



## Model 8170 Series Mass Flowmeter System



### Description

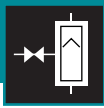
The complete 8170 Mass Flowmeter System offered by Matheson consists of a flowmeter transducer (Model 8172/8173 Series), a digital readout/power supply box and the necessary cable and connectors. These flowmeters can be supplied with either Swagelok tube connections (standard) or optional male VCR compatible connections for easy installation into tubing and piping systems.

The Mass Flowmeter System produces a 0-5 VDC signal proportional to 0-100% of flow rate. This output signal from the digital readout box makes the 8170 Series Mass Flowmeters ideal for use with integrators, totalizers and data logging equipment. The Model 8124 Totalizer is used to compile the total amount of gas used over a period of time, regardless of varying flow rates.

The 8170 Mass Flowmeter Digital Readout Box is available standard for rack mounting in a 1/2 EIA rack or for benchtop use. Other standard features are high and low alarm setpoints selected by the user.

### Specifications

<b>Materials</b>	
Body:	316 stainless steel
By-pass:	316 stainless steel
Fittings:	316 stainless steel
Standard Seals:	Viton
Proof Pressure:	1500 psig (10,350 kPa)
Minimum Differential Pressure:	5 psid (19.5 kPa) (nominal)
Maximum Operating Pressure:	500 psig (3450 kPa)
(All models)	
Temperature Range:	0° to 50°C (32° to 122°F)
<b>Accuracy:</b>	
≤ 30 slpm:	±1% full scale
50-300 slpm:	±2% full scale
>300 slpm:	±3%
<b>Standard Calibration</b>	
Temperature:	0°C (32°F)
Temperature Coefficient:	0.05% per °C
Response Time:	0.5 seconds to 98% of scale (typical)
<b>Repeatability</b>	
≤ 200 slpm:	0.2%
> 200 slpm:	0.5%
Flow Capacity:	2%-100% of range selected
Signal Voltage Output:	0-5 VDC
Voltage Input :	115 VAC, 5 Watts; 230 VAC (optional)
<b>Cable Lengths</b>	
Power Cord:	6 ft
Signal Cable:	8 ft
Alarm Contacts (Each Channel):	1 amp at 30 VDC maximum
Shipping Weight:	8 lbs



**Model 8170 Series** *(continued)*  
**Mass Flowmeter System**

**Ordering Information**

Model Number	Range in Nitrogen @ 0°C and 14.7 psia	Standard End Fittings
8170-0411	0-10 sccm	1/4" Swagelok
8170-0421	0-20 sccm	1/4" Swagelok
8170-0431	0-30 sccm	1/4" Swagelok
8170-0451	0-50 sccm	1/4" Swagelok
8170-0412	0-100 sccm	1/4" Swagelok
8170-0422	0-200 sccm	1/4" Swagelok
8170-0432	0-300 sccm	1/4" Swagelok
8170-0452	0-500 sccm	1/4" Swagelok
8170-0413	0-1 slpm	1/4" Swagelok
8170-0423	0-2 slpm	1/4" Swagelok
8170-0433	0-3 slpm	1/4" Swagelok
8170-0453	0-5 slpm	1/4" Swagelok
8170-0414	0-10 slpm	1/4" Swagelok
8170-0424	0-20 slpm	1/4" Swagelok
8170-0434	0-30 slpm	1/4" Swagelok
8170-0454	0-50 slpm	3/8" Swagelok
8170-0415	0-100 slpm	3/8" Swagelok
8170-0425	0-200 slpm	3/8" Swagelok
8170-0435	0-300 slpm	1/2" Swagelok
8170-0455	0-500 slpm	1/2" Swagelok
8170-0416	0-1000 slpm	3/4" Swagelok

**Options**

Model Number	Description
8291	Specific Gas Calibrations (Limitations Apply); Standard Calibration on Nitrogen, Corrected for Direct Reading.

**Additional Signal Cable Lengths**

CBL-0125-XX	25 ft
CBL-0126-XX	50 ft
CBL-0127-XX	100 ft

8292	230 VAC Models
8293-4	1/4" VCR Compatible End Fittings
8293-6	3/8"/1/2" VCR Compatible End Fittings
8294	4-20 mA Output
8295	PTFE Teflon Seals
MKIT-0015-NB	Neoprene Seal Kit for Ammonia Service, up to 30 slpm
8124	Totalizer for Mass Flowmeter
HAN-0007-AA	Full Rack Mounting Adapter