GE
Sensing

Features

- Low-cost
- Reliable (15 years of low-cost infrared sensor manufacturing)
- Pre-calibrated
- Maintenance free (calibration maintained with patented ABC Logic)
- Flexible configurations (see matrix, page 2)
- Intuitive VLI display
- Three available outputs: analog 0 to 10V, passive temperature (20K thermistor), and digital UIP interface (RS-232 TTL level)
- User-definable thresholds (optional UIP cable and software not included)
- RoHS and WEEE compliant

GE Sensing offers high-volume manufacturing capabilities for its Telaire products, a global sales force, and additional engineering resources to support your sensing application needs.

Telaire® 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 polytetrafluoroethylene (PTFE) filter prevents particulate and water contamination of the sensor. Light is absorbed in proportion to the CO_2 concentration and the remaining light is measured and converted into an analog signal.

ABC Logic™ (Automatic Background Calibration)
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.

T5000 Series

Telaire® Airestat™ CO_2/Temperature Transmitter

T5000 Series is a Telaire product. Telaire has joined other GE high-technology sensing businesses under a new name–GE Industrial, Sensing.

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The Product

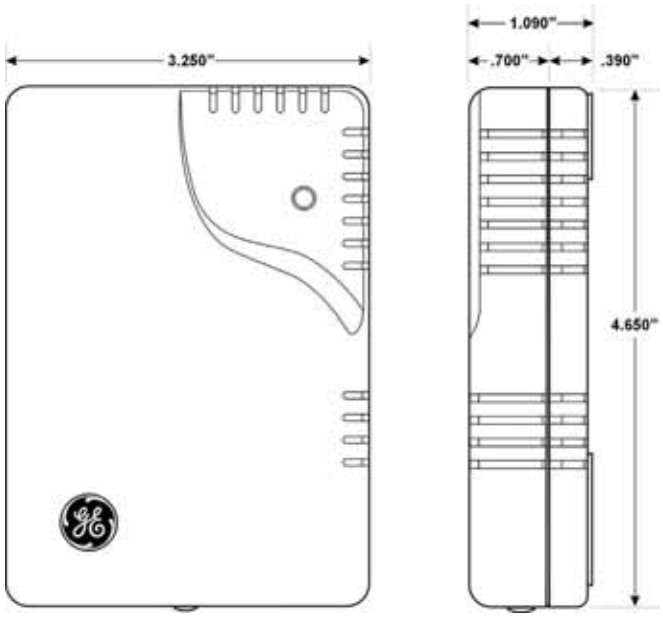
The Telaire T5000 Series Airestat CO_2 and temperature transmitter is a low-cost wall-mounted sensing solution for demand-controlled ventilation. The Airestat provides an intuitive VLI (Visual Limit Indicator) display for CO_2 thresholds, a passive temperature output (20kΩ thermistor), and a standard analog 0 to 10 volt signal to maintain air quality in enclosed spaces (such as school classrooms, offices, gymnasiums and theaters.) The T5000 series also offers a digital UIP (User Interface Program) to configure internal CO_2 concentration thresholds (optional accessory cable and software not included.) The factory defaults are 1000 ppm and 1500 ppm.

Product Features:

Telaire Model No.	CO2	Temp	LED	GE Logo
T5001	✓	✓		
T5003	✓	✓		✓
T5005	✓	✓	✓	
T5007	✓	✓	✓	✓

VLI (Visual Limit Indicator)

GE Sensing—Telaire Products introduces an exciting new alternative to traditional scientific LCD display of the CO_2 value. Our new T5000 Series transmitter with VLI (Visual Level Indicator) communicates intuitively to the average end-user. The correlation between a CO_2 PPM reading and adequate ventilation may not be fully understood. Instead of offering the user a reading in ppm (parts per million), we provide a simple LED that communicates increased CO_2 concentrations based on definable or predetermined thresholds. The LED smoothly transitions between green, yellow and red as the CO_2 threshold is exceeded. Unlike scientific displays, training to understand ppm values is not a prerequisite with this innovative product.



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T5000 Series Specifications

Product

Sampling Method
Non-dispersive infrared (NDIR), gold plated optics, (with Telaire's patented ABC Logic self calibration algorithm). Diffusion sampling.

Measurement Range
0 to 2,000 ppm factory calibrated. Output scalable using UIP up to 3,000 ppm with resulting decrease in sensor accuracy

Accuracy
± 75 ppm @ 72°F (22°C) when compared with a factory reference or 10% of reading, whichever is greater*

Temperature Dependence
0.2% FS per °F (°C)

Stability
<2% of FS over life of sensor (15 years typical)

Non-Linearity
<1% of FS

Pressure Dependence
0.13% of reading per mm Hg

Calibration Interval
Not required*

Response Time
3 to 5 minutes for 90% step change.

Warm up Time
- <2 minutes (operational)
- 10 minutes (maximum accuracy)

Operating Conditions
- 32°F to 122°F (0°C to 50°C)
- 0 to 95% RH, non condensing

Storage Conditions
- -4°F to 158°F (-20°C to 70°C)
- 0 to 95% RH, non condensing

Temperature
NTC 20k thermistor

Output
- Analog: 0 to 10V (100 Ω output impedance)
- Digital: RS-232 (TTL Level) communication with Telaire UIP software

Connections
Screw terminals for 18 to 28 AWG

Power Supply Requirements
18 to 30 VAC RMS, 50/60Hz or 18 to 42 VDC, polarity protected

Power Consumption
1.75 VA average, 2.75 VA peak

Agency/Certifications
FCC Part 15 Class B, CE, RoHS, WEEE

Warranty Term
18 months

* Note: Automatic Background Calibration, or ABC Logic, is a patented self-calibration technique designed to be utilized in applications where concentrations will drop to outside ambient conditions (approximately 400 ppm) at least four times in a 14-day period, typically during unoccupied periods.

Full accuracy is achieved after two weeks of operation.

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