

SAGE SRE SPECIFICATIONS

REMOTE STYLE EXPLOSION PROOF IN-LINE MASS FLOWMETER

Flow Meter is thermal dispersion type, utilizing constant temperature difference method of measuring Gas Mass Flow Rate. It contains two reference grade platinum RTD sensors clad in a protective 316 SS sheath. Features direct Mass Flow for gases, wide rangeability, low pressure drop, very low end sensitivity, and no moving parts.

Flow Meter is microprocessor based, does not have any potentiometers, and has RS232 communications with accompanying menu driven software (Sage VIP). Flow Meter is powered by 24 VDC or 115 VAC/ 230 VAC. The power dissipation is under 6 watts (e.g. under 250 ma at 24 VDC).

Electronics is Remote Style, with Explosion Proof, Class 1, Div 1, Groups B, C, D, NEMA 4X Windowed Enclosure, Display and Keypad. The Display is a back-lit LCD with two lines of information: Mass Flow Rate on top line; and Totalized Flow and Temperature on bottom line. The Keypad has 4-buttons and provides a convenient means to interface with an extensive menuing system. The electronics has a 4 to 20 ma output proportional to Mass Flow Rate or the output can be factory or field configured to Temperature. Output is opto-isolated. In addition, one dry contact relay is provided that can be configured for pulsed outputs of Totalized Flow, or Trip High, Trip Low, and other functions.

Flow Element is In-Line Style consisting of a choice of 316 Stainless Steel Schedule 40 Flow Bodies sized from 1/4" x 6" long to 4" x 12" long. Male NPT ends are standard, with flanged ends, tube, or butt weld optionally available.

Flow Element's Junction Box is Explosion Proof (Class 1, Div 1, Groups B, C, D), and does not have any electronics – only a wiring terminal block. The Flow Element will be connected to the Electronics by 25 feet of lead-length compensated cable. The cable (6-conductor) can be lengthened or shortened without affecting accuracy (max loop resistance 10 ohms, up to 1000 feet).

Calibration Self Check: Flow Meter has built in diagnostics – the menuing system has provisions to check the sensor's operation by accessing the sensor's output, and comparing it to the original reported "zero flow" value noted on last few lines of meter's Certificate of Conformance. This convenient in-situ field diagnostic procedure verifies that the original factory calibration hasn't drifted, shifted, or changed. This "Sensor Functionality and Zero Self Check" also verifies that the sensor is free from contamination, even without inspection.

Accuracy is +/- 0.5% of Full Scale +/- 1% of Reading with a turn-down of up to 1000 to 1. Repeatability will be 0.2%. The Flow Meter is Sage Metering, Inc. SRE Series.

