



Fast Response Mass Flow Sensor (1FRM-17FRM) with Optional Inlet Filter



Fast Response Mass Flow Sensor (18FRM-19FRM)



Fast Response Mass Flow Sensor (20FRM-24FRM)

Table VI, Specifications—Mass Flow Sensors

	Fast Response Sensors 1FRM-17FRM	Fast Response Sensors 18FRM-19FRM	Fast Response Sensors 20FRM-24FRM
Operating Pressure Range	570 torr to 4500 psig	570 torr to 1500 psig	570 torr to 1500 psig
Operating Temperature Range	40°F to 150°F	40°F to 150°F	40°F to 150°F
Maximum Flow Capacity	See Table VIII	See Table VIII	See Table VIII
Minimum Flow Capacity	2% of max. flow capacity	2% of max. flow capacity	2% of max. flow capacity
Accuracy	± 1% of full scale at calibrated conditions	± 1% of full scale at calibrated conditions	± 1% of full scale at calibrated conditions
Repeatability	± 0.25% of full scale	± 0.25% of full scale	± 0.25% of full scale
Response Time	3 seconds max ¹	3 seconds max ¹	3 seconds max ¹
Pressure Drop	10" water column at maximum flow	10" water column at maximum flow	10" water column at maximum flow
Mounting Attitude Sensitivity	±0.5% of Full Scale ²	±0.5% of Full Scale ²	±0.5% of Full Scale ²
Inlet and Outlet Connections	¼" compression ³	⅜" compression ³	½" NPT female ⁵
Dimensions (inches)	5.50 x 1.48 x 4.32 ⁴	5.50 x 1.48 x 4.32 ⁴	7.00 x 3.30 x 6.10
Weight (approximate)	2 lbs.	2 lbs.	13 lbs.
Electrical Connection	15-pin Type D male connector	15-pin Type D male connector	15-pin Type D male connector
Power Requirements	+15 VDC at 35mA -15 VDC at 35mA	+15 VDC at 35mA -15 VDC at 35mA	+15 VDC at 35mA -15 VDC at 35mA
Flow Output Signal	0-5 VDC into 3000 ohm (or greater) load	0-5 VDC into 3000 ohm (or greater) load	0-5 VDC into 2000 ohm (or greater) load

1. To within 2% of set points.
2. Maximum deviation from stated accuracy specification.
3. VCR® connections are available on special order.
4. Dimensions include compression end connectors.
5. 1" or 1½" NPT or ½", ¾" or 1" compression connections available on special order.

Table VII, Materials of Construction—Mass Flow Sensors (All Models)

<p>Metal Parts Exposed to Gas: Type 316 Stainless Steel Seals: Viton® (Buna-N or Kalrez® Seals available on special order)</p>
