Specifications

Overall Specifications

Hardware Configuration

Package Options:
Epoxy-coated aluminum (standard).
Stainless steel (optional).
Fiberglass (optional).
Explosion-proof (optional).

Physical: (Epoxy-coated aluminum package)
Size: 14.24 × 11.4 × 5.12 in. (36.2 × 29 × 13 cm).
Weight: 11 lb (5 kg).

Environmental

Operating Temperature:
14° to 130°F (-10° to 55°C).

Storage Temperature:
14° to 158° (-10° to 70°C)

Flow Accuracy (% of reading)

Velocity Accuracy:
1-Path Measurement
±2 to 5% of reading at ±1 to ±275 ft/s (±0.3 to ±85 m/s)

2-Path Measurement
±1.4 to 3.5% of reading at ±1 to ±275 ft/s (±0.3 to ±85 m/s)

Note: *Specifications assume a fully developed flow profile. This is installation-dependent and may require a straight run of pipe 20 diameters upstream and 10 diameters downstream. Accuracy depends on whether measurement is 1- or 2-path.*

Range

Bi-directional:
-275 to -0.1 ft/s (-85 to -0.03 m/s)
+0.1 to +275 ft/s (+0.03 to 85 m/s).

Molecular Weight and Mass Flow Accuracy (% of reading)

Molecular Weight (hydrocarbon mixtures):
MW 2 to 120 g/mol.
1.8%, optimizable for other gas composition

Mass Flow (hydrocarbon mixtures, typical)
1-path: 3 to 7%
2-path: 2.4 to 5%

Note: *Dependent on accuracy of temperature and pressure inputs.*

Rangeability	2750:1.
Repeatability	±1% at 0.5 to 100 ft/s (15 cm/s to 30 m/s)

Electrical Specifications

Power Supply

Input Options:
110 to 120 VAC, 50/60 Hz with 1 A Slo-Blo Fuse
220 to 240 VAC, 50/60 Hz with 0.5A Slo-Blo Fuse
12 to 28 VDC with 3.0 A Slo-Blo Fuse

Power Usage

AC Unit:

20 W maximum

DC Unit:

10 W maximum

Protection

Built-in mains power surge/lightning protection.

European Compliance

This unit complies with EMC Directive 89/336/EEC and 73/23/EEC Low Voltage Directive (Installation Category II, Pollution Degree 2).

Input/Output Specifications

Keypad:
39-key membrane keypad with tactile feedback.

Display:
Two independent, software-configurable 64 x 128-pixel LCD graphic displays.

Printer/Terminal Communications:
One RS-232 port for printer, terminal, PC, SCADA, etc.

Standard Inputs
Two isolated 4 to 20 mA inputs (121 Ω load) with integral 24 VDC power supply

Note: *Temperature and pressure inputs required.*

Analog Input Options:
Select up to 2 boards from one of the following types:

1. *Transmitter Input Board* with 2 isolated 4-20 mA inputs and 24-V loop power

2. *RTD Input Board* with 2 isolated 3-wire RTD inputs. Span: -148° to 662°F (-100° to 350°C)

Analog Output Options:
All meters come with two isolated 4-20 mA current outputs (550 Ω maximum load).
Optional selection of up to 3 additional output boards, each with four isolated 4-20 mA outputs (1000 Ω maximum load).

Measurements
(assignable to any output):
Velocity: 0 to 275 ft/s (0 to 85 m/s)
Volumetric flow rate: standard or actual
Molecular weight: 2 to 120 g/mol
Sound speed: 500 to 5000 ft/s (150 to 1500 m/s)
Mass flow rate: 0 to 4,000,000 lb/h (0 to 2,000,000 kg/h)

Digital Outputs
Standard: RS232 serial port
Optional: RS485
RS485 (MODBUS)

Totalizer/Frequency Output Options:

Select up to 3 Totalizer/Frequency Output Boards, each with four outputs per board, 10 kHz max.

All boards allow software-selectable functioning in two modes:

Totalizer Mode: one pulse per defined unit of parameter (e.g., 1 pulse/SCF).
Frequency Mode: 5-volt frequency proportional to magnitude of parameter (e.g., 10 Hz = 1 SCFM).

Alarm Options:

Select up to 2 boards of one of the following types:
Standard Relay Board with 3 non-hermetic Form-C relays.
Hermetic Relay Board with 3 hermetically-sealed Form-C relays.

Operational Specifications

Flow Computer (Built-in)	Programmable from the keypad. Calculates velocity, instantaneous average molecular weight, mass flow rate, and other flow parameters in real time, while simultaneously handling other activities such as programming, logging, calibration, and output of data and diagnostics. New and improved MW algorithm, now based on temperature and pressure correction of sound speed. Gives wider range, higher accuracy, and improved compensation for non-hydrocarbon gases such as CO_2, H_2, N_2, and CO.
Data Logging	Keypad-programmable for setting up log units, update interval, start and stop times.Memory capacity for up to 43,000 data points in a linear or circular log for standard and error logs.
Display Functions	Graphic display shows flow in numeric or graphic format. Also displays logged data and diagnostics.
Printer Signal Output	Supports wide variety of thermal and impact printers. Outputs data in numeric or graphic ("strip-chart") format.

Transducer/Flowcell Specifications

Transducer Type	Standard GE Panametrics type T1 (swaged assembly of Ti transducer housing to SS tube) or T2* (welded assembly of Ti transducer housing to Ti tube) For agency certifications, contact GE Panametrics.
Temperature Range	Standard: -166° to +300°F (-110° to +150°C). Optional: -166° to +500°F (-110° to +260°C).
Maximum Pressure	1500 psig
Materials	Standard: T1- titanium head, 316 ss T2 - all titanium. Optional: Monel, Hastelloy, and 316 stainless steel.
Connections	**Cable Length:** Up to 1000 ft (300 m) **Housing Options:** Explosion-proof (NEMA-7, Class I, Group C & D, Division I.) Weatherproof (NEMA-4X, IP65) Flameproof (INIEX certified for EEx d II C T6). **Mounting and Installation:** Mechanical insertion mechanisms rated to 500°F and 500 psig.
Installation	**Spoolpiece** Prefabricated spools complete with transducer/mechanism ports: Pipe sizes: 3 to 120 in. Process Connections: Plain end; 150, 300, or 600 lb. RF flanged. Materials: carbon steel, low-carbon steel, stainless steel, or other. **Hot/Cold Tap** Mechanisms installed via hot or cold tap. Full installation jigs, fittings, and documentation provided.
Process Connection	Standard: 3 in., 150 lb flange connection Optional: 2 in., or other Optional: Non-removable flange mounting (consult factory)
Preamplifier with Explosion-proof Housing	Operating Temperature: -40° to +140° (-40° to +60°C)