

Series 8200MPHT

A leading manufacturer of Thermal Mass Flow Meters Since 1988.

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

Master-Touch Series 8200MPHT Flow Meters are for use in hazardous area locations (Flame proof locations) with the ability to perform at high temperatures.

Insertion Style Thermal Mass Flow Meters include a sensor & probe assembly that is inserted into the process gas flow conduit to allow the process gas to flow across the flow sensing elements. Our insertion style flow meters are available in, 3/4" O.D. probe to 60", or 1" O.D. probe up to 84". Optional mounting items- Tube fittings, flange, ball valve retractor. For problematic or unique installations, please consult our factory.

Remote style thermal mass flow meters utilize two enclosures. The probe enclosure is manufacturer rated as 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 is manufacturer rated as Type NEMA 4X and is usually placed in a readily accessible ordinary location. Optionally available, is a Cast Aluminum 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.



Type NEMA 4X
Remote

**SERIES
8200MPHT**



Cast Aluminum
Remote Option

THERMAL GAS MASS FLOW MEASUREMENT APPLICATIONS-

Compressed Air Monitoring
Ventilation Hood Alarms
Bio / Digester Gas production
Boiler Combustion Efficiency
Pharmaceutical Clean Rooms
Food Processing
Wet Gas
and many more.....

Natural Gas Consumption
Water & Waste Aeration
Landfill Gas Recovery
Stack / Flue Gases
Semiconductor Fabrication
Nitrogen Purging
Pulp & Paper Mills

Master-Touch™

RTD's (Resistance Temperature Detectors)



Series 8200MPHT

Thermal mass flow meters generally follow King's Law, and use the principle of convective heat transfer to directly measure mass flow. EPI's proprietary thermal mass flow sensors use two **precisely matched**, reference-grade platinum **Resistance Temperature Detectors (RTDs)**. The sensor elements are hermetically sealed in 316L Stainless Steel (or optional Hastelloy C276) thin wall sheaths. Our microcontroller operated smart sensor technology preferentially heats one RTD; the other RTD acts as the temperature reference. The process gas 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 molecular gas flow rate. Our sensors are temperature compensated for a wide process gas temperature range and insensitive to pressure changes, therefore the flow meter output is a direct mass flow rate value.

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; Optional- BACnet, HART or Profibus DP
Display LCD 2-line 16-characte	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 Reading
Withstands Ambient temperature (electronics)	-40° to 158°F (-40° to 70°C)
Suitable Process Gas temperature range**	-40° to 977°F (-40° to 525°C)
Gas temperature coefficient (GTC)	0.02% Full Scale/°C
Gas pressure effect	Negligible over ± 50% of factory calibration pressure
Pressure rating maximum	500 PSI Std.
Input power requirement	6 Watts 24 Vdc @ 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.

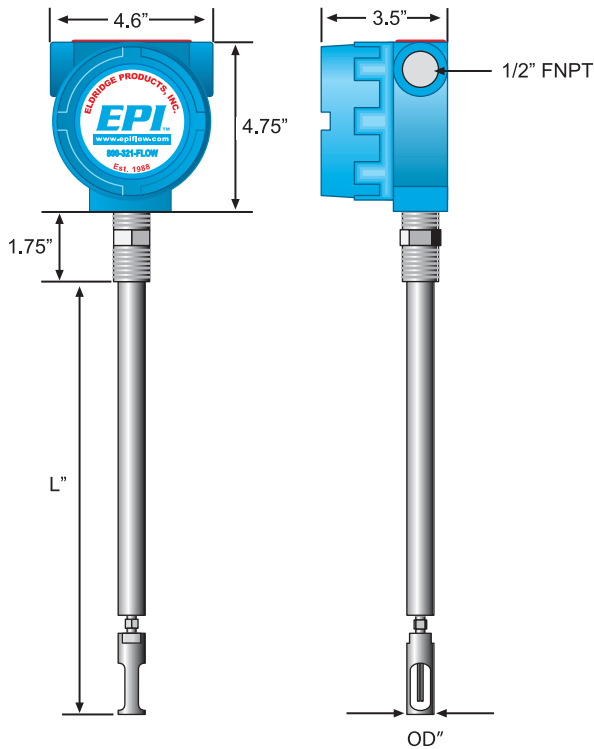
** Specify average process operating temperature, with high & low limits.

