

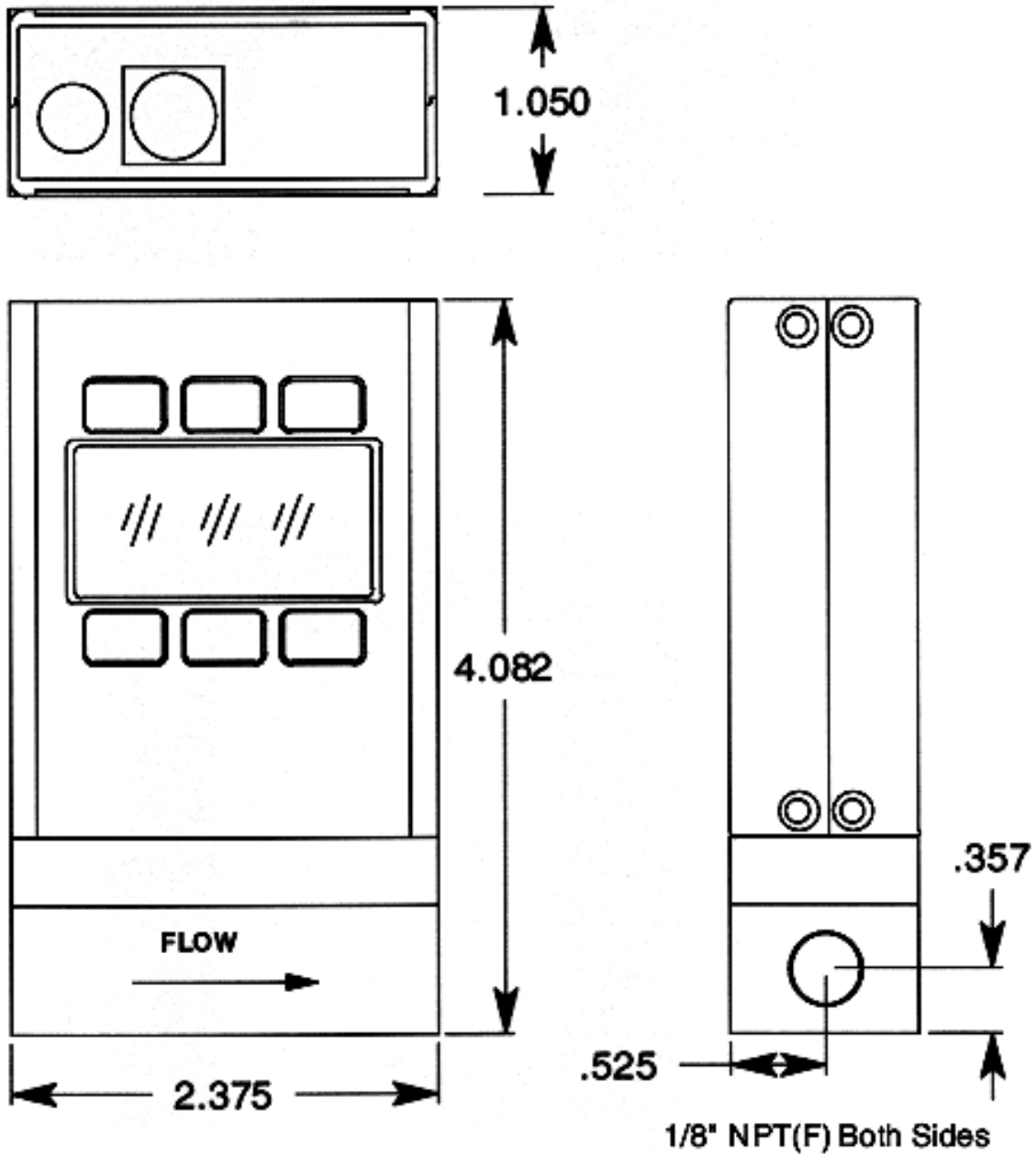
## MASS and VOLUMETRIC Gas Flow meters

The M and V series gas flow meters use two of the best-studied physical properties of gases to measure flow: Pressure and Viscosity. Differential pressure measurement, across a laminar flow element, results in a flow meter that is inherently linear. The flow meters measure differential pressure within the laminar region, to achieve a turndown of 100:1 typical. Gas units are available with a very wide range of measurement, starting at 500 micro-liters per minute full scale to 1000+ liters per minute full scale.

