TELAIRE®

# Telaire® Duct Mount Sensor

## Telaire Ventostat® T8031 $CO_2$ Duct Mount Transmitter



Amphenol Advanced Sensors is excited to announce the release of a new generation of Telaire $CO_2$ transmitters targeting indoor air quality and energy conservation applications. The Ventostat® T8031 duct mount $CO_2$ transmitter offers accuracy and versatility at an affordable price. This exceptional product line touts an unobtrusive form factor that is easy to install, simple to use, and remains accurate over the expected life of the device using Telaire's patented ABC Logic™ (Automatic Background Calibration) technology.

### Application

$CO_2$ transmitters can be used in a broad range of applications, including air quality monitoring in buildings. $CO_2$ concentration levels in buildings are monitored to provide an indication of occupancy and to drive a ventilation control strategy. An effective DCV (Demand Controlled Ventilation) strategy will conserve energy and maintain indoor air quality.

### Features

- One of the smallest in-duct $CO_2$ transmitters on the market
- Simple installation (mounting hardware and instructions included)
- Ideally suited for OEM manufacturers that must accommodate smaller < 6 in (15.2 cm) HVAC return air ducts.
- Offers standard 0-10 volt output
- Patented absorption infrared/gas sensing engine provides high accuracy in a compact, low-cost package
- Patented ABC Logic™ self-calibration system eliminates the need for manual calibration in most applications
- Gas permeable, water-resistant diffusion filter prevents particulate and water contamination of the sensor
- Lifetime calibration guarantee

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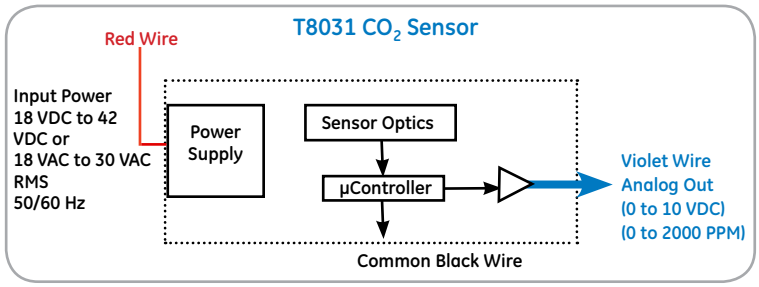
# Model T8031 Specifications




## Description

Telaire Ventostat® T8031 CO2 duct mount transmitter is the smallest package available.

The T8031 is a CO2 transmitter designed to be installed in HVAC return air ducts. The size of the board and the dimensions of the case have been optimized to place the transmitter in small, i.e. 6 inch [15.24 cm] diameter, return air ducts. This product offers a sleek design, a simple analog output, and it is easy to install. The transmitter includes mounting hardware and installation instructions.

## Measurement Range

0-2000 ppm factory calibrated

## Duct Air Velocity

0 to 1500 ft/min (0-450 meter/min)

## Temp Dependence

0.2% of full scale per ºC

## *Accuracy

±40 ppm +3% of reading @ 22ºC (72ºF) when compared with a factory certified reference

## Non-linearity

<1% of full scale @ 22ºC (72ºF)

## Pressure Dependence

0.13% of reading per mm of mercury

## *Calibration

Sensors will be calibrated at zero and span at the factory. Calibration in the field will not be required. Sensors will be shipped with ABC Logic™ turned on.

## Response Time

Three minutes typical for 90% step change at low duct speeds

## Warm-up Time

< Two minutes (operational); 10 minutes to achieve maximum accuracy

## Operating Conditions

- Temperature: 0ºC to 50ºC (32ºF to 122ºF)
- Humidity: 0 to 95% relative humidity, non-condensing

## Storage Conditions

-20ºC to 70ºC (-4ºF to 158ºF)

## Certifications

RoHS compliance
FCC Part 15,B
CE EMC EN61000-6-2, class B, criterion B*
*Deviations of the output signal may occur during strong electrical fast transients on the power line
Enclosure flammability rating – UL94-5VA

## Output

Analog 0 to 10 VDC (100 ohm output impedance)

## Power Supply Requirements

18 to 30 VAC RMS, 50/60 Hz or 18 to 42 VDC, polarity protected.

## Power Consumption

Typical values (1.65 watts peak, 0.65 watts avg. @ 42 VDC)

**Note: The Telaire product line offers patented ABC Logic™ software for self correction of drift to better than ±20 ppm per year. The system is virtually free of maintenance and typically has a lifetime of more than 10 years.*

## Physical Requirements

## Dimensions:

Length: 3.83 in (9.72 cm) + 0.74 in (1.87 cm) mounting tab
Width: 1.17in (2.97 cm)
Height: 0.94 in (2.38 cm)
Color: 701 Black
Flammability Classification: UL 94V-5

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