



Fast Response Mass Flow Control Module (1FRC-17FRC) with Optional Inlet Filter



Fast Response Mass Flow Control Module (18FRC-19FRC)



Fast Response Mass Flow Control Module (20FRC-24FRC)



High Pressure Mass Flow Control Module (6HPC-16HPC)

Table III, Specifications—Mass Flow Control Modules

	Fast Response Modules Models 1FRC-17FRC	Fast Response Modules Models 18FRC-19FRC	Fast Response Modules Models 20FRC-24FRC	High Pressure Modules Models 6HPC-16HPC
Operating Pressure Range	570 torr to 1500 psig	570 torr to 1500 psig	570 torr to 1500 psig	570 torr to 4500 psig
Operating Temperature Range	40°F to 150°F	40°F to 150°F	40°F to 150°F	40°F to 150°F
Maximum Flow Capacity	See Table V	See Table V	See Table V	See Table V
Minimum Flow Capacity	2% of max. 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	± 1% of full scale at calibrated conditions
Repeatability	± 0.25% of reading	± 0.25% of reading	± 0.25% of reading	± 0.25% of full scale
Response Time	3 seconds max. <sup>1</sup>	3 seconds max. <sup>1</sup>	3 seconds max. <sup>1</sup>	15 seconds max. <sup>1</sup>
Maximum Pressure Drop	50 psi differential	50 psi differential	290 psi differential	50 psi differential
Minimum Pressure Drop	5 psi differential	10 psi differential	22 psi differential	5 psi differential
Mounting Attitude Sensitivity	± 0.5% full scale <sup>2</sup>	± 0.5% full scale <sup>2</sup>	± 0.5% full scale <sup>2</sup>	± 0.25% full scale <sup>2</sup>
Inlet and Outlet Connections	¼" compression <sup>3</sup>	⅜" compression <sup>3</sup>	½" NPT female <sup>5</sup>	¼" compression <sup>3</sup>
Leak Integrity	1 x 10 <sup>-9</sup> atm. scc/sec Helium	1 x 10 <sup>-9</sup> atm. scc/sec Helium	1 x 10 <sup>-9</sup> atm. scc/sec Helium	1 x 10 <sup>-9</sup> atm. scc/sec Helium
Dimensions (inches)	5.48 x 1.48 x 5.02 <sup>4</sup>	5.68 x 1.75 x 5.82 <sup>4</sup>	7.00 x 3.30 x 7.9	4.92 x 1.00 x 5.05 <sup>4</sup>
Weight (approximate)	2.5 lbs.	3 lbs.	15 lbs.	1.5 lbs.
Electrical Connection	15-Pin Type D male connector	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 180mA	+15 VDC at 350mA -15 VDC at 350mA	+15 VDC at 35mA -15 VDC at 180mA	+15 VDC at 215mA -15 VDC at 15mA
Flow Output Signal	0-5 VDC into 2000 ohm (or greater) load	0-5 VDC into 2000 ohm (or greater) load	0-5 VDC into 2000 ohm (or greater) load	0-5 VDC into 1000 ohm (or greater) load
Command Signal	0-5 VDC	0-5 VDC	0-5 VDC	0-5 VDC

1. To within 2% of set point. Response time specification shown is with "soft start" feature disabled. With soft start enabled, response time will increase by a factor of approximately 4 to 5 times stated specification. Modules are shipped with this feature disabled.

2. Maximum deviation from stated accuracy specification.

3. VCR® connections are available on special order.

4. Dimensions include compression end connectors.

5. 1" or 1 ½" NPT or ½", ¾" or 1" compression connections available on special order.