



Cole-Parmer Flowmeters and Proportional Controllers for Gases

Versatility and high accuracy from a laminar-based mass flowmeter

- Accuracy of $\pm 0.8\%$ of reading +0.2% full-scale; repeatability of $\pm 0.2\%$
- Measure 20 standard gases—user selectable from display
- 100 to 1 turndown with ranges of 1 SCCM full-scale up to 1000 SLPM
- Models with 4 to 20 mA output or totalizer are available

These meters measure flow via pressure drop across a laminar flow element (LFE). Because the flow element makes the flow stream laminar, placement in the process does not require straight pipe runs upstream or downstream of the meter, greatly simplifying installation. As compared to thermal mass technologies, the LFE design provides an ultrafast response within 10 milliseconds and offers “instant on” with no warm-up time.

An integrated keypad around the display is all that is required to program the unit for service. The 0 to 5 VDC output allows transmission of the flow value to a remote display, recorder, or controller regulating a valve or pump.

Flow controllers feature an integrated PID to direct the unit’s response to process changes. Flow set point is established with keypad, the optional set point control module, a 0 to 5 V signal, or an RS-232 input signal. Order set point control modules separately from the table. For portable flow metering applications, order the battery pack listed below table.

What’s included: NIST-traceable calibration report supplied by the manufacturer, 120/230 VAC power adapter with communications cable.



Mass flowmeter 32908-59 shown with optional battery pack 32929-50



Flow controller 32907-51



Meters and controllers feature a dynamic display that simultaneously shows flow rate, line pressure, fluid temperature, and (for controllers) the set point. For the units shown, both power and input/output signals are transmitted through a single multi-pin connector.

Specifications

Max particulate size

Up to 1 LPM: 20 μm
>1 LPM to 1000 LPM: 50 μm

Accuracy: $\pm 0.8\%$ of reading +0.2% full-scale

Repeatability: $\pm 0.2\%$

Response time

Flowmeters: 10 msec
Flow controllers: 50 msec

Operating temperature:

14 to 122°F (-10 to 50°C)

Max pressure: 145 psig (9.9 bar)

Pressure drop: 0.8 to 3.2 psig (flowmeter)

Output signal: 0 to 5 VDC, RS-232

Input signal: 0 to 5 VDC and RS-232

Wetted materials

Flowmeters: 302 and 303 SS, Viton®, silicone RTV, and glass-reinforced nylon, aluminum
Flow controllers: 302, 303; Viton, silicone RTV, glass-reinforced nylon, aluminum, brass, 410 SS, silicon, glass

Power

Flowmeters: 7 to 30 VDC at 30 mA
Flow controllers
Models ≤ 10 LPM: 12 to 30 VDC at 250 mA
Models ≤ 50 LPM: 24 to 30 VDC at 750 mA

Display type: four-digit, seven-line LCD; 1/4" H flow display



User REVIEWS!



Rated 5 out of 5 stars!

“Very versatile flow controller”

Find more reviews at ColeParmer.com

Connections

≤ 10 mL/min: 10-32 UNF
50 mL/min to 10 LPM: 1/8" NPT(F)
50 to 100 LPM: 1/4" NPT(F)
100 and 250 LPM: 1/2" NPT(F)
500 and 1000 LPM: 3/4" NPT(F)

Flowmeters/controllers [†]	Dimensions
Models ≤ 50 mL/min	2 3/8" L x 3 7/8" H x 1 1/4" D (6.0 x 9.8 x 3.2 cm)
Models 100 mL/min to 10 LPM	2 3/8" L x 4 1/4" H x 1 1/4" D (6.0 x 10.8 x 3.2 cm)
Models 50 LPM to 100 LPM	4" L x 4 3/8" H x 1 1/8" D (10.2 x 11.1 x 4.1 cm)
Models 250 LPM to 1000 LPM	4" L x 5 1/2" H x 1 1/8" D (10.2 x 14.0 x 4.1 cm)
Set point module	2 3/8" W x 2" H x 1" D (6.0 x 5.1 x 2.5 cm)

[†]Dimensions do not include control valve.

Flow range	Mass flowmeters		Mass flow controllers		Set point modules [‡]	
	Catalog number	Price	Catalog number	Price	Catalog number	Price
0.01 to 1 mL/min	SN-32908-51		SN-32907-51		SN-32907-83	
0.05 to 5 mL/min	SN-32908-53		SN-32907-53		SN-32907-85	
0.1 to 10 mL/min	SN-32908-55		SN-32907-55		SN-32907-87	
0.5 to 50 mL/min	SN-32908-57		SN-32907-57		SN-32907-89	
1 to 100 mL/min	SN-32908-59		SN-32907-59		SN-32907-91	
2 to 200 mL/min	SN-32908-61		SN-32907-61		SN-32907-93	
5 to 500 mL/min	SN-32908-63		SN-32907-63		SN-32907-97	
0.01 to 1 LPM	SN-32908-67		SN-32907-67		SN-32907-83	
0.05 to 5 LPM	SN-32908-69		SN-32907-69		SN-32907-85	
0.1 to 10 LPM	SN-32908-71		SN-32907-71		SN-32907-87	
0.5 to 50 LPM	SN-32908-73		SN-32907-73		SN-32907-89	
1 to 100 LPM	SN-32908-75		SN-32907-75		SN-32907-91	
2.5 to 250 LPM	SN-32908-77		SN-32907-77		SN-32907-95	
5 to 500 LPM	SN-32908-79		SN-32907-79		SN-32907-97	
10 to 1000 LPM	SN-32908-81		SN-32907-81		SN-32907-99	

[‡]May be ordered as an option.

SN-17080-10 NIST-traceable recalibration

SN-32929-89 Connection cable, 8-DIN to stripped ends

SN-32929-50 Battery pack, for portable operation of mass or volumetric flowmeter only