The M series "NON-THERMAL" Mass Gas Flow meters use discrete Differential Pressure, Absolute Pressure, and Temperature sensor measurements within the laminar flow region to determine mass flow. The embedded microprocessor provides a software-based STP calculation compensated for pressure and temperature to standard conditions (1 atmosphere 25° Celsius). The M series address the limitations of thermal mass flow technologies, as there is no "Hot Wire" drift. The unit has an adjustable response time starting from 10 milliseconds. The dynamic display units show mass flow, volumetric flow, temperature and absolute pressure simultaneously. With the push button interface, the user can select the primary display, gas of interest (13 standard gases featured), adjust meter response time or tare the meter at zero flow. The optional battery pack makes for a powerful portable test and calibration tool.

The V series Volumetric Gas Flowmeters are designed for applications venting to atmosphere, with constant backpressure or with little to no backpressure. They do not include absolute pressure or discrete temperature sensors, which makes them an affordable alternative to mass flowmeters. As with the M series, the Volumetric flow meters use discrete Differential Pressure sensor measurements within the laminar flow region to determine flow.

Specification	M Meter	V Meter	Units	Sample FS Ranges
Accuracy	±1%	±1%	Full Scale	0.5 (S)CCM
Repeatability	±0.5%	±0.5%	Full Scale	1 (S)CCM
Turndown Ratio	100:1	100:1		2 (S)CCM
Response Time	10	10	Milliseconds	5 (S)CCM
Full Scale Press. Drop	Consult DigiFlow			10 (S)CCM
Temperature Range (Operating)	-10 to +50	-10 to +50	°C	20 (S)CCM
Zero Shift	0.02% / ATM	0.02%	FS/°C/atm	50 (S)CCM
Span Shift	0.02% / ATM	0.02%	FS/°C/atm	100 (S)CCM
Humidity Range	0-100% non-condensing	0-100% non-condensing		200 (S)CCM
Excess Flow Rate	20X	20X	Full Scale	500 (S)CCM
Common-Mode Pressure	125	15	PSIG	1 (S)LPM
Supply Voltage	7 - 30	7 - 30	Vdc	2 (S)LPM
Supply Current	35	30	mA	5 (S)LPM
Voltage Output - Std	0-5 or 0-10	0-5 or 0-10	Vdc	10 (S)LPM
Media	Air, Argon, Nitrogen, Oxygen, Hydrogen, Helium, Carbon Dioxide, Methane, Propane, Carbon Monoxide, Ethane, Nitrous Oxide, Neon, etc.			20 (S)LPM
Connections	10-32 for 50 SCCM & under =====> => UNF 1/8" for 50+ SCCM - NPTF 20SLPM, 1/4" for 50 & 100 LPM, 1/2" for 250 SLPM 3/4" for 250± 1000 SLPM			50 (S)LPM
Wetted Materials	Anodized AL, 303 & 302 Stainless Steel, Viton®, Silicone RTV, Glass reinforced Nylon			100 (S)LPM 250 (S)LPM 500 (S)LPM 1000 (S)LPM



Flow Range	Height	Length	Depth	Port Size
0.5SCCM - 50SCCM	3.867"	2.375"	1.05"	10-32 UNP
100 SCCM - 20 SLPM	4.167"	2.375	1.05"	1/8" FNPT
50 SLPM - 100 SLPM	4.367"	4.000"	1.600"	1/4" FNPT
250 SLPM	4.967"	4.000"	1.600"	1/2" FNPT
500 - 1000 SLPM	4.967"	4.000"	1.600"	3/4" FNPT

\*Very low flow devices may have special ports to reduce dead volume.

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