

ValuMass™

Series 500 ValuMass™ Flowmeters

Low Cost/High Value

Eldridge Products, Inc. (EPI) is a proven leader in gas flow measurement. Our Master-Touch™ thermal dispersion gas mass flowmeters and patented Flow Averaging Tubes set the standard for innovation, performance and reliability. Now our new **Series 500 ValuMass™** flowmeters offer a **lower cost** option for many flow applications with the **high value** associated with all of EPI's flow measurement instrumentation.

ValuMass™ flowmeters include a robust feature set: 0 – 5, 10 VDC, 4 – 20mA, RS485 Modbus RTU and optional 0 – 1 kHz outputs (proportional to the gas mass flow rate); an RS232C port; 16-bit linearization technology for flow rate accuracy; and rugged construction of 316/316L stainless steel wetted parts. An optional 2-line, 16-character backlit LCD displays the flow rate and the elapsed total readouts.



ValuMass™ inline and insertion flowmeters accommodate virtually all installation requirements. The insertion style flowmeters are available with ½" OD probes in 6", 12" or 18" lengths. A compression fitting for convenient mounting is included with all insertion style flowmeters. The inline style flowmeters are

available for line sizes from ¼" to 2". The 3 ½" long flow sections have MNPT ends as standard for easy mounting in the process line. ValuMass™ flowmeters accept 24VDC, 115VAC or 230VAC input power as specified at the time of purchase.

Thermal Technology

EPI's thermal dispersion flowmeters are solid state instruments that use the principle of convective heat transfer to directly measure gas mass flow. EPI's sensors consist of two resistance temperature detectors (RTDs). A forced null, Wheatstone bridge preferentially heats one RTD; the other RTD acts as the temperature reference. The air or nitrogen flow dissipates heat from the first RTD, causing an increase in the power required to maintain a balance between the RTDs. This increase is directly related to the gas molecular rate of flow.

Our sensors are temperature compensated and insensitive to pressure changes, so no additional instrumentation or calculations are required. The output signal is a true mass flow rate signal which can be directly interfaced with your data acquisition system.

Model Numbers

Model	Style	Size
540 0406	insertion	½" x 6" probe
540 0412	insertion	½" x 12" probe
540 0418	insertion	½" x 18" probe
500 S4002	inline	¼" x 3 ½" flow section
500 S4003	inline	⅜" x 3 ½" flow section
500 S4004	inline	½" x 3 ½" flow section
500 S4006	inline	¾" x 3 ½" flow section
500 S4008	inline	1" x 3 ½" flow section
500 S4010	inline	1 ¼" x 3 ½" flow section
500 S4012	inline	1 ½" x 3 ½" flow section
500 S4016	inline	2" x 3 ½" flow section

Series 500 ValuMass™ Thermal Flowmeters

Specifications

Accuracy (including linearity)	± [2% of Reading + (0.5% Full Scale + 0.05% / °C)]
Repeatability	± 0.5% of Full Scale
Linear Signal Output	0 – 5 or 0 – 10VDC, 4 – 20 mA, RS485 Modbus RTU Optional 0 – 1 kHz (proportional to flow for total/counter)
Sensor Response Time	1 second
Turndown Ratio	100:1 (not less than 15 SCFM / FT ²)
Transmitter Operating Temperature	0° – 130°F (-18° – 55°C)
Temperature Compensation	Standard 0° – 150°F (-18 – 66°C) Optional 0° – 250°F (-18° – 121°C)
Gas Pressure Effect	Negligible over ± 20% of absolute calibration pressure
Pressure Rating Maximum:	
Inline Flowmeters	500 PSIG
Insertion Flowmeters	500 PSIG (Stainless Steel ferrule) 150 PSIG (Teflon™ ferrule)
Input Power Requirement	24 VDC @ 250mA 115 VAC 50/60 Hz 100mA optional 230 VAC 50/60 Hz 50mA optional
Transmitter Power Requirements	5 Watts or less
Communications	RS-232C, RS485 Modbus RTU, LightWIRE infrared (optional)
Display	Optional 2-lines, 16 characters per line, backlit LCD
Wetted Materials	316 & 316L Stainless Steel
Standard Temperature & Pressure (STP)	70°F & 29.92" Hg (Air = 0.075 Lbs. / FT ³)
NIST Traceable Calibration	Standard
Enclosure Rating	NEMA 4X (IP66)
Approvals	CE Mark

SPECIFICATION NOTICE

The specifications contained herein are subject to change without notice. EPI cannot guarantee the applicability or suitability of our products in all situations since it is impossible to anticipate or control every condition under which our products and specifications may be used.

LIMITED WARRANTY

EPI warrants its products to be free from defects in materials and workmanship for one year from the date of factory shipment. If there is a defect, the purchaser must notify EPI of the defect within the warranty period. Upon receipt of the defective product, EPI will either repair or replace the defective product at its sole option. EPI MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AS TO THE PRODUCTS. EPI MAKES NO WARRANTY THAT THE GOODS SOLD TO ANY PURCHASER ARE FIT FOR ANY PARTICULAR PURPOSE. FURTHERMORE, EPI MAKES NO WARRANTY OF MERCHANTABILITY WITH RESPECT TO ANY PRODUCTS SOLD TO ANY PURCHASERS. There are no other warranties that extend beyond the description on any brochure or price quote.

ValuMass
div., of Eldridge Products, Inc.
2700 Garden Road
Monterey, CA 93940



Tel: 831/648-7772
Fax: 831/648-7780
Email: sales@ValuMass.com
Internet: www.ValuMass.com