

SAGE METERING, INC. PARAMOUNT 402 SERIES REMOTE INDUSTRIAL THERMAL MASS FLOWMETER

- 1) The flowmeter shall use the principle of convective heat transfer to directly measure mass flow. The sensor shall consist of two platinum resistance temperature detectors (RTDs).
- 2) The thermal mass flow meter shall directly measure the gas mass flow for calibrated Full Scale velocity settings from 0 to 35,000 feet per minute (e.g., 0 to 7000 SCFM in a 6" pipe) with a turndown ratio of at least 100:1
- 3) The flowmeter shall track the of overall gas consumption with an accuracy of +/- 0.5% of Full Scale +/- 1% of reading (enhanced accuracy optionally available with limited turn-down)
- 4) The flowmeter shall provide repeatability of 0.2% Full Scale
- 5) The meter shall provide an update of 1 second for a step change in measurement up to 63% of final flow value
- 6) The flowmeter shall have a 4-20mA flow signal output for rate and a 24VDC pulse for totalized value and Modbus® compliant RS485 RTU or HART communications. BacNet optional
- 7) The flowmeter shall also have a 2nd USB communication channel (cable supplied) which directly connects to PC for reconfigurability or meter validation checks
- 8) The thermal mass flowmeter shall be microprocessor based (Hybrid-Digital) with Remote electronics
- 9) The flow meter can be either Insertion Style or In-Line Style
- 10) The flowmeter shall support field adjustments of the Full Scale flow range, engineering units, pipe size, low flow cutoff, filtering, etc. (using the supplied SageCom™ software)
- 11) The flowmeter shall provide a field In-Situ Calibration Check Verification using the displayed mW
- 12) The thermal mass flowmeter shall be Sage Metering Paramount Series (402)
- 13) Contact Sage Metering 866-677-7243 for further information or pricing

GENERAL SPECIFICATIONS PARAMOUNT 402 SERIES REMOTE STYLE METER

STYLE:	Remote Insertion or In-Line Mass Flow Meter (transmitter up to 1000 feet from probe Junction Box)
SENSOR:	Two reference grade platinum RTDs clad in 316SS sheath
MATERIAL:	Wetted metal components: 316SS
POWER:	24VDC Standard (115/230VAC optional)
POWER DISSIPATION:	<2.5 W
ELECTRONICS:	Remote-Style Microprocessor based (Hybrid-Digital)
PROBE ENCLOSURE:	Junction Box is Explosion Proof, Class I, Groups B, C, D, NEMA 4X (no electronics)
TRANSMITTER ENCLOSURE:	Remote mount, NEMA 4X enclosure, explosion proof rated
DISPLAY:	High contrast photo-emissive OLED graphical display (Flow Rate, Totalizer, Temperature and mW)
TURNDOWN:	100 to 1
RESOLUTION:	1000 to 1
LOW END SENSITIVITY:	5 SFPM
FIELD CALIBRATION CHECK:	Yes - Digital system features In-Situ Calibration Verification using the displayed mW
COMMUNICATIONS:	Modbus® compliant RS485 RTU or HART (BacNet optional) with separate USB connector/cable
APPROVALS (DIV2):	CSA C22.2 (24 VDC); ANSI 12.12.01, Class I, Div 2, Groups B, C, D T4 (24VDC); CE (AC Power or 24VDC); ATEXnA (Div 2 on 24 VDC)
APPROVALS (DIV1)	Optional on 115/230 VAC or 24 VDC powered meters; Class I, Div 1, Groups B, C, D, T6
FIELD RECONFIGURABLE:	SageCom™ software included for reconfigurability and validation checks
FLOW ACCURACY:	+/- 0.5% of Full Scale +/- 1% of reading (enhanced accuracy optionally available with limited turn-down)
FLOW REPEATABILITY:	0.2%
RESPONSE TIME:	1 second time constant
GAS TEMPERATURE RANGE:	Standard -40° to 200°F (93°C), Optional to 300°F (149°C) and 450°F (232°C)
GAS PRESSURE:	500 PSIG (If higher pressure needed, contact Sage)
FLOW OUTPUT:	4 to 20 mA for Rate
TOTALIZER:	24VDC pulse for Totalized value
TEMPERATURE OUTPUT:	Through Modbus® or HART only
AMBIENT TEMPERATURE:	-40°F to 150°F (66°C)
PROBE/ FLOW BODY	Insertion: 1/2" OD Probe (3/4" optional) probe lengths 6" to 36"; In-Line Flow Body: ¼" to 4" (6" optional)
RELAYS:	Optional external dry contact relay available (DCR-DC)
CABLE LENGTH:	25' Standard (max length 1000'). Lead length compensated (accuracy unaffected)
FLOW CONDITIONING:	Standard for In-Line Meters; Captive Flow Conditioners available upon request for Insertions
TRANSMITTER ENCL DEPTH:	DC: 8.0" ; AC: 8.0"