



## Product Data

### A/ESENSE Series

Carbon Dioxide Sensor

## Product Description

The A/ESENSE room and duct transmitters monitor the carbon dioxide (CO<sub>2</sub>) levels in industrial, school, and office type environments. The concentration of CO<sub>2</sub> is a good indication of the overall indoor air quality.

The A/ESENSE Series is based on a single beam non-dispersive infrared technology and is a cost-optimized solution for the climate control of buildings and other processes. In addition, ABC software eliminates the need for manual calibration.

The A/ESENSE Series measures the CO<sub>2</sub> concentration in the ambient air up to 2,000 ppm and converts the data into an analog output. This data can be used in conjunction with a Building Automation or Demand Control Ventilation System to decrease energy consumption while creating a healthier indoor climate.

Units come with combined outputs of 0-5VDC and 4 to 20mA or 0-10VDC and 4 to 20mA.

The A/ESENSE Series is covered by ACI's Two (2) Year Limited Warranty, which is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's web site, which is:  
www.workaci.com.

## Product Specifications

<b>Supply Voltage</b>	24 VAC/VDC +/-20%, 50/60 Hz (half-wave rectifier)
<b>Power Consumption</b>	< 1 Watt average
<b>Measurement Range Default</b>	0 to 2,000 ppm (up to 3,000 with software adjustment)
<b>Output Signal</b>	0-5VDC and 4-20mA or 0-10VDC and 4-20mA
<b>Accuracy</b> (after a minimum of three weeks of operation)	+/- 30 ppm +/- 3% of reading
<b>Repeatability</b>	+/- 20 ppm +/- 1% of reading
<b>Annual Zero Drift</b>	< +/- 10 ppm
<b>Pressure Dependence</b>	+ 1.6% reading per kPa
<b>Response Time</b>	< 10 sec. @ 30 cc/minute flow rate < 3 minute diffusion time
<b>Warm up Time</b>	≤ 1 minute (@ full specs ≤ 15 minutes)
<b>Operating Temp/ RH Range</b>	32 to 122°F (0 to 50°C) / 0 to 95%, non-condensing
<b>Sensor Coverage Area</b>	7,500 sq. ft. maximum
<b>Approvals</b>	EMC-Directive 89/336/EEC / RoHS-Directive 2002/95/EG

Wiring Diagrams available at [www.workaci.com](http://www.workaci.com)

## Carbon Dioxide



### Attributes:

- Internal automatic self-diagnostics
- Multiple Outputs: 0-5VDC, 0-10VDC, and 4-20mA (See order grid)
- 15 year life expectancy
- No field calibration required
- LCD option

### Applications:

- Large office buildings
- Schools / gymnasiums
- Shopping Malls
- Convention Centers
- Demand Control Ventilation
- Theatres
- Restaurants

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TEMPERATURE

RELATIVE HUMIDITY

PRESSURE

CURRENT

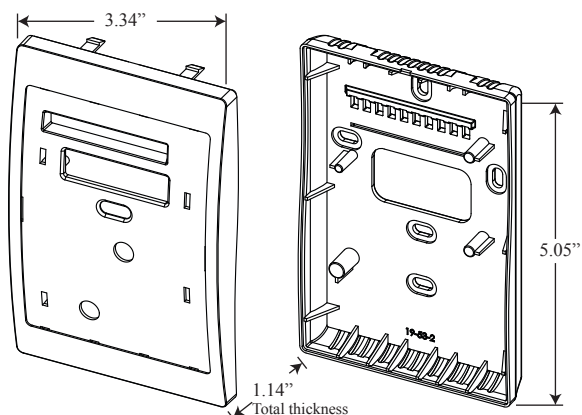
GAS SENSORS

ACCESSORIES

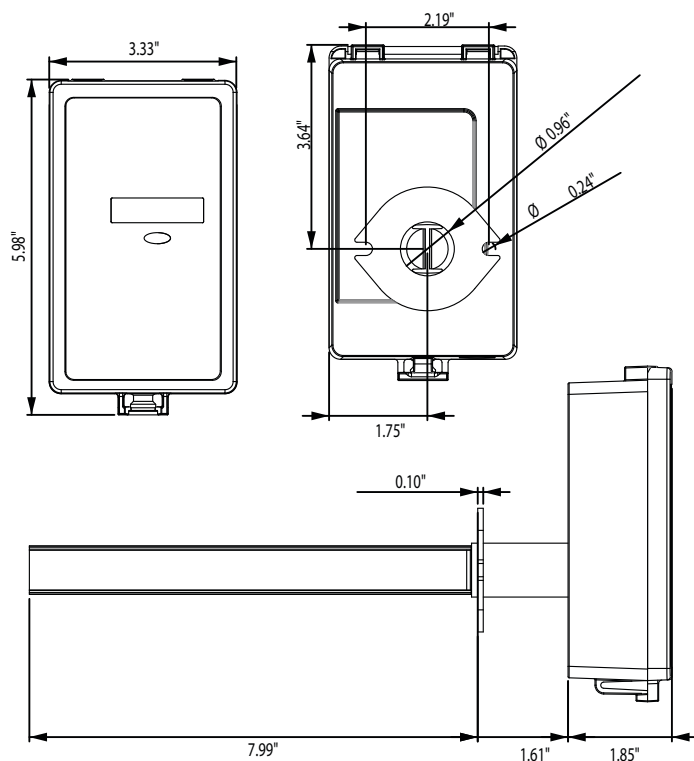
INTERFACE DEVICES

## Dimensions

### Room



### Duct



## Ordering Information

### A/ESENSE

#### Enclosure

-[ ]

- (R) Room mount/US
- (RE) Room mount/European
- (D) Duct mount (IP65)
- (IP54) Industrial wall mount
- (IP50) In duct/wall mount with pigtail wiring\*

#### Outputs

-[ ]

- ( ) 0-10VDC and 4-20mA
- (5) 0-5VDC and 4-20mA

#### Display option

-[ ]

- ( ) - No Display
- (LCD) Display

\*Not available with LCD option

Examples: A/ESENSE-R-LCD or A/ESENSE-IP50-5

## Accessories:

### SADK (configuration and test software)

Log data • Configure outputs • Configure ABC function • Configure FRAC (signal stabilization) • Save and load settings quickly by using a Setfile

### ZERO CALIBRATION KIT

Hand held (no gas cylinder required)

