

CWE2 & CWV2 ANALOG SERIES

Economy and Value Wall Mount CO₂ Sensors



The CWE2 and CWV2 Series of air quality sensors for living space are for use with BAS controllers designed to accept 4 to 20mA, 0 to 5 Vdc or 0 to 10 Vdc outputs. These sensors measure CO₂ levels using a dual-beam, non-dispersive infrared (NDIR) technology.

The CWE2 Series Economy sensor has an accuracy of ± 30 ppm $\pm 3\%$ of measured value, features 2-wire 4 to 20mA and 3-wire voltage outputs, and is available with optional temperature output.

The CWV2 Value sensor with an accuracy of ± 40 ppm $\pm 5.5\%$ of measured value, is ideal for bid-spec applications.

SPECIFICATIONS

OPERATING ENVIRONMENT

Input Power	Class 2; 20 to 30 Vdc, 24 Vac, 50 to 60 Hz
Max. Current	CWE2: 20 mA CWV2: 45 mA
Analog Output	Selectable 4 to 20 mA, 0 to 5 V, 0 to 10 V
Operating Temperature Range	0 to 50 °C (32 to 122 °F)
Operating Humidity Range	0 to 95% RH non-condensing
Housing Material	High-impact ABS plastic
Terminal Block Torque	0.5 to 0.6 N-m (0.37 to 0.44 in-lbf)
IP Rating	IP 30
Mounting Location	For indoor use only. Not suitable for wet locations.
Surface Mount	The device can be surface mounted on Single Gang J-Box, British Standard and CE60 wall boxes

CO₂ TRANSMITTER

Sensor Type	Dual-beam, non-dispersive infrared (NDIR), diffusion sampling
Output Range	0 to 2000 ppm
Accuracy	CWE2: ± 30 ppm $\pm 3\%$ of measured value CWV2: ± 40 ppm $\pm 5.5\%$ of measured value
Repeatability	CWE2: ± 20 ppm $\pm 1\%$ of measured value CWV2: ± 30 ppm $\pm 2.5\%$ of measured value
Response Time	≤ 75 seconds for 90 degree step change
Startup Time	CWE2: ≤ 20 seconds
Max. Load Resistance*	CWE2: 100 Ω at 20 Vdc 250 Ω at 24 Vdc 500 Ω at 30 Vdc

Flexible

3+ wires, 4 to 20 mA or 0-5/0-10 Vdc versions...flexible systems compatibility...save time in the field, stock fewer devices

Easy to install

Large wiring terminals on baseplate and snap-on covers with security screw simplify installation and service

Field selectable

Field-selectable outputs for operation flexibility

APPLICATIONS

- Controlling ventilation in response to occupancy
- Office buildings, conference rooms, schools, retail stores, etc.
- Facilitating compliance with ASHRAE 62.1 standard for air quality

Economy Sensor

Competitively-priced sensors ideal for bid-spec

Self-calibrating

Innovative self-calibration algorithm...easy to maintain

WIRING TERMINALS

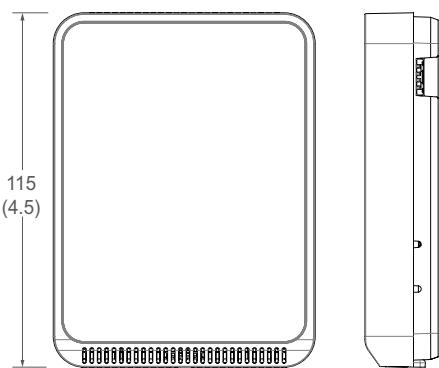
Terminal Blocks	Screw terminals, 18-24 AWG
Screw Terminal Torque	0.2 N-m (2.0 in-lbF) max.
Limited Warranty	CWE2: 3 years CWV2: 1 year

COMPLIANCE INFORMATION

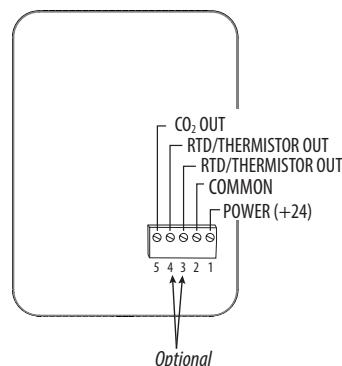
Agency Approvals	UL 916 European Conformance CE: EN 60730-1, EN 60730-2-9, EN 60730-2-13, EN 61000-6-2, EN 61000-6-3, EN 61000 Series - Industrial Immunity, EN 61326-1 FCC Part 15 Class B, REACH, RoHS, RCM (Australia), ICES-003 (Canada), UKCA (UK)
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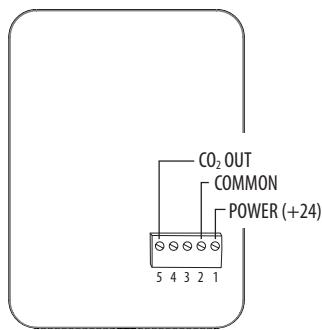
*Applicable for CWE2 4-20 mA current mode only. If load parameters are not met, product will reset.

DIMENSIONAL DRAWING**CWE2 VOLTAGE OUTPUT**

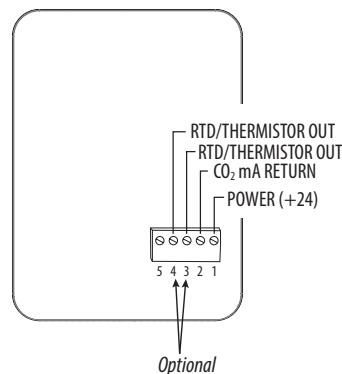
Wiring Diagram

**CWV2**

Wiring Diagram

**CWE2 CURRENT OUTPUT**

Wiring Diagram

**ORDERING INFORMATION**

Temperature Option	
CWE2	<input type="checkbox"/>
Blank = None	
C = 1000 PT RTD	
D = 10K T2 thermistor	
H = 10K T3 thermistor	
K = 10K curve G/11K shunt	
M = 20K NTC thermistor	
N = 1.8K TAC thermistor	
Example: CWE2 <input type="checkbox"/> C	