

3750 Process O₂/CO₂ Analyser



For the simultaneous measurement of Oxygen and Carbon Dioxide in all types of processes, gas blending, biotech and other systems.



Applications

Fruit storage vessel monitoring
Food and Beverage packaging

Controlled environment monitoring
Fermentation monitoring

Gas mixing
Sugar processing

Features & Benefits

- Maintenance free, disposable oxygen sensor
- Maintenance free, CO₂ detector with virtually unlimited life
- Calibrate to air
- No special skills required
- Specific to oxygen/ CO₂
- Analogue outputs available
- Sturdy, reliable construction

Systech Illinois' 3750 Process Oxygen or Carbon Dioxide Analyser is designed for the simultaneous measurement of oxygen and carbon dioxide in all types of processes; gas blending, biotech and other systems. Incorporating separate, high quality sensors to perform these measurements. The instrument can be calibrated to ambient air or standard calibration samples, and is capable of providing accurate analysis in almost all industrial gases and atmospheres.

Infrared CO₂ measurements are inherently non linear, especially over a wide range of concentrations. The 3750 uses a solid-state infrared sensor with no moving parts and a compact optical cell. Microprocessor based calibration factors using a 10 point linearisation allow measurements up to 100% CO₂.

The Systech Illinois 3750 is simple to use and requires virtually no maintenance.

Principle of Operation

Oxygen

The 3750 produces oxygen measurement by use of an electrochemical fuel cell which will monitor and display oxygen from 0.1 to 100%. This highly accurate and stable sensor remains unaffected by high concentrations of CO₂ which may destroy most traditional fuel cell sensors.

Carbon Dioxide

Carbon dioxide measurement is made by use of an infrared unit comprised of an infrared source sample cell and an infrared detector package. The detector is installed on a signal processing board which provides linear output to a digital panel meter. The detector will measure carbon dioxide from 0.1 to 100%.

Sampling Versatility

The compact sensors have a low internal volume requiring a low sample flow of approximately 150 cc/min. The sample should be clean and dry (non-condensing). Moisture or dirt deposits on internal surfaces of the CO₂ sensor can cause errors in reading.

Therefore, a disposable type particulate filter can be inserted in the sample line if required. For those systems where a source of sample flow is not available the 3750 can be equipped with an optional diaphragm pump.

Optional Analogue Output

The optional analogue outputs allows you to continuously monitor the data output using a chart recorder or data logger. Alternatively, you can use this option for remote monitoring.

Technical Specifications

Measurement Range	0.1 - 100% (O ₂ /CO ₂)
Power Requirements	100/115 VAC, ±10% 220/240 VAC, ±10%
Display Type	Two 3½ Digit LED's
Accuracy	Oxygen: ± 0.1% Carbon Dioxide: ± 2% FS
Response Time	90% within 20 seconds
Sample Connections	1/8 inch Swagelok type
Enclosure	Cast aluminium and sheet steel
Dimensions inches (mm)	102H x 262W x 254D (mm)
Options	
Analogue Outputs	0-10V or 0-20mA for both O ₂ and CO ₂
Internal Sample Pump	

Systech Illinois have over 25 years experience of providing analysis solutions for a wide range of industries. From our manufacturing plants in the UK and U.S we produce gas analysers for industrial process industries, headspace analysers for monitoring gas flushing of food products, and our range of permeation analysers.

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