

# ELECTRONIC MASS FLOW CONTROLLERS

## Series A810

### DESCRIPTION

The Series A810 electronic mass flow controllers are compact, self-contained units designed to indicate and control a set flow rate of gas. They are unaffected by temperature and pressure variations within specified limits. The mechanical layout of the design includes an LCD readout built into the top of the transducer. This readout module is tiltable over 90 degrees to provide optimum reading comfort. The readout is connected by a standard modular plug, and is readily removable and extended for remote reading installations. Units are available in aluminum or stainless steel.

### FEATURES

- Rigid metal construction.
- Maximum operating pressure – 1000 psig.
- NIST traceable calibration certification.
- Built-in set point control.
- Leak integrity  $1 \times 10^{-7}$  sccm helium.
- 0-5 VDC or 4-20mA signals.
- Built-in tiltable readout display in engineering units.
- Circuit protection.
- Totalizer option available.

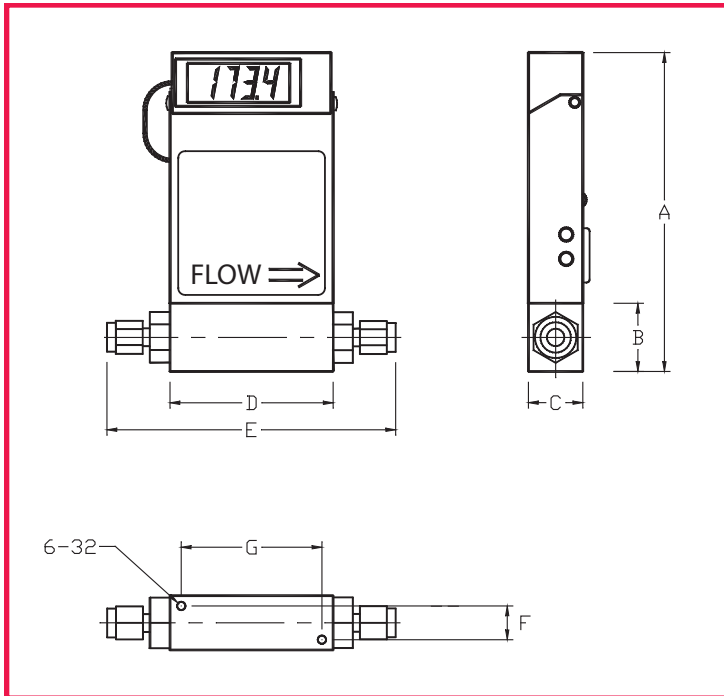


### SPECIFICATIONS

Accuracy:	$\pm 1.5\%$ of full scale, including linearity for gas temperatures of 59°F to 77°F and pressures of 5 to 60 psia
Repeatability:	$\pm 0.5\%$ of full scale
Response time:	Generally 2 seconds to within $\pm 2\%$ of actual flow
Temperature coefficient:	0.15% of full scale/°C
Pressure coefficient:	0.01% of full scale/psi
Maximum pressure drop:	1.06 to 8.0 psid depending on flow range
Maximum pressure differential:	50 psi
Gas and ambient Temp:	41° to 122°F
Output signals:	Linear 0-5 VDC (1000 ohms min load impedance) or 4-20 mA (0-250 ohms loop resistance)
Transducer input power:	12 VDC; 800 mA
Materials in fluid contact:	Aluminum units: anodized aluminum, 316 SS, brass, Viton o-rings Stainless steel units: 316 SS and Viton o-rings
Attitude sensitivity:	No greater than + 15 degrees from horizontal to vertical: Standard calibration is in horizontal position.
Connections:	1/4" compression fittings
Leak integrity:	$1 \times 10^{-7}$ sccm of helium maximum to the outside environment
CE compliant:	EN 55011 class, class B: EN50082-1

# ELECTRONIC MASS FLOWMETERS *CONTINUED*

## Series A820



Series A820C Dimensional Drawing

### A820 Dimensions

	Up to 10 slpm	15 to 50 slpm
A	5.60	5.98
B	1.00	1.37
C	1.00	1.25
D	3.00	4.13
E	5.02	6.15
F	0.69	0.69
G	2.69	2.63
H	4.50	4.88

## HOW TO ORDER

### A820T-W-X-Y-Z

(Select W, X, Y, and Z parameters from the table below. Also when ordering specify the gas, inlet pressure and operating temperature for the calibration.)

T = Totalizer (omit T if no totalizer is required)

W = material: A = aluminum  
S = stainless steel

X = Seals: V = Viton®  
B = Buna  
E = EPR  
T = Teflon®

Y = flow range:

0-10 sccm	=	00010
0-20 sccm	=	00020
0-50 sccm	=	00050
0-100 sccm	=	00100
0-200 sccm	=	00200
0-500 sccm	=	00500
0-1 slpm	=	01000
0-2 slpm	=	02000
0-5 slpm	=	05000
0-10 slpm	=	10000
0-15 slpm	=	15000
0-20 slpm	=	20000
0-30 slpm	=	30000
0-40 slpm	=	40000
0-50 slpm	=	50000

Z = Output signal: V = 0-5 VDC  
A = 4-20 mA