

## CWE2 & CWV2 ANALOG SERIES

Economy and Value Wall Mount CO<sub>2</sub> 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 CO<sub>2</sub> levels using a dual-beam, non-dispersive infrared (NDIR) technology.

The CWE2 Series Economy sensor has an accuracy of  $\pm 30 \text{ ppm} \pm 3\%$  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  $\pm 40 \text{ ppm} \pm 5.5\%$  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

#### CO<sub>2</sub> TRANSMITTER

Sensor Type	Dual-beam, non-dispersive infrared (NDIR), diffusion sampling
Output Range	0 to 2000 ppm
Accuracy	CWE2: $\pm 30 \text{ ppm} \pm 3\%$ of measured value CWV2: $\pm 40 \text{ ppm} \pm 3.5\%$ of measured value
Repeatability	CWE2: $\pm 20 \text{ ppm} \pm 1\%$ of measured value CWV2: $\pm 30 \text{ ppm} \pm 2.5\%$ of measured value
Response Time	$\leq 75$ seconds for 90 degree step change
Startup Time	CWE2: $\leq 20$ seconds
Max. Load Resistance*	CWE2: 100 $\Omega$ at 20 Vdc 250 $\Omega$ at 24 Vdc 500 $\Omega$ 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.

#### WARRANTY

Limited Warranty	CWE2: 3 years CWV2: 1 year
------------------	-------------------------------

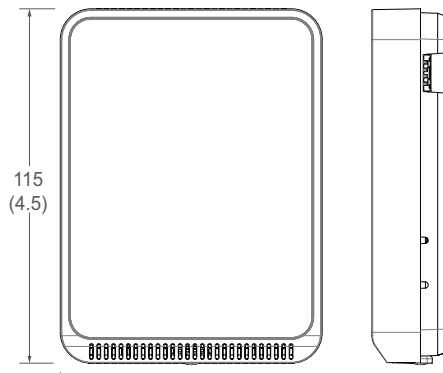
#### COMPLIANCE INFORMATION

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)
------------------	--



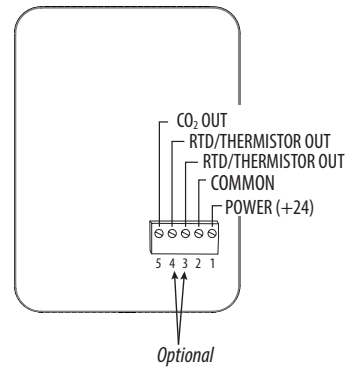
\*Applicable for CWE2 4-20 mA current mode only. If load parameters are not met, product will reset.

## DIMENSIONAL DRAWING



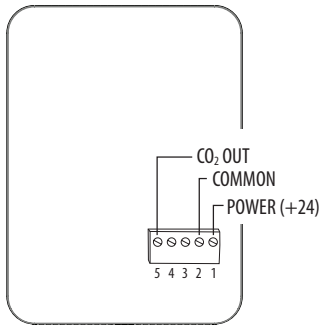
## CWE2 VOLTAGE OUTPUT

Wiring Diagram



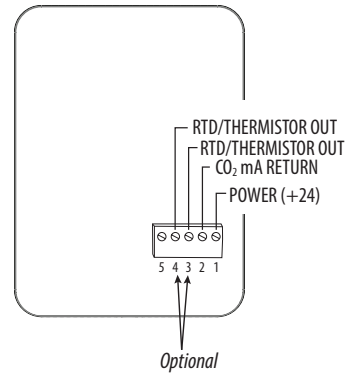
## CWV2

Wiring Diagram



## CWE2 CURRENT OUTPUT

Wiring Diagram



## ORDERING INFORMATION

Temperature Option	
CWE2	
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
CWV2 (No Options)	