

GE

Measurement & Control Solutions

# Telaire®

## T7000 Series

### Handheld Indoor Air Quality (IAQ) Monitors

#### Applications

- Identify areas with low or substandard ventilation.
- Identify hidden energy savings in overventilated spaces.
- Determine if ventilation is a factor in air quality complaints.
- Locate the presence of combustion fumes from vehicles and appliances.
- Use as a reference to calibrate wall mounted CO<sub>2</sub> sensors.

#### Features

- Patented dual beam, Absorption Infrared™ gas sensor ensures long term stability and durability.
- Record temperature, CO<sub>2</sub>, RH and graph recorded data with supplied software (Model 7001D).
- Large, easy-to-read display. Temperature displayed in °F or °C. CO<sub>2</sub> displayed in ppm. Easily adjusted for altitude changes.
- Fast, simple calibration using external port and display. Calibrate with ambient air or bottled gas.



- Calibrate, set elevation, change °F or °C using on-board controls
- Flip out stand for desktop monitoring.
- Voltage output via RJ45 connector provides easy interface to most data loggers.
- Plug in AC power adaptor.
- Operates for up to 80 hours on four AA alkaline batteries (not included).
- Calculates and displays real-time ventilation rates in CFM or Liters/minute per person based on differential CO<sub>2</sub> levels outside and inside the building..



## Telaire T7001

Equipped with Telaire's patented dual beam Absorption Infrared™ technology, the Telaire T7001 is an easy-to-use CO<sub>2</sub>/temperature monitor designed for use in residential or commercial applications. With the ability to display CO<sub>2</sub> readings and calculate air ventilation rates in cfm/person, the monitor is an ideal tool for: identifying energy saving opportunities in over-ventilated spaces, determining if air quality complaints are due to insufficient ventilation, or locating the presence of combustion fumes generated from vehicles and appliances. It comes with a power adapter.



## Telaire T7001i

The T7001i monitor combines the standard Telaire T7001 CO<sub>2</sub>/temperature monitor with an international adapter kit..

## Telaire T7000SK

The Telaire T7000SK combines the Telaire T7001 with a technical reference library (CD), graphing software and Ventulator™ energy analysis program. The Ventulator calculates potential energy savings and provides a detailed report to support your control strategy. The VG Graphing software is a "real-time" graphing software that records and graphs CO<sub>2</sub> data directly to your computer.



## Telaire T7001D

The T7001D combines the Telaire T7001 and Hobo data logger to provide you with everything you need to record and graph CO<sub>2</sub>, temperature, and relative humidity.



# T7000 Series Specifications

## Method

Dual beam, Absorption Infrared

## Sample Method

Diffusion or flow through (50 to 100 ml/min)

## Display-LCD

Independent CO<sub>2</sub> and temperature readings.  
Calculates and displays ventilation rates.

## General

### Operating Conditions

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

### Storage Temperatures

-4°F to 140°F (-20°C to 60°C)

### Certification

CE  
FCC Class 15 Part B

### Warranty

18 months parts and labor

## Performance—CO<sub>2</sub> Channel

### Measurement Range

- 0 to 10,000 ppm display
- 0 to 4000 ppm voltage output

### Display Resolution

±1 ppm

### Accuracy

±50 ppm or 5% of reading, whichever is greater

### Repeatability

±20 ppm

### Temperature Dependence

±0.1% of reading per °C or ±2 ppm per °C, whichever is greater, referenced at 25°C.

### Pressure Dependence

0.13% of reading per mmHg (corrected via user input for elevation)

## Response Time

<60 seconds for 90% of step change

## Warm-Up Time

<60 seconds at 72°F (22°C)

## Calibration Interval

12 months, offset adjustment using single gas at 0 to 1000 ppm CO<sub>2</sub>. Full factory calibration available.

## Performance—Temperature Channel

### Temperature Range

- Voltage output: 32°F to 104°F (0°C to 40°C)
- Display: 32°F to 122°F (0°C to 50°C)

### Display Resolution

0.1°F (0.1°C)

### Display Options

°F, °C

### Accuracy

±2°F (±1°C)

### Response Time

20 to 30 minutes (case must equilibrate with environment)

### Calibration Interval

12 months, offset adjustment using temperature standard at 50°F to 86°F (10°C to 30°C). Full factory calibration available.

## Output—Analog

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

0 to 4 VDC, 1 mV/ppm (4000 ppm maximum)

### Temperature

0 to 4 VDC linear, 32°F to 104°F (0°C to 40°C)

### Output Impedance

100 ohms

### Digital Output

RS232 for use with Telaire CO<sub>2</sub>View graphing software

### Wiring Connection

One RJ45 to connector dual analog output plus digital output

## Power Supply

### Battery Type

Four AA batteries of any type (not included)

### Battery Operation

80 hours (alkaline)

### External

6 VDC from external AC/DC adapter (included)

### Power Requirements

100 mA peak, 20 mA average from 6V

## CFM/Person Ventilation Rate Measurement

The Telaire T7000 Series will calculate the outside air ventilation rate to a space based on the inside/outside CO<sub>2</sub> differential readings. Outside readings can be established by measuring outside levels and holding the “enter” button on the sensor for five seconds. The outside reading can also be manually set using the on-board keypad and display (default 400 ppm).

Accurate interpretation of the ventilation rate indicator requires a measuring two to three hours after occupancy has stabilized in a space or at a peak in daily CO<sub>2</sub> concentrations. In other conditions the indicator may tend to overestimate ventilation rates.

The ventilation rate display assumes a people activity level in the measured space similar to an office type environment (1.2 MET). If higher levels of activity are present, the indicator may tend to underestimate ventilation levels.

## T7000 Series Accessories/ Ordering Information

### T2070 Cable

Voltage output cable, includes two pigtail leads for connecting to third party devices.

### T2075NG Calibration Kit

Comes with regulator, flowmeter and tubing. Gas is not included.

### T2077 Hobo Data Logger Kit (included in T7001D)

Comes with small size Hobo data logger, software and all necessary connection cables for recording and graphing measurements. The data logger includes internal RH and temperature sensors and can record their outputs along with T7001 CO<sub>2</sub> measurements. It can be attached to the back of T7001.

### T2080 CO<sub>2</sub>View

Graphing software for logging CO<sub>2</sub> concentrations directly to PC.

### T62933 International Power Supply Kit

### T62285 RJ45 to DB9 cable

### Factory Calibration

Call the factory for a RMA number.



[www.ge-mcs.com](http://www.ge-mcs.com)

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