

MODEL

M90 CO₂ Monitor

This uniquely rugged and simple design by Envent Engineering utilizes dual-beam technology for accuracy and stability.

APPLICATIONS

CO₂ is measured routinely in natural gas for product quality and process control purposes. Common ranges are from 0-5% for sales gas and up to 0-30% for inlet CO₂ concentration. Some H₂S removal chemical processes can be fine-tuned by slip stream as much CO₂ as possible to gain volume but not so much as to exceed pipeline tariff limits of typically 2-4%. CO₂ is also a combustion byproduct and needs to be quantified.

FEATURES

- True Dual-Beam Technology
- Long-term stability
- Low power consumption
- Alarms
- Backlit, 16-character, 2-line Display
- 4-20 mA output

VALUE

The M90 dual-beam IR CO₂-detection system continuously measures and corrects for the short and long-term changes that caused measurement errors in first-generation, single-beam CO₂ sensors. The M90 is a compact CO₂ sensor which uses less than 2 watts of operating power, provides linearized analog or digital measurement outputs. Options include adjustable set point control relays.

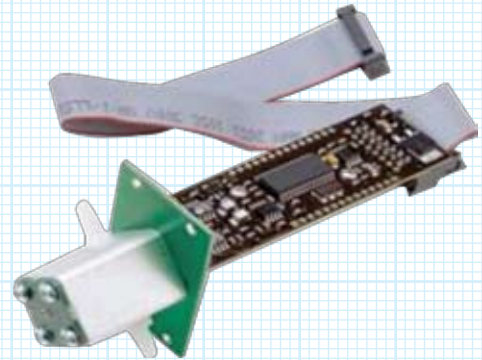
The M90 offers industry-leading value in price for Class 1, Division 1 Groups C & D hazardous locations. Standard range is 0-20 % CO₂ but other ranges available upon request.



Model M90

SPECIFICATIONS

Enclosure	Class 1, Div1 Grps C & D
Operating Principle	Dual-beam, non-dispersive infrared (NDIR)
Detector	Sapphire window with glass frit seal
Sensing Cell Proof Pressure (sample cell only)	2 PSI (13.8 KPa) gauge pressure
Measurement Range	0-20% CO ₂ (other ranges available upon request)
Repeatability	± 0.1 % CO ₂
Drift	Less than 2.5% of reading/year
Accuracy	± 3% of reading or 0.1% CO ₂ at cal temperature ± 5% of reading or 0.1% CO ₂ over full operating temperature range
Warmup time	Less than 5 minutes
Operating Temperature	10 - 50°C
Operating Humidity	Sensing Cell: 0-100% RH (non condensing) Electronics: 0-90% RH (non condensing)
Storage Temperature	-20-60°C.
Storage Humidity	0-90% RH (non condensing)
Analog Output	Isolated 4-20 mA
Digital Interface	RS-485 & RS-232
Operating Power	24 VDC at 5 Watts standard, 12 VDC optional
Source Life	10 years minimum
Alarm Outputs	2 solid state drivers 2 Amp, 30 VDC maximum
Standard Sample System	Inlet filter (1,500 psig max) and SS single stage regulator (3,000 psig max), flow meter (100 psig max) mounted



Dual-Beam Infrared CO₂ Sensor



CO₂ M90 with standard sample system mounted on 16" x 24" anodized aluminum panel