



SIE Insertion Series Models / Specifications

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Models		
Your Pipe Size	Insertion Models ¹	Max Full Scale (SCFM) ^{2, 3}
1"	SIE-05-12	200
1-1/4"	SIE-05-12	300
1-1/2"	SIE-05-12	470
2"	SIE-05-15	820
2-1/2"	SIE-05-15	1000
3"	SIE-05-15	1750
4"	SIE-05-15	3150
6"-14"	SIE-05-18	33,000
16"-24"	SIE-05-24	100,000
26"-36"	SIE-05-30	250,000
>36"	Consult Factory	Consult Factory

1 - "05" refers to probe diameter of 1/2". Optionally, 3/4" probes are available ("07"). The length of probe is typically 15 inches ("15") or 18 inches ("18")

2 - Max Full Scale available for many gases, such as pressurized Air or Nitrogen. Some gases such as Hydrogen may be limited. Contact Sage for details

3 - SCFM = Standard Cubic Feet Per Minute. 1 SCFM = 1.7 NCMH. Sage standard conditions for calibration are 70°F and 29.92" Hg. Note, Max Full Scale is based on a maximum Velocity of 35,000 Standard Feet Per Minute (SFPM)

Specifications

General	
Function	Microprocessor-based Insertion Flow Meters for gases
Flow Element	Constant Temperature Thermal Mass Flow Element consists of two 316 SS clad platinum-wound RTDs
Flow Rate Output Signal	4-20 ma isolated output linearly proportional to mass flow rate or velocity
Temperature Output Signal	Optionally configurable 4-20mA isolated linear temperature signal from 40°F to 200°F. Menu selectable in lieu of flow output
Power	24VDC (250 ma), or 115VAC or 230VAC (switchable)
Communication	RS232 Communication and Menuing Software (Sage VIP)
Sensor Drive Circuit	Proprietary Sensor Drive Circuit provides enhanced flow signal stability and insensitivity to process temperature changes
Display / Keypad	2-Line 2 x 16 small format back-lit display with standard 4-Button Keypad. Flow Rate (top line), Total and Temperature (bottom line)
Menu Navigation	4-Button Touch Screen Display Keypad and RS232 with navigational software (Sage VIP) standard
Multiple Channel Capability	Up to four totally independent calibrations. Calibrate for four different gases, different sensitivities, and/or different configurations (Channels A–D). Channels can be keypad, laptop or externally selectable (via contact closures)
Flow Range / Sizes	
Units of Measurement	Flow–SCFM, SCFH, SCFD, SCCM, NCMM, NCMH, KG/S, KG/M, KG/H, KG/D, LBS/S, LBS/M, LBS/H, LBS/D, SLPM, SLPH; Temperature–°C and °F; Velocity-SFPM, SFPS, NMPH (other combinations available)
Insertion Meters	Full Scale depends on pipe size. For example up to 1000 scfm in a 2 1/2" pipe, but up to 100,000 scfm in a 24" pipe
Performance	
Standard Flow Accuracy	Accuracy of +/- 1% of Reading +/- 0.5% of Full Scale per Channel
Repeatability	0.2% of Full Scale
Turndown	Up to 1000:1
Calibration	Sage Metering's National Institute of Standards Traceable (NIST) calibration facility
Gas Temperature	Std.: -40°F to 200°F (-40°C to 93°C); HT01: 200°F to 350°F (93°C to 177°C)
Integral Enclosure Temperature	0° to 150°F (-18°C to 65°C). Contact Sage for lower temperature ranges
Pressure Rating	500 psig (1000 psig optional)
Response Time	1 second (each time constant) for flow change
Relays	One dry contact Relay suitable for Pulsed Outputs of Totalized Flow or configurable to Trip High or Trip Low
Wetted Parts	316L Stainless Steel for Flow Bodies, Sensor Flow Elements and Flow Conditioners. Hastelloy (recommended for Chlorine Gas) and other materials optional
Agency Approvals	CSA approved for Class I, Div 1, Groups B, C, & D. (Tested & approved to CSA C22.2 No 30 & CSA C22.2 No. 142) Meters have a T3C Rating. AC Powered meters, have a T2 Rating

**Limited
Warranty**

Sage Metering's Series of Thermal Mass Flow Meters are warranted against faulty materials or workmanship for one year from the date of delivery to the buyer. After issuance of a Return Meter Authorization (RMA) by Sage, and upon receipt of the defective meter, Sage will either repair or replace the defective meter at its sole option and at no cost to the purchaser

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