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

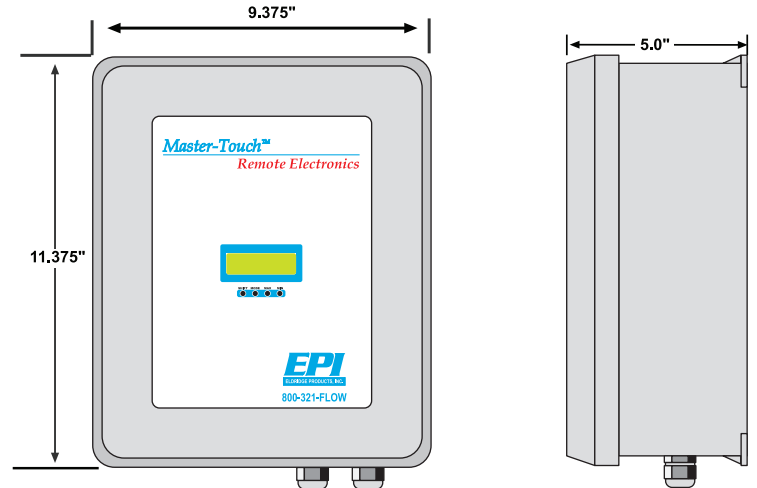
NOTE: Eldridge Terms & Conditions for sales available on our web site, www.epiflow.com.

Dimensional Specifications

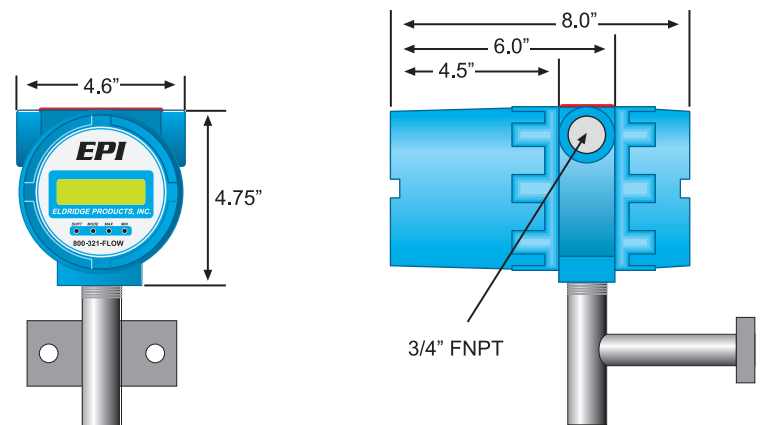
*Flow Transmitter Assembly



**Remote Electronics Enclosure



**Remote Electronics Cast Aluminum Enclosure option with Mounting Bracket



Model Number	OD"	Length
8280MPHT	1"	6" up to 84"
8260MPHT	3/4"	6" up to 60"

Four-wire, twisted pair interconnect cable required between Remote Electronics and Flow Transmitter (max. 5 ohm resistance).

AWG	Wire Length
20	200'
18	300'
16	500'
14	800'
12	1250'

Certification Choices

NO AGENCY CERTIFICATIONS

*Flow Transmitter: Manufacturer rated as flame proof Ex and Type NEMA 4X, IP66

**Remote Enclosure: Manufacturer rated as Type NEMA 4X

Optional- Cast Aluminum Remote Enclosure (Specify preference at the time of order)



ORDER
YOURS
TODAY

Series 8200MPHT



WANT TO LEARN MORE...



Visit:
www.epiflow.com



Call us at:
800.321.FLOW



To place an order, email:
sales@epiflow.com