SUBMITTAL SHEET

MASS-tron II / CEM

ULTRA-LOW RANGE DIFFERENTIAL PRESSURE/ FLOW TRANSMITTER

The ultra-low differential pressure transmitter converts differential pressure, temperature, and static pressure signals received from the STACK-probe(s) into a continuous output signal representing the volumetric flow in SCFM (wet or dry basis) being discharged into the atmosphere. An internal microprocessor manages all system calibration and purge timing functions. AUTO-cal circuitry provides 40CFR75 required calibration drift reporting.

PERFORMANCE SPECIFICATIONS

Accuracy. ±0.1% of Natural Span, including non-linearity, hysteresis, deadband, and non-repeatability.

Stability. ±0.5% of Natural Span for six months.

Temperature Effect
Zero. None; corrected by AUTO-zero.
Span. 0.015% of Full Span/ºF.

Mounting Position Effect. None; corrected by AUTO-zero.

Transducer Response Time. 0.5 second to reach 98% of a step change.

Power Consumption.

	Standard		w/AUTO-purge/CEM	
	In Rush	Hold	In Rush	Hold
24VAC	14.4VA	14VA	88VA	76VA
24VDC	9.6W	9.0W	39W	39W
120VAC	19.2VA	18.67VA	110VA	95VA

FUNCTIONAL SPECIFICATIONS

Digital Outputs.
Form C dry contact rated for 3 Amps at 24VAC/VDC for AUTO-cal in progress. Dual Form A dry contacts rated for 3 amps at 24VAC/VDC for AUTO-purge acknowledgment.

Digital Inputs.
Dry contact for AUTO-cal external start command.
Dry contact for AUTO-purge external start command.

Analog Outputs.
Three standard 4-20mA DC outputs for flow, temperature, and, absolute pressure. One additional output is optionally available.

Analog Inputs.
4-20mADC for temperature input.

AUTO-purge Management.
AUTO-purge cycle is initiated via an external dry contact input from an external smart relay R-1.

Power Supply.
Standard 24VAC (20-28VAC) or 24VDC (20-40VDC), with automatic selection. Optional 120VAC (100-132VAC), via external transformer.

Low Pass Filtration.
Response time to reach 98% of a step change is adjustable from 2.0 to 250.0 seconds.

Automatic Zeroing.
Accuracy. Within 0.1% of calibrated span.
Frequency. Every 1 to 24 hours on 1 hour intervals.

Overpressure and Static Pressure Limit.
25 psig.

Circuit Protection.
Power input is isolated, fused, and reverse polarity protected.

Span and Zero Adjustment.
Digital, via internally located push-buttons.

Displays.
Standard 5 line x 20 character backlit graphical LCD provides five lines of data display. LED's indicate AUTO-zero in progress, CPU activated, AUTO-zero over-ranged, AUTO-purge in progress, and AUTO-cal in progress.

Temperature Compensation Selection.
Push-button selection of linearized or non-linear input. Choice of thermocouple (Type E, K, J, and T) or 100 ohm platinum RTD temperature sensor type.

Pressure Compensation.
Absolute pressure (atmosphere or duct static), 20" to 40" Hg standard.

Humidity Limits.
0-95% RH, non-condensing.

Temperature Limits.
–20ºF to 180ºF Storage.
+40ºF to 140ºF Operating.

Calibration Drift Reporting.
Once every 24 hours. Refer to AUTO-cal Report Signal Timing Diagram.

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