

MAS Thermal mass Flowmeter



Benefits and Features

- Accuracy: $\pm 1.5\%$ of Full Scale
- Mass Flow Based Measurement
- Temperature/Pressure Change Insensitive
- Meter Ranges From 0-10 SCCM to 0-500 SLM
- Nylon, Aluminum or Stainless Steel Construction
- Maximum Meter Pressures to 1000 PSIG (SS)
- Exceptional Versatility
- Remote Display Capability
- Analog Output Standard

General Description

MAS Mass Flowmeter measures gas flow rates in ranges from 0-10 sccm to 0-500 slm. Accuracy is $\pm 1.5\%$ of full scale over a wide temperature and pressure range. Response time is two seconds to within 2% of final flow. The MAS offers outstanding performance and unsurpassed value.

In contrast to volumetric flow metering devices, the MAS needs no pressure or temperature correction. This makes the unit ideal for a wide variety of gas flow applications including general process control, flow into vacuum systems, leak testing, and flow calibration.

The MAS is available in nylon, aluminum or stainless steel, with or without a digital display. If the display is selected, Flow Network provides a 31/2" digit LCD, tiltable over 180° for easy viewing. The remote display option comes standard with 5 feet of cable, but may be ordered with up to 100 feet of cable for remote surface mounting.

Specifications

Accuracy: $\pm 1.5\%$ full scale @ 15-25° C and 5-60 PSIA

Repeatability: $\pm 0.5\%$ full scale

Drift Coefficients Temperature: 0.15% FS/°C

Pressure: 0.02% FS/PSI

Max. Temperature: 50° C

Max. Pressure

Nylon, Aluminum: 100 PSIG

SS: 500 PSIG

Wetted Parts

Nylon: Nylon®, 316 SS, Viton®

Aluminum: Aluminum, Viton®

SS: 316 SS, Viton®

Leak Integrity

Nylon, Aluminum: 1×10^{-4} scc/sec Helium

SS: 1×10^{-7} scc/sec Helium

Input Power

Standard: 12 VDC, 100 mA

Option "-V2": 24 VDC, 100 mA

Output

Standard: 0-5 VDC (linear)

Option "-A": 4-20 mA (linear)

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Ordering Information

Flowmeter with Nylon Body				
Range Nitrogen SCCM	Maximum Pressure Drop cm H ₂ O	Fittings NPT	Model Number	
			With Display	Without Display
0-10	1	1/4"	MAS-1001	MAS-2001
0-20	1	1/4"	MAS-1002	MAS-2002
0-50	1	1/4"	MAS-1003	MAS-2003
0-100	1	1/4"	MAS-1004	MAS-2004
0-200	1	1/4"	MAS-1005	MAS-2005
0-500	1	1/4"	MAS-1006	MAS-2006
SLM				
0-1	1	1/4"	MAS-1007	MAS-2007
0-2	6	1/4"	MAS-1008	MAS-2008
0-5	6	1/4"	MAS-1009	MAS-2009
0-10	6	1/4"	MAS-1010	MAS-2010
0-20	25	1/4"	MAS-1011	MAS-2011
0-30	47	1/4"	MAS-1012	MAS-2012
0-40	88	1/4"	MAS-1013	MAS-2013
Flowmeter with Aluminum Body				
0-75	6	1/2"	MAS-1115	MAS-2115
0-125	6	1/2"	MAS-1116	MAS-2116
0-175	6	1/2"	MAS-1117	MAS-2117
Options				
4-20 mA Output	Suffix "-A"			
24 VDC Input Power	Suffix "-V2"			
Remote Display with 5 foot cable	Suffix "-RD"			
±1% Full Scale Accuracy (SS units only)	Suffix "-S1"			
Medium Pressure Calibration (40-150 PSIG)	Suffix "-MP"			
High Pressure Calibration (150-500 PSIG)	Suffix "-HP"			
Cleaned for Oxygen Service	Suffix "- O2"			
Calibrated for hydrogen Service	Suffix "-H2"			
KALREZ O-Rings	Suffix "-OR6"			

Flowmeter with Stainless Steel Body					
Range Nitrogen SCCM	Maximum Press. Drop cm H ₂ O	Fittings Swagelok® Style	Body Size	Model Number	
				With Display	Without Display
0-10	6	1/4"	L	MAS-3001	MAS-4001
0-20	6	1/4"	L	MAS-3002	MAS-4002
0-50	6	1/4"	L	MAS-3003	MAS-4003
0-100	6	1/4"	L	MAS-3004	MAS-4004
0-200	6	1/4"	L	MAS-3005	MAS-4005
0-500	6	1/4"	L	MAS-3006	MAS-4006
SLM					
0-1	6	1/4"	L	MAS-3007	MAS-4007
0-2	6	1/4"	L	MAS-3008	MAS-4008
0-5	6	1/4"	L	MAS-3009	MAS-4009
0-10	105	1/4"	L	MAS-3010	MAS-4010
0-15	105	1/4"	L	MAS-3011	MAS-4011
0-20	40	1/4"	M	MAS-3012	MAS-4012
0-30	60	1/4"	M	MAS-3013	MAS-4013
0-50	80	3/8"	M	MAS-3014	MAS-4014
0-100	105	3/8"	M	MAS-3015	MAS-4015
0-100	6	3/8"	H	MAS-3016	MAS-4016
0-200	6	3/8"	H	MAS-3017	MAS-4017
0-300	140	3/8"	H	MAS-3018	MAS-4018
0-400	140	1/2"	H	MAS-3019	MAS-4019
0-500	140	1/2"	H	MAS-3020	MAS-4020

Fitting Styles	1/4"	3/8"	1/2"
Swagelok® Style (Nylon: 1/4" only)	-C1	-C2	-C3

Accessories	
MAS-5000	110 VAC to 12 VDC Power Supply