Model DT3000 Oxygen Analyzer – In Situ

The Datatest Model DT3000 Oxygen Analyzer provides reliable 02 concentration data to enable the operator to optimize fuel consumption, improve combustion, enhance process control, and minimize air pollution. The Model DT3000 is ideal for applications that include coal, oil, gas-fired and packaged boilers, furnaces, incinerators, dryers, process heaters, kilns and other combustion applications where economical, in situ 0_2 monitoring is required.

Key Benefits

- In situ probe allows cell replacement without probe removal
- Automatic calibration
- Assortment of probe lengths available
- High temperature to 2800°F
- Auto back purge
- Sensor temperature display
- Front panel programmable
- Instantaneous and averaged 4-20 mA outputs
- RS 422/232/485 Modbus RTU output
- Meets or exceeds USEPA 40 CFR 60, Appendix B, P.S.3

Control Unit

The Datatest Model **DT3000** Control Unit is exceptionally user-friendly with access to all system functions, and is controlled via a membrane touch keypad and 80 character LCD readout. Among the Control Unit functions are:

- Back purge time and real time displays
- Zero gas/ span gas value display
- Scales in %
- Sensor mV display
- Hi/Lo set point display
- Sensor temperature display
- Control Unit is offered in both panel and NEMA 4 wall-mount configuration.

Analyzer Probe

The Model **DT3000** Oxygen Analyzer is available with probes of up to nine feet in length. A 316 stainless steel probe is standard and withstands temperatures up to 1500°F (815°C). For higher temperature applications, an Inconel/Alumina probe is available that will withstand temperatures to 2800°F (1538°C).

Oxygen Sensor

Unlike other oxygen monitoring systems on the market, the Datatest **DT3000** features easy field replacement of the Zirconia cell. Mounted inside the probe head outside the stack or duct, it's easily accessible for quick and easy replacement without removing the probe from service.

A constant temperature of 1000°F is maintained at the Zirconia Cell. Since the Model **DT3000** operates at cooler temperatures than other systems, cell life of the probe is greatly increased.

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Model DT3000 Oxygen Analyzer – In Situ

Specification

Probe

Sensor:	Zirconia
Measurement type:	In situ
Measurement range:	0-20.9%
Measurement output:	4-20 mA corresponding to 0-25% (adjustable)
Gas temperature:	1500℉ (815℃) standard; optional 2800℉ (1538℃).
Probe length:	Standard to 2 feet; non-standard to 9 feet
Probe material:	Standard 316 stainless steal; optional inconel / alumina (high temp).
Flange:	Stainless steel 304, ANSI #125, 4”
Accuracy:	± 1% of Full Scale*
Weight:	20 lbs (2ft)

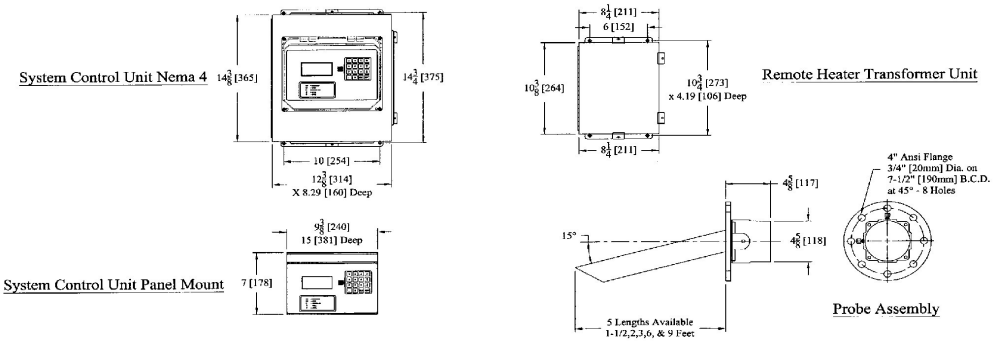
Control Unit

Ambient Operating Temp:	32℉ (113℃) to 0℃– 45℃ for control unit.
Microprocessor Platform:	Siemens C167 MPU
Response Time:	15 seconds to 90% value
Sensitivity:	0.1% (25% scale)
Repeatability:	±0.5% of FSD
Contact Output	1 SPST for each of the following sub-relay outputs: System alarm, Back purge, O2 low; O2 high, Span calibration gas and Zero calibration gas
Amalog Port:	4-20 mA, instantaneous and averaged
Serial port:	Modbus RTU (RS232/422/or 485) for bi-directional communication.
Contact Rating:	1 amp, 230 volts, resistive load.
Display:	4-line by 20 character LCD
Keypad:	Tactile
Power Supply:	100 watts, 220/110 Volts AC, 50/60 Hz
Weight:	25 lbs
Enclosure:	NEMA 4 cabinet.

Air/Calibration

Gas Ports:	1/8” NPT (F)
Air Supply:	No more than 1 SCFH at .1 psig
Probe Back Purge	Flow rate of 25 Scfm between 50 & 100 Psi
Calibration:	Manual and/or automatic in accordance with real time clock
Back Purge:	Automatic, adjustable
Eductor:	Supplied for Negative Pressure or Low Flow Applications
Sampling Rate Insitu System:	Assuming air-lines are ¼” tube, air Pressure of 5/8/10/12 Psi will pull a sample of 3/5/5.5/7 SCFH.

*As required by USEPA



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