Model 122

Mass Flow Instruments

Porter Mass Flow products reflect over four decades of experience in the design and manufacture of precision instruments for the measurement and control of gas flow. They incorporate design principles that are simple and straightforward, yet flexible enough to operate under a wide variety of process parameters. The result is flowmeters, flow controllers and control valves that are accurate, reliable and cost-effective solutions for many gas flow applications in the analytical, process, chemical/petrochemical, environmental, biopharmaceutical and research markets.

The 100 and 200 series are the lastest evolution of the original Porter Analog Mass Flow Products. With thousands installed worldwide, they are the proven solution when cost effective high performance gas flow control is the goal. The 100 Series Mass Flow Meters are available for applications where flow measurement only is required.



SPECIFICATIONS:

Flow Capacity: Any Flow range from 0-10 SLPM to 0-100 SLPM (nitrogen equivalent).

Response Time (per SEMI E17-91 Settling Time): 1 to 2 Seconds

Accuracy and Linearity: ±1% full scale

Repeatability: Within ±0.2% full scale at any constant temperature within operating temperature range

Rangeability (Control Range): 50; 1 (2%-100% full scale) (accuracy and control)

Ambient and Operating Temperature Range: -10 to 70 °C (±14 to 158 °F) **Maximum Operating Pressure:** 3000 PSIG

Temperature Coefficent (per SEMI E18-91 Zero Effect and Span Effect):

±0.05% full scale / °C of zero ±0.05% of reading/ °C of span

Pressure Coefficent (per SEMI E28-92 Total Calibration Effect):

± 0.1%/atmosphere typical using nitrogen (N_o)

Mounting Orientation: Attitude insensitive

Warm-up Time: 10 minutes

External Electrical Connector: Nine (9)- pin D-connector

Weight (approximate): 2.1 lbs

Power Supply Requirements:

(Current consumption <45 mAdc):

Voltage output models: +12 (±5%) (0-5 Vdc & 1-5 Vdc flow signal outputs only) or +15 (±10%) Vdc

Current loop models:

+15 (±5%) or +24 (±15%) Vdc

Setpoint Input/Flow Signal Output:

- 0-5 Vdc/0-5 Vdc (2K ohm minimum load resistance)
- 0-10 Vdc/0-10 Vdc (3K ohm minimum load resistance)
- 1-5 Vdc/1-5 Vdc (2K ohm minimum load resistance)
- 4-20 mAdc/4-20mAdc (refer to load resistance values below)

Load resistance values for 4-20 mAsc flow signal output:

- 0-450 ohm for 6.5-15 Vdc loop supply voltage
- 200-750 ohm for 15-30 Vdc loop supply voltage



ENGINEERING YOUR SUCCESS.

MATERIALS OF CONSTRUCTION

Body: 316 Stainless Steel

Sensor Assembly: 316L Stainless Steel **Elastomers (O-rings and Valve Seat)**: Buna

N, EPDM, Kalrez®, Neoprene or Viton® **Process Connections:** 316 Stainless Steel

Kalrez® and Viton® are property of their respective owners

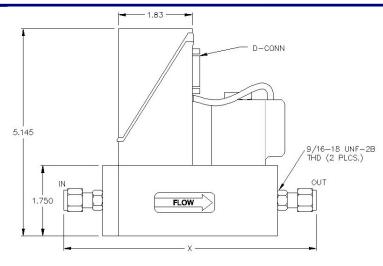
Specifications subject to change

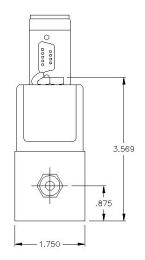
ORDERING INFORMATION

To order, please specify:

- Model number
- Type of output signal
- Elastomer material
- Process connection size and type
- Flow capacity
- Gas type
- Operating temperature
- Inlet (supply) pressure
- Outlet pressure
- Calibration standard (i.e. 0°C, 20°C, 21.1°C or 25°C)
- Additional accessories required

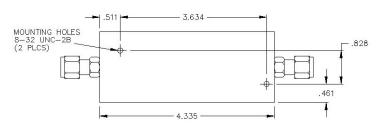
DIMENSIONAL DATA





Process Connection Size

1/4" MMGFS(2)



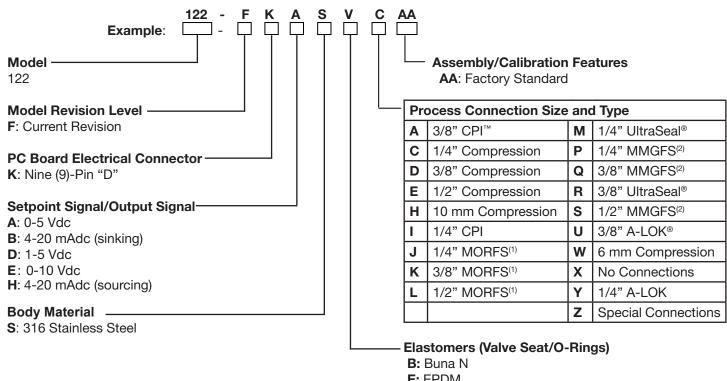
& Type	
1/4" Compression	4.584"
3/8" Compression	4.704"
1/4" CPI®	4.584"
3/8" CPI®	4.704"
1/4" A-LOK®	4.584"
3/8" A-LOK®	4.704"

'X' Dimension

4.444"

Dimensions shown in inches

MODEL NUMBER AND DESCRIPTION



A-LOK®, CPI™, UltraSeal™, VacuSeal™ - Parker Hannifin Corp. (1)MORFS = Male O-Ring Face Seal

(2)MMGFS = Male Metal Gasket Face Seal

E: EPDM

K: Kalrez

N: Neoprene

Max.

3201/3261

Max.

Pressure²

(PSIG)

Min.

Delta³

(PSIG)

V: Viton

For model number options not shown above, please consult factory

OTHER AVAILABLE ANALOG MASS FLOWMETER AND MASS FLOW CONTROLLER MODELS

Туре	Model	Flow ¹ (SLPM)	Pressure ² (PSIG)	Delta ³ (PSIG)	Туре	Model	Flow ¹ (SLPM)
	111	10	1500	2		201	10
	121	10	3000	2		261	10
Analog	112	100	1500	2		221	10
Flow	122	100	3000	2		251	50
Meters	113	500	1000	2	Analog	202	100
	114	1000	1000	2	Flow	222	100
	2111	10	200	2	Controllers	202A	100
	3211	10	1000	2		203A	500
						204A	1000
						2201	10

Note: The flow ranges listed are the minimum and maximum nitrogen (N₂) flow ranges available for each given model. Intermediate flow ranges are available. For correct sizing when operating parameters are questionable, please consult the factory.

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