



Eldridge Products, Inc.

a leading manufacturer of thermal gas flow meters since 1988

Eldridge Products, Inc. has pursued innovation and excellence in thermal dispersion gas mass flow measurement since 1988. Thermal flow meters offer simple, low cost operation for accurate, economical and reliable gas flow measurement for various applications - Compressed Air, Biogas, Natural gas, Aeration, Digesters, Landfills, HVAC systems — virtually any gas flow application. Master-Touch™ flow meters can solve your gas measurement challenges.

Master-Touch™ Series 9200MP Flow Meters are for use in hazardous area locations (Flame proof locations), Certified to CSA/CUS, ATEX, IECEx, KOSHA standards.

Insertion style thermal mass flowmeters include a sensor & probe assembly that is inserted into the process gas flow conduit to allow the process gas to flow across the flow inlet tube. Our insertion style flowmeters are available with 1/2", 3/4", or 1" OD probes. Optional mounting items - Tube fitting, flange, ball valve retractor. The tube length is determined by the size of the process pipe. Large ducts or stacks may require multiple averaging tubes to achieve the very best accuracy. For problematic or unique installations, please consult the factory.

Remote style thermal mass flowmeters utilize two enclosures. The probe enclosure is Explosion proof (Flame proof) rated for use in hazardous area locations. The enclosure is mounted directly to the insertion probe assembly. The enclosure contains the electrical connections, signal processing electronics and the LCD display, with programming keypad. The remote enclosure has a Type 4X rating and is usually placed in a readily accessible non-hazardous area (Ordinary location). Optionally available, is an Explosion-proof remote enclosure. The enclosure contains the electrical connections, signal processing electronics and the LCD display, with programming keypad. Only a four-wire, twisted-pair cable is required to carry the input power and flow signal between the two enclosures.



Our patented **Flow Averaging Tubes™ (FAT™)** use the principle of convective heat transfer to directly measure mass flow, and are well suited to most applications with limited available straight run. In many installations, the up-stream straight run can be reduced to three diameters. The probe has a number of large diameter inlet ports along the length of the upstream impact surface. The pressure at each inlet port is averaged inside the tube to create the axial flow through the tube and across our flow sensor. The gas returns to the main flow stream through the ports located near the sensing elements. Anomalies in the actual flow profile or installations in non-circular ducts may still some require minor adjustment to achieve the best accuracy.



THERMAL GAS MASS FLOW MEASUREMENT APPLICATIONS —

Compressed Air Monitoring

Natural Gas Consumption

Ventilation Hood Alarms

Water & Wastes Aeration

Bio / Digester Gas Production

Landfill Gas Recovery

Boiler Combustion Efficiency

Stack / Flue Gases

Pharmaceutical Clean Rooms

Semiconductor Fabrication

Food Processing

Nitrogen Purging

Pulp & Paper Mills

and many more!



Specifications

Linear signal output	0–5 VDC & 4–20 mA (Flow and Temperature)
Event Relays (Two)	1 Amp @ 30 Vdc Event selectable functions (see Manual)
Communication Protocols.....	RS232 & RS485 Modbus RTU or BACnet Optional HART or Profibus DP
Display LCD 2-line 16-character	Rate, Total, milliwatts, Temperature, Event
Accuracy including linearity (Ref.: 21°C)*	±(1% of Reading + 0.5% of Full Scale + GTC)
Repeatability	±0.2% of Full Scale
Sensor response time	1 second to 63% of final value
Turn down ratio.....	100:1; 10 SFPM (0.05 NMPS) Minimum
Withstands Ambient temperature (electronics)	-40° to 158°F (-40° to 70°C)
Suitable Process Gas temperature range**	-40° to 392°F (-40° to 200°C)
Gas temperature coefficient (GTC)	0.02% Full Scale/°C
Gas pressure effect	Negligible over ± 20% of absolute calibration pressure
Pressure rating maximum	500 PSI Std.
Input power requirement	6 Watts 24VDC @ 250mA 120 VAC 50/60 Hz optional 240 VAC 50/60 Hz optional
Flow Meter power requirements	5 watts maximum
Date/Time RAM Back-up	Lithium Button Cell, ten-year life, Quantity 1
Wetted materials	316L Stainless Steel (Optional Hastelloy C276)
Standard temperature & pressure (STP).....	70°F & 29.92" Hg (Air 0.075 lb./cubic foot) Optional 0°C & 1.0132 BarA (Air 0.081 lb./cubic foot) Or user specified STP at time of order
NIST traceable calibration	Yes

* EPI is not responsible for measurement errors due to flow profile irregularities caused by installation, piping configurations surface corrosion or scale, valve placement, etc.

** Specify average process operating temperature, with high & low limits.

NOTE: Specifications subject to change without notice. Consult our web site, www.epiflow.com, at time of order.

NOTE: Eldridge Terms & Conditions for sales available on our web site, www.epiflow.com.

APPROVAL CHOICES

CSA/CUS
APPROVED INSTRUMENT
For use in hazardous area locations; Class I Group B, C, D; Class II Group E, F, G; Class III: Encl Type 4X; Class I Zone I; AEx d IIB+H2 IP66; Ex d IIB+H2 IP66; T2 or T3 or T4 as marked; Ta = 0°C to 50°C

ATEX
APPROVED INSTRUMENT
For use in hazardous area locations; Ta = 0°C TO 50°C; IP66; Ex d IIB+H2 T4 Gb/ Ex t IIIC T135°C Db or Ex d IIB+H2 T3 Gb/EX t IIIC T200°C Db or Ex d IIB+H2 T2 Gb/EX t IIIC T300°C Db; SIRA 12ATEX1302

IECEX
APPROVED INSTRUMENT
For use in hazardous area locations; T2 or T3 or T4 as marked; Ta = 0°C to 50°C; Ex d IIB+H2 T2...T4 Gb IP66; Ex tD A21 IP66 T135°C...T300°C
IECEX CSA 11.0014

KOSHA
APPROVED INSTRUMENT
For use in hazardous area locations; Class I Group B, C, D; Class II Group E, F, G; Class III; Encl Type 4X; Class I Zone I; AEx d IIB+H2 IP66
Ex d IIB+H2 T2...T4 Gb IP66; Ex tD A21 IP66 T135°C...T300°C

Certification Choices

Flow Transmitter - CSA/CUS, ATEX, IECEX, KOSHA (specify preference at time of order)

Remote Enclosure — CSA/CUS Non-Hazardous area locations (Ordinary locations)
Optional CSA/CUS, ATEX, IECEX, KOSHA (specify preference at time of order)

