



Carbon Dioxide Monitor

Model 2007DHH-R 20% CO₂

Description:

The Valtronics Model 2007DHH-R is a Non-Dispersive Infrared gas monitor, designed as a remote transducer-transmitter for continuous monitoring of Carbon Dioxide in the range of zero to 20% CO₂ full scale. This unit is designed with the intent of meeting CE requirements for Radio Frequency Interference. The requirements for the "CE" marking (Electromagnetic Compatibility for the European Economic Community market).

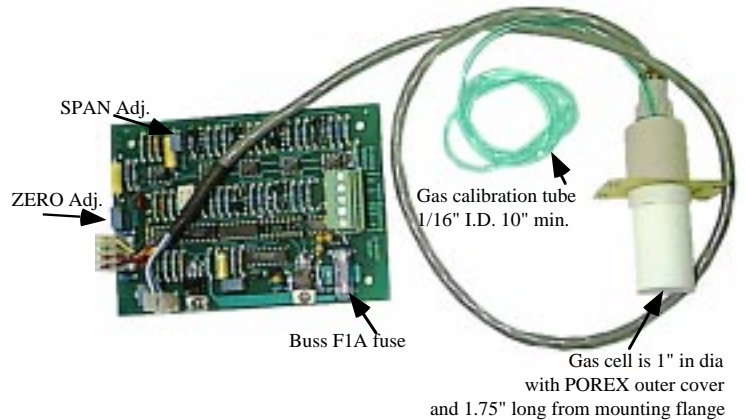
The Optical Diffusion Head is completely unaffected by humidity, and requires no gas sampling pump. The transducer output may be interfaced to any controller unit via the linear 0 to 1 Volt output signal.

Model 2007DHH-R 20% Specifications:

- Method: N.D. I. R. (Non-dispersive Infra-red) gas diffusion sample cell
- Gas: Carbon dioxide (CO₂)
- Range: 0-20% CO₂
- Accuracy: ± 5% of reading from mid to full scale (± 0.5 CO₂ from 0-10% CO₂)
- Repeatability: ± 1% of full scale (challenge with same gas sample and assure zero)
- External Power Source: 12 Volts D.C. @ 0.5 amp. max.(7.25 to 15.0 VDC absolute min./max.)
- Power Consumption: 3 watts typical @ 12.0 VDC
- Output Signal: 0 to 1 volt = 0 to 20% CO₂ (linear scale data attached)
- Electronic Response Time: 8 seconds typical to a step change in gas concentration
- Zero Noise at
Constant Temperature: Less than 10 mV peak to peak (measured during any 20 second period)

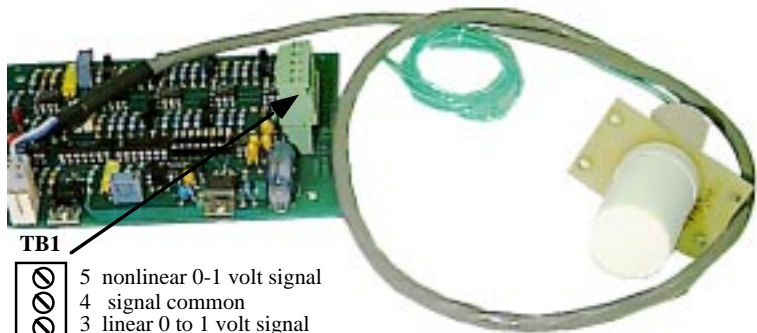
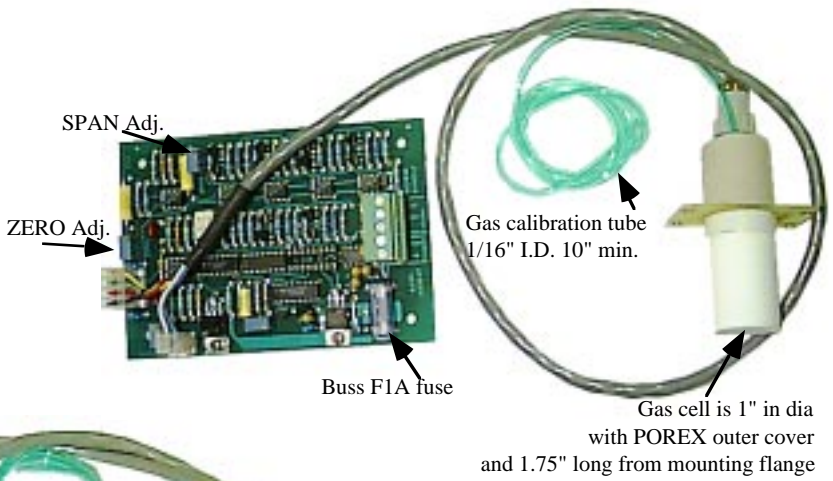
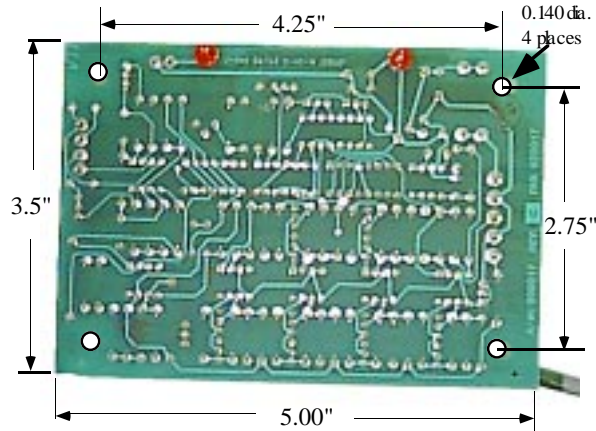
Designed with the intent of meeting CE requirements for Radio Frequency Interference.
- Zero Drift at Constant Temperature: Less than 2% of full scale per 24 hours (random not cumulative)
- Zero Drift due to Ambient Temp: Less than 0.5% of full scale per degree Centigrade
- Operating Temperature Range: 5 to 40°C (41° to 104°F) see **Application Note A12**
- Ambient Relative Humidity: 5 to 95% RH non-condensing see **Application Note A30**
- Storage Temperature range: 40 to +70°C (-40 to +158°F)
- Weight: Less than 0.5 pound (0.23 kilogram)
- External Dimensions: PCB Card: 3.5" x 5" x 1" (8.89 cm, x 12.7 cm, x 2.54 cm)
- Sample Head and Optics: .. 1.25" x 2.0" x 2.5" on a 29±2 inch long cable: **cell # marked on flange**

