Mass Flow Controller

Model 36A

Model 36A Series mass flow controllers utilize the specific heat properties of gases to measure true mass flowrate. In addition these mass flow controllers have an electro-magnetic control valve at the outlet which additionally gives them the ability to control gas flows with a ±1% full-scale accuracy when coupled to our Model 36E Series secondary electronics (see page 327). Based on this control capability, they can also be used to perform gas blending operations.

Model 36A controllers are offered in ranges from 0.2 – 10 mL/min through 0.4 – 20 SLPM. They feature a 3-second response time with minimal overshoot and undershoot. In addition, these controllers are relatively attitude insensitive, allowing them to be installed in any mounting orientation with little effect on accuracy.

Benefits/Features

Accessible zero and range potentiometer.

Altitude insensitive.

High accuracy.

Wide flow ranges (up to 20 LPM N_2).

All solid state electronics.

Linear output signal.

Selectable soft start.

Selectable external valve override.

Selectable external valve control.

Normally closed valve.

Model Number	**Flow Range** in Air 20°C and 760 mm Hg
Q2-36A1V-1	0 – 10 mL/min
Q2-36A1V-2	0 – 20 mL/min
Q2-36A1V-5	0 – 50 mL/min
Q2-36A1V-10	0 – 100 mL/min
Q2-36A1V-20	0 – 200 mL/min
Q2-36A1V-50	0 – 500 mL/min
Q2-36A1V-1K	0 – 1000 mL/min
Q2-36A1V-2K	0 – 2000 mL/min
Q2-36A1V-5K	0 – 5000 mL/min
Q2-36A1V-10K	0 – 10,000 mL/min
Q2-36A1V-20K	0 – 20,000 mL/min

Optional Equipment

Model Number	Description
Q2-36-K	Kalrez® Seals
Q2-36-B	Buna-N Seals
Q2-36-VCO	VCO® Fittings
Q2-36-VCR	VCR® Fittings
Q2-36-HP	Special Calibration: Air above 200 psig (14 bar)
Q2-36F-SS	Recommended Option: Inline Filter
Q2-36-SC	Calibration for Gases not Listed Above

* Contact nearest Air Liquide facility with intended gas service to determine additional cost.

Specifications

Performance: Accuracy: ±1% full-scale including linearity at calibrated conditions. ±1.5% full scale for flowrates greater than 20 SLPM.

Repeatability: 1.25% of rate

Response Time: Standard less than 3 seconds to within 2% full-scale of final value for a 0 to 100% command change.

Flow Ranges: 0 to 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10,000 and 20,000 mL/min for air, nitrogen, hydrogen, oxygen, helium and argon

Programmable Input: 0 to 5 VDC or 1000 ohm potentiometer

Output: 0 to 5 VDC into 2000 ohm (or greater) load. Maximum ripple is 3 mV RMS.

Operating Pressure Ratings: 1500 psig (103 bar); 5 – 50 psig (0.3 – 3 bar) pressure drop maximum

Temperature: Ambient/gas 40°F to 150°F (4°C to 65°C)

Maximum Power: -15 VDC at 35 mA DC and -15 VDC at 180 mA DC; 3.5 watts power consumption

Electrical Connections: D-Type connector

Materials of Construction

Wetted: Stainless steel with Viton® seals standard

Connections: 1/4" stainless steel compression fittings standard