TELEDYNE ANALYTICAL INSTRUMENTS

MODEL OT-3H

Designed to Measure O2 in Natural Gas

The Challenge

At a time when domestic natural gas companies seek to lessen the United States' dependence on foreign resources and attain greater production from our reserves, Teledyne has supported the mission with reliable equipment for measuring oxygen in natural gas. The OT-3H is designed to run continuously for years with minimal maintenance and streamline the work of field technicians.

In a small and easy to maintain package, this innovative instrument utilizes new sensor technology -- Teledyne's own A-2CNG sensor -- engineered with CO2 resistant electrolyte. Even more exciting, this sensor has a built-in acid gas scrubber (patent pending).

Competitors' units rely on a bulky, external scrubber that requires frequent maintenance and replacement. Restructuring the sensor to accommodate the scrubber simplifies upkeep while minimizing instrument size.

The Solution

The OT-3H Natural Gas Oxygen Measurement System accurately monitors trace oxygen levels in a variety of gases at the ppm level.

Measuring Oxygen in Natural Gas

• Controls quality

• Prevents corrosion

The transmitter is equipped with two user-selectable oxygen analysis ranges and is acceptable for operation in Class I, Division 2, Groups B, C, and D hazardous environments when used in conjunction with a non-incendive power source.

The OT-3H system is housed in a weatherproof NEMA-4 case. For access to the Micro-fuel Cell and transmitter controls, the front door swings open.

The transmitter is equipped with two oxygen analysis ranges (0-100 and 0-1000 ppm) and has an optional heating system.

The OT-3H is designed to work with a variety of Flow Computers, such as TotalFlow or FlowBoss, and the system can be ordered in either AC or DC powered versions.

The Sensor

The heart of the system is Teledyne's own A-2CNG Micro-fuel Cell oxygen sensor. This cell is a sealed electrochemical device which translates the amount of oxygen present in a sample into an electrical current. And unlike other sensors on the market, it comes complete with a built-in acid gas scrubber.

Features

- Two analysis ranges, user selectable, 0-100 and 0-1000 ppm
- Designed to work with all flow computers in use
- AC or DC powered versions
- High sensitivity (0.5% FS)
- High accuracy (±1% of full scale at constant temperature)
- Insensitive to flow variations
- Fast response and recovery
- Long, life maintenance free Micro-fuel Cell sensor
- Unaffected by reducing agents (HC's, CO, SO2, etc.)
- Easy to calibrate, no zero gas required
- Rugged NEMA-4 bulkhead mount enclosure
- Temperature regulation through an internal heater (optional)

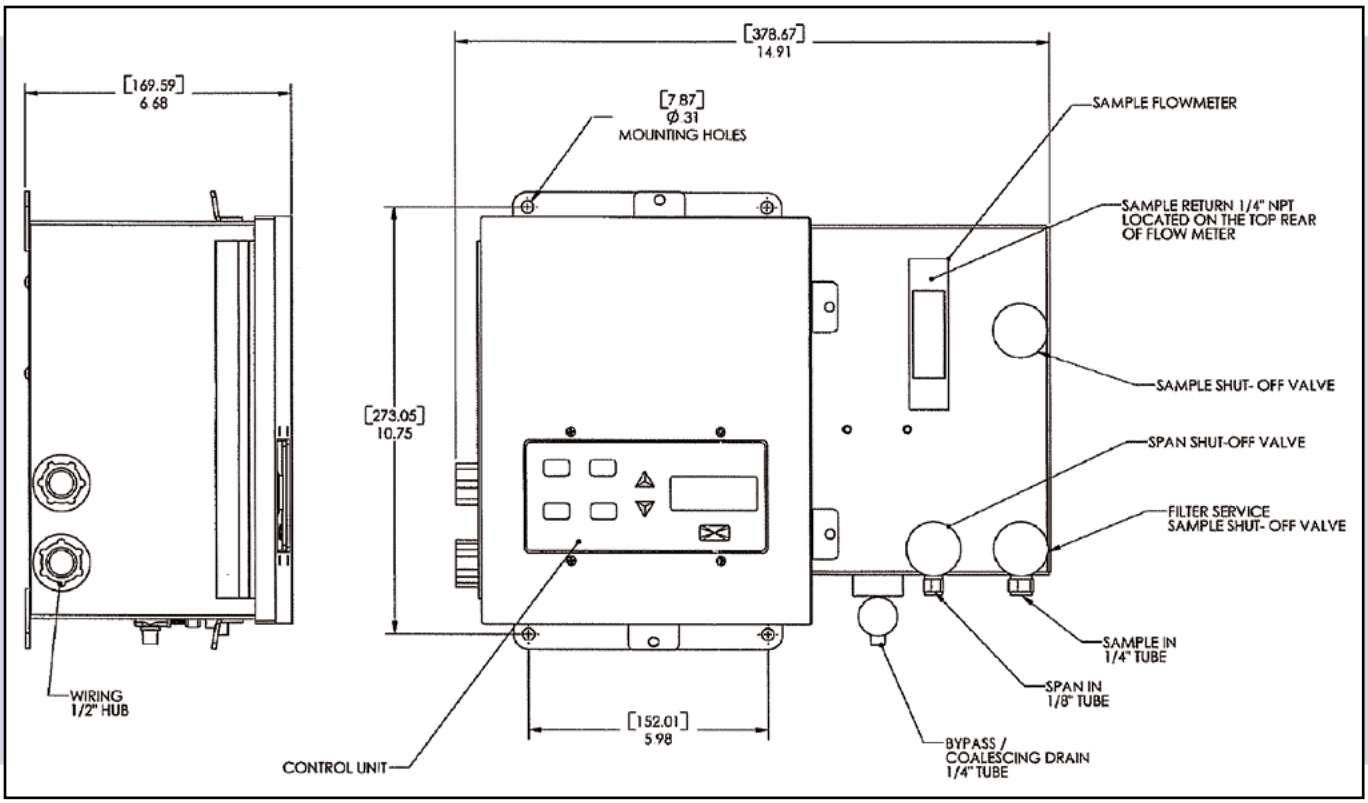
Model OT-3H Oxygen in Natural Gas Analyzer

Specifications

Ranges:	Two user selectable ranges between 0-100 ppm and 0-10,000 ppm oxygen, and a 0-25 % (nominal); Air Calibration range
Operating temp:	-10 to 50°C
Sensor type:	A2C-NG (built-in acid gas scrubber) (patent pending)
Signal output:	Voltage: 0–10 VDC, negative ground
Current:	4-20 mA, negative ground
Accuracy:	±1 % of full scale at constant temperature
Display:	Light emitting diode (LED) display
Response time:	90 % in less than 65 seconds at 25°C (68°F)

System power requirement: AC or DC

System enclosure:	NEMA 4 enclosure
	Suitable for use in Class I, Div. 2 as long as the relay ratings are followed
	DC Rating: 0-30 VDC maximum @ 0.9 Amps maximum
	AC Rating: 125 VAC maximum @ 0.2 Amps maximum; minimum reliable switching rating: 10 +A @ 10mV
Range ID:	0-10 VDC
Alarms:	Two user-settable non-latching alarms, with user adjustable programmable 0-20 min delay; one power failure relay (all are failsafe)



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Warranty

Instrument is warranted for 1 year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

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