Note: The gas cell & circuit board are **matched calibrated & temperature compensated pairs**. They will not function properly if they are not kept as **matched pairs**.



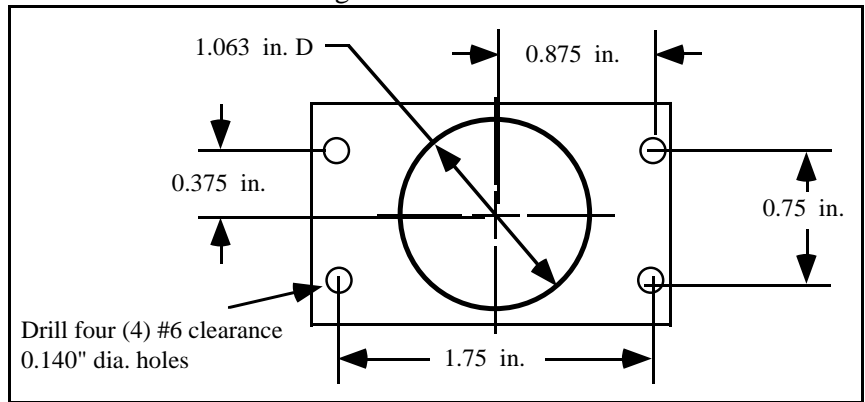


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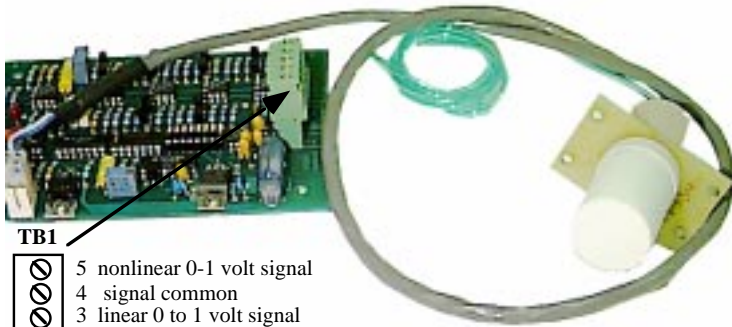
- TB1**
- | | |
|---|---------------------------|
| 5 | nonlinear 0-1 volt signal |
| 4 | signal common |
| 3 | linear 0 to 1 volt signal |
| 2 | 12 VDC return (-) |
| 1 | +12 VDC |
- TB1**

Gas cell mounting dimensions





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Note: The gas cell & circuit board are **matched calibrated & temperature compensated pairs**. They will not function properly if they are not kept as **matched pairs**. A control number is marked on the gas cell flange that should match one marked on the circuit board.

