10 VDC or 4-20 mA, fully isolated.

Voltage - outboard and middle pin jumpered
Current - inboard and middle pin jumpered

ORDERING INFORMATION

MODEL	DESCRIPTION
CD-A	CO ₂ sensor with analog output
MOUNTING	
W	Wall mount
D	Sampling version for duct applications
RELAY OPTION	
R	Optional control relay
DISPLAY OPTION	
LCD	Optional LCD display

CD-A - D - R - LCD Example: CD-AD-R-LCD Duct-sampling CO₂ transmitter with analog output, control relay, and LCD display

RELATED PRODUCTS

UCK-1 Universal calibration kit
GAS-CO2-1000 Calibration gas (1000 ppm CO₂), 17L bottle