

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.

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!

Our patented Flow Averaging TubesTM (FATTM) 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.



Specifications

Linear signal output
Event Relays (Two) 1 Amp @ 30 Vdc
Event selectable functions (see Manual)
Communication Protocols
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
Turn down ratio
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)
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-upLithium Button Cell, ten-year life, Quantity 1
Wetted materials
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 calibrationYes

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

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

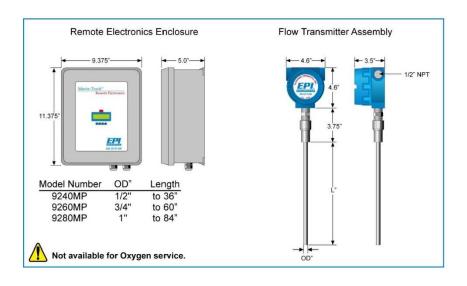
NOTE: Eldridge Terms & Conditions for sales available on our web site, www.epiflow.com.

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)



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+HZ IP66
Ex d IIB+HZ T2...T4 Gb IP66;
Ex tD AZ1 IP66
T135°C...T300°C

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