



L02-05-0102 CO₂ Duct Transmitter Product Data

Product Description

The L02-05-0102 transmitter monitors the carbon dioxide (CO₂) levels in industrial and office type environments. The concentration of CO₂ is a good indication of the overall indoor air quality (IAQ). Guidelines provided by ASHRAE (62-1989), relate CO₂ levels to the amount of ventilation required in occupied spaces. Carbon dioxide levels in outside air typically range from 320 to 350 ppm. Indoor concentrations above 1000 ppm indicate the need for additional ventilation.

The L02-05-0102 unit has a 0-10 VDC analog output as well as the patented ABC Logic™ self-calibration system (Automatic Background Calibration).

The concentration of CO₂ is measured using a Single Beam Absorption Infrared Flow Through sampling method for all duct mounting configurations. These units should not be used in environments such as greenhouses, wineries, breweries, or any other applications where industrial sources of CO₂ are present.

The ABC Logic™ software, eliminates the need for manual calibration in applications where the indoor CO₂ level drops to outside levels during unoccupied periods (ie. during evening hours). The ABC Logic™ will not work properly in applications where the space is left unoccupied for less than 4 hours a day or where there are industrial sources of CO₂ present such as breweries, wineries, or greenhouses. Upon initial installation, a warm-up period of more than two minutes is required and up to 30 minutes for full operating accuracy.



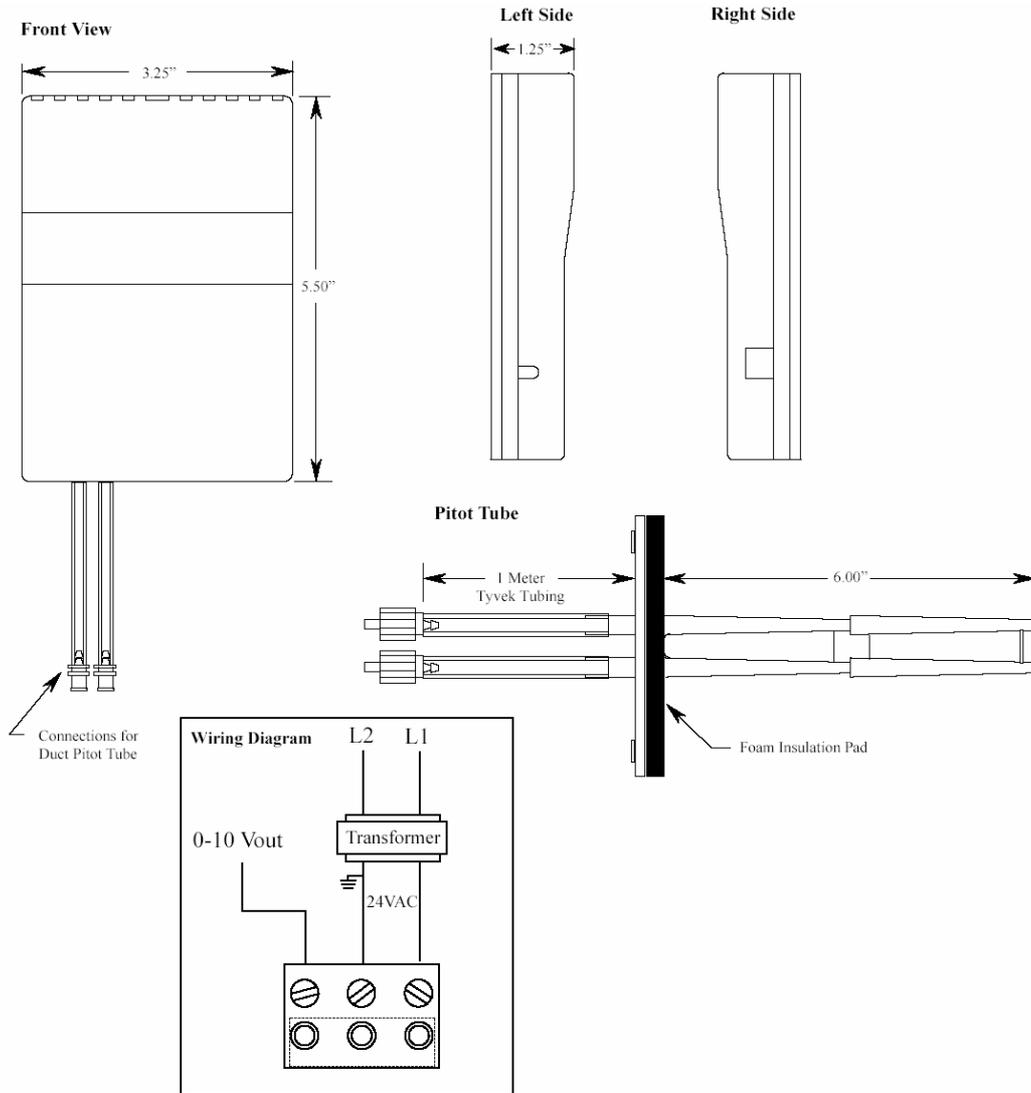
Technical Data

Supply Voltage	• 18 to 30 VAC RMS, 50/60 Hz Half-Wave Rectified or +18 to 42 VDC
Power Consumption	• 1.75 VA max. average power, 3.25 VA peak power
Output	• 0 to 10 VDC (100 Ohm output impedance) (Source: 10 mA, Sink: 10 mA)
Measurement Range	• 0 to 2000 ppm
Accuracy	• +/- 50 ppm or +3% of reading (Against factory certified calibration gas @ 25°C at standard pressure)
Non-Linearity	• < 1% of FS
Sensitivity	• +/- 20 ppm
Response Time	• <2 minutes (Sensor Response), 0 to 90% step change w/ (1) meter sampling tube at a worse case duct velocity of 1.3 m/s response time including sampling is <12 minutes
Temperature Dependence	• +/- 0.15% FS/°C
Pressure Dependence	• 0.13% of reading per mmHg from 760 mmHg
Operating Temp. Range	• 59 to 90°F (15 to 32°C) Temp Limits: 32 to 122°F
Operating RH Range	• 0 to 95%, non-condensing
Calibration Interval	• ABCLogic™, Automatic Self Calibration Software
Agency Certifications	• FCC, CE
Design Life	• 15 Years, Typical
Sensor Coverage Area	• 7,500 sq. ft. maximum



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Device Detail



Mounting

The L02-05-0102 carbon dioxide duct transmitters are supplied with a pitot tube and 1 meter of clear tyvek tubing, The transmitter will mount directly to a standard 2" x 4" junction box and is encased in a beige enclosure.

Ordering Information

Model #	Description
L02-05-0102	CO ₂ Duct Transmitter with 0-10VDC Output and Pitot Tube