Model 601 CB Basic

Mass Flow Controller

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Porter's Model 601 Basic Series II Mass Flow Controller (MFCs) are standard and straightforward instruments. They provide accurate measurement, fast response and stable control in common gas flow applications. Model 601 Basic is an economical solution for installation in OEM systems. The instruments operate on the principle of thermal mass flow measurement in ranges starting from 0.2 to 10 ml/min up to 1.4 to 70 l/min. They offer analog I/O signals as well as digital RS232 communication and/or Modbus-RTU as a standard feature.

Product Features:

- Accurate mass flow control
- Fast response, excellent repeatability
- Analog I/O - signals: 0 to 5 (10) Vdc or 0 (4) to 20 mA
- RS232 Communication
- Modbus-RTU
- Control characteristics digitally configurable by user

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Specifications

Measurement / