Envent Model M90 (PPM)

Carbon Dioxide Monitor

The Model M90 is designed to monitor low concentrations of CO2 in gas applications. An infrared, dual-wavelength technology is incorporated into the design of the instrument. The M90 can be included as an additional measurement with other Envent analyzers, or can be offered as a stand-alone monitor with an integrated sample conditioning system.

Features

- Dual Wavelength IR Technology
- Long-term stability
- Low power consumption (5 Watts)
- Dual alarm outputs
- 4 – 20 mA output
- Two adjustable set point control relays
- The M90 PPM monitor continuously measures and corrects for the short and long-term concentration changes that cause measurement errors in first-generation (single-beam) CO2 sensors

Envent M90 (PPM) with Sample System

Applications

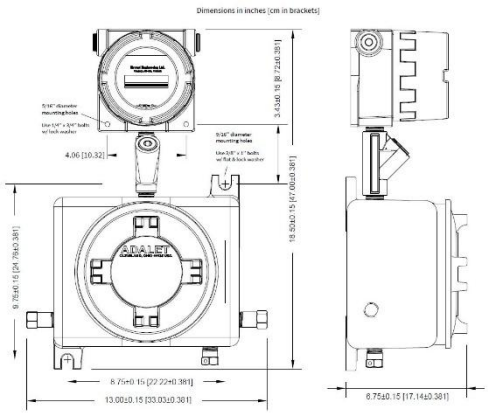
- CO_2 is measured routinely in natural gas for product quality and process control purposes. Common ranges are from 0 – 2000 PPM with a lower detectable limit of 200 PPM. Other ranges are available upon request.
- Gas Plants
- Certain H_2S removal chemical processes can be fine-tuned by CO_2 slipstreaming
- Quantify CO_2 as a combustion by-product
- Biogas
- Natural gas – Process and Stream

Benefits

- Quick delivery
- Class I, Division 1, Groups B, C & D
- Full service & training
- Source life: 10 years minimum

Envent
Knowledge by Analysis

M90 (PPM) Components Diagram



M90 (PPM) Mounting Dimensions

Specifications

Enclosure	Class I, Division 1, Groups C & D
Measurement Ranges	CO2 0 - 500 ppm 0 – 1000 ppm 0 – 2000 ppm 0 – 3000 ppm 0 – 5000 ppm 0 – 1%
Accuracy	0 - 500ppm, 0 - 1000ppm: ±3% of range ±10% of range (range dependent)* 0 - 2000ppm, 0 - 3000ppm, 0 - 5000ppm, 0 - 1%: ±2% of range ±<0.015% of range per mbarv * Not including gas calibration tolerance
Zero Stability	0-500ppm, 0-1000ppm: ±10% of range (over 12 months) 0-2000ppm, 0-3000ppm. 0-5000ppm, 0-1%:±2% of range (over 12 months)
Response Time	T90 = 10 seconds or programmable RC
Zero Drift Due to Ambient Temperature	< ± 3% range per °C
Operating Pressure	800 to 1150 mbar (11.6 to 16.7 psig)
Warm-up Time	1 minute (initial), 30 minutes (full specification)
Humidity	Measurements are unaffected by 0 – 95% relative humidity, non-condensing
Power Requirements	24 V DC (7V – 30V) Standard
Analog Output	Linear 4 – 20 mA
Digital Interface	RS-485 & RS-232
Operating Power	24 VDC at 5 Watts Standard 12 VDC, 120/240 VAC optional
Source Life	10 years minimum
Alarm Outputs	2 solid state drivers 2 Amp. 30 VDC maximum

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