

Features

- Simple installation (mounting hardware and instructions included)
- Ideally suited for larger 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.

GE Sensing is excited to announce the release of a new generation of Telaire CO₂ transmitters targeting indoor air quality and energy conservation applications. The Ventostat® T8041 duct mount CO₂ 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

CO₂ transmitters can be used in a broad range of applications including air quality monitoring in buildings. CO₂ 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.

Telaire® Duct Probe Sensor

Telaire Ventostat® T8041 CO₂ Duct Probe Transmitter

Telaire Duct Probe Sensor is a Telaire product. Telaire has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



Model T8041 Specifications

Technology

The technology is based on the absorption of light in a gold-plated reflective light pipe or waveguide diffusion gas chamber. A gas permeable PTFE filter prevents particulate and water contamination of the sensor. Light is absorbed in proportion to the CO₂ concentration and the remaining light is measured and converted into an analog signal.

Measurement Range

0-2000 PPM factory calibrated

Duct Air Velocity

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

Temp Dependence

0.2% of full scale per °C

Stability

<2% of full scale over the life of the sensor (15 years typical)

*Accuracy

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

Non-linearity

<1% of full scale @ 22°C (72°F)

Pressure Dependence

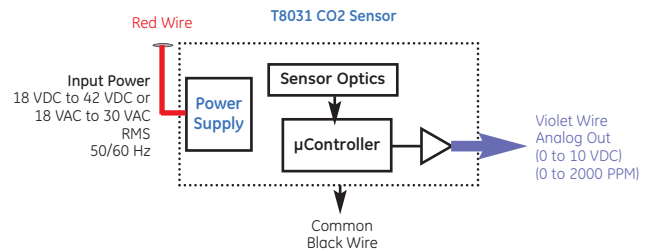
0.13% of reading per mm of mercury

*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 a 90% step change at low duct speeds



The T8041 is a CO₂ transmitter designed to be installed in HVAC return air ducts. This product offers simplicity in design and installation. Available with analog 0-10V output only. Includes mounting hardware and installation instructions

Sampling Rate

Every two seconds, 25% duty cycle

Warm-up Time

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

Operating Conditions

- Temperature: 0°C to 50°C (32°F to 122°F)
- Humidity: 0 to 95% relative humidity, non-condensing

Storage Conditions

-20°C to 70°C (-40°F to 158°F)

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:

Probe Length:	4.12 in (10.46 cm)
Probe Diam:	1.24 in (3.14 cm)
Junction Box Depth:	1.6 in (4.06 cm)
Height:	3 in square approximately (7.62 cm)

Color: Grey (6Y6275)

Flammability Classification: UL 94V-5



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