

Thermo Scientific Model 200LS Dilution Probe Controller

For CEMS systems monitoring stack effluents

The Thermo Scientific™ Model 200LS dilution probe controllers offer high measurement sensitivity, fast response times and robust operation in harsh environments.

Features

- Meets U.S. EPA requirements for stack monitoring
- Easy integration with other Thermo Scientific™ iSeries gas analyzers for a complete CEMS solution
- Easy operation with minimal maintenance
- Highly accurate

Stack gas applications

The Model 200LS Dilution Controller measures stack emissions released in coal-fired power plants by combining exhaust gases with pressurized, regulated zero air at a known dilution ratio. It accepts up to five calibration gasses and can be configured for either single or dual probe installation (see single flow schematic on reverse side). The instrument meets the US EPA CFR Title 40, Part 60 requirements, while maintaining easy operation with highly accurate results and minimal servicing.



Principle of operation

The Model 200LS is used in conjunction with various probe/orifice configurations. A critical orifice attached to the probe mixes high pressure zero air with exhaust gasses to produce a known dilution ratio. The dilution decreases the water content of the sample gas so that water vapor does not condense. Dilution ratios from 50:1 to 200:1 are most commonly used for combustion emissions and other sample gasses. Typically, the use of dry instrument air with a dilution ratio on the order of 100:1

results in a sample that is 99% clean, dry air. This low moisture content creates a properly conditioned sample of ambient air analyzers, insuring high accuracy in the monitoring process.

The Model 200LS Dilution Controller allows the user to set the correct dilution ratio by using a calibrated analyzer to measure combustion emissions or other sample gasses. A relay board, controlled via a front-mounted rotary control knob switches the flow streams among various calibration gasses or between two separate probes.



Thermo Scientific™ Model 200LS
Dilution Probe Controller

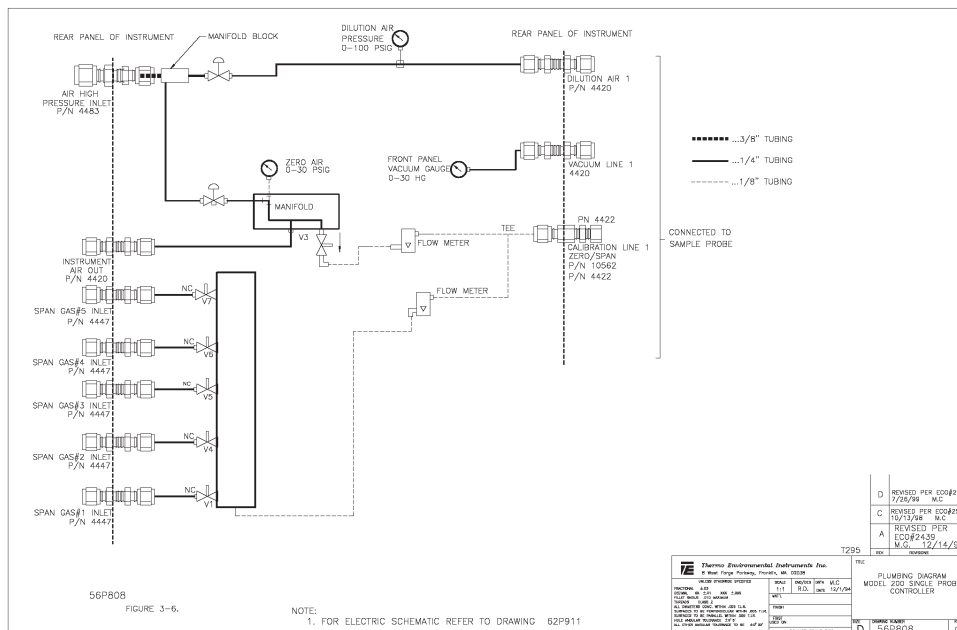
A complete CEMS solutions

The Model 200LS integrates easily into Thermo Scientific™ Continuous Emissions Monitoring Systems (CEMS). It pairs well with the Thermo Scientific™ EPM302 Probe and the 42i NOX analyzer, 43i SO₂ analyzer, Model 48i CO analyzer, 410i CO₂ analyzer and 80i Hg analyzer.

Thermo Scientific Model 200LS Probe Controllers

Specifications	
Operating temperature	15°C to 27°C in NEMA 1 enclosure; -32°C to 52°C in optional NEMA 4 or 12 enclosures
Power requirements	115/230 volts AC ±10%, single phase, 50/60 Hz, 200 watts
Remote inputs	Ability to control zero sample and 1-5 span ports
Output contacts	Zero, sample, and up to 5 spans
Physical dimensions	14" (W) × 7" (H) × 18" (D)
Weight	38 lbs. (17.24kg)

Schematic of flow in single probe configuration



The flow diagram illustrates a standard, single probe configuration. The controller configuration can be customized for application versatility.

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