## Features

• Designed specifically for the Original Equipment Manufacturer (OEM).

• Reliable design based on 15 years of low-cost infrared sensor manufacturing.

• Affordable technology

• Low power consumption

• RoHS and WEEE compliant for European applications.

The Telaire® 6500 series module is a low-cost CO_2 threshold sensor designed to meet the volume, cost, and delivery expectations of Original Equipment Manufacturers (OEM). The module is ideal for customers who are familiar with the design, integration, and handling of electronic components but do not wish to invest resources in their own development effort.

By joining GE Sensing, Telaire can now offer high-volume manufacturing capabilities, a global sales force, and additional engineering resources to support your sensing application needs.

CO_2 OEM Module–6500

Low Cost/High Volume Manufacturing

CO_2 OEM Module–6500 is a Telaire product. Telaire has joined other GE high-technology sensing businesses under a new name–GE Industrial, Sensing.
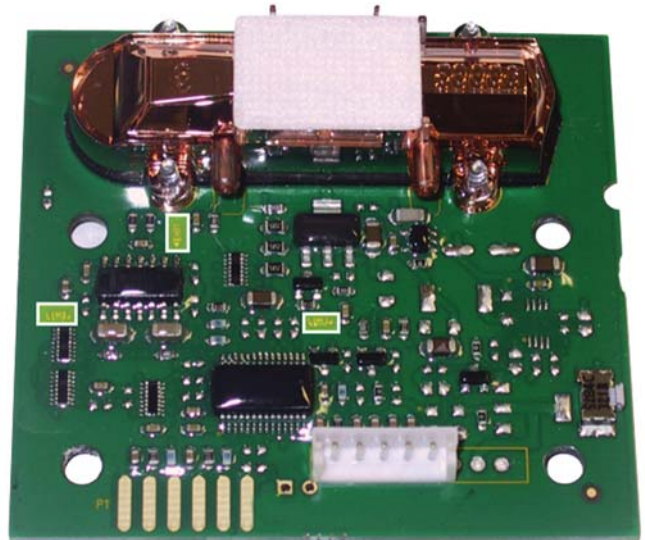
CO$_2$ OEM Module–6500 Specifications

General Performance

Operating Temperature Range
41°F to 86°F (5°C to 30°C)

Storage Temperature Range
-4°F to 140°F (-20°C to 60°C)

Operating Humidity Range
20 to 100% non-condensing

Compliance with

Acceptance of Electronic Assemblies	IPC-A-610C, level 3
ESD Immunity	EN61000-4-2, level 2
HF Radiation Immunity	EN61000-4-3
Magnetic Immunity	EN61000-4-8
Radiated Emissions	EN55022, Class B
Vibration	0.05 in (1.5 mm) amplitude, 10 – 30 Hz
Static Electricity Discharge	EN61000-6-1
2002/95/EC	WEEE
2002/96/EC	RoHS

Electrical (Default Settings)

Power Input
- Regulated Voltage Supply: 5V ±10%
- Battery Supply: 4.3 VDC – 7.0 VDC

Average Current
- 2 minute sampling rate < 2.4 mA per hour ave, typical
- 10 second sampling rate < 13.0 mA per hour ave, typical

Peak Current
< 90 mA ±10% (94 – 95 mA default/typical)

Low Voltage Shut-down
4.3 VDC ±5%

Connector (5-pin)
- *Pin 1 → Adjustable: CO$_2$ Threshold #1 (0.8% 8000 ppm default/typical)
- *Pin 2 → Adjustable: Battery Threshold (5.3V default/typical)
- Pin 3 → V+
- Pin 4 → V-
- Pin 5 → Adjustable: CO$_2$ Threshold #2 (0.9% 9000ppm default/typical)

Connector Type
JST B5B-EH-A(LF)

Reverse Polarity Protection
None

Measurement Accuracy (Default Settings)

Threshold Setpoint
*0.9% CO$_2$ in air ± .1% CO$_2$ by volume

Threshold Hysteresis
*0.1% CO$_2$ by volume

Sampling Interval @ 68°F (20°C)
- *2 minutes < 7000 ppm
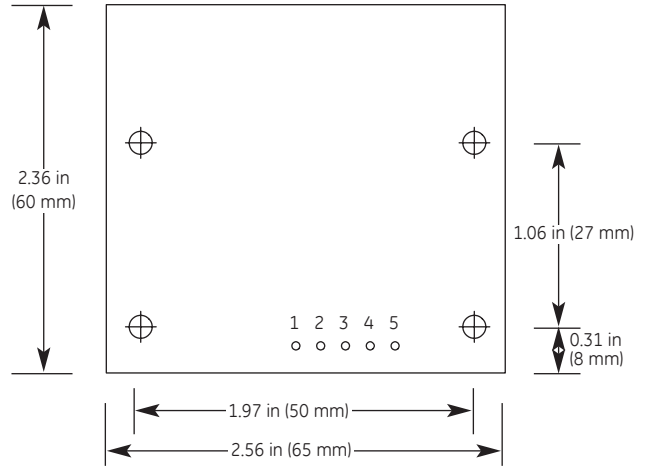- *10 seconds > 7000ppm

Number of samples
- *3 Consecutive above 0.9% CO$_2$ for threshold
- *3 Consecutive below 4.3 V for low battery threshold

Note: "" denotes customizable feature.*
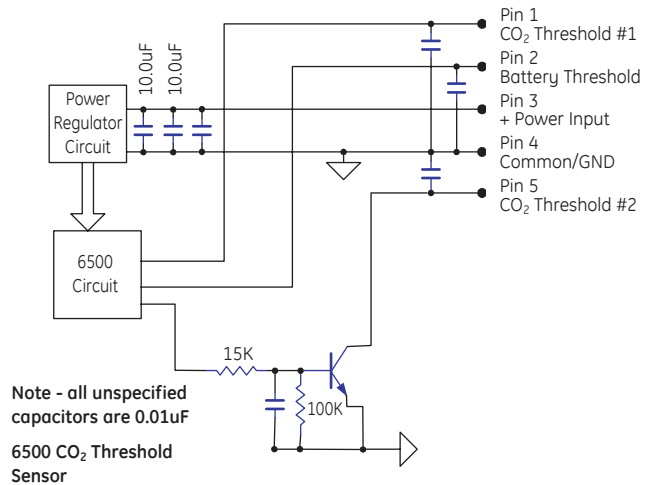
CO$_2$ OEM Module–6500 Specifications

Printed Circuit Board Dimensions

- Mounting Holes: The sensor board shall have (4) mounting holes to mate with standard circuit board locking stand-offs.
- Hole diameter = 4 mm (0.2, -0.0 mm).
- Clearance diameter for stand-off = 0.20 in (5.2 mm)

2.36 in (60 mm)

1.06 in (27 mm)

0.31 in (8 mm)

1 2 3 4 5

1.97 in (50 mm)

2.56 in (65 mm)

Printed Circuit Board Dimensions

10.0uF

10.0uF

Power Regulator Circuit

6500 Circuit

Pin 1
CO$_2$ Threshold #1

Pin 2
Battery Threshold

Pin 3
+ Power Input

Pin 4
Common/GND

Pin 5
CO$_2$ Threshold #2

15K

100K

Note - all unspecified capacitors are 0.01uF

6500 CO$_2$ Threshold Sensor

Sensor Schematic

GE
Sensing

www.gesensing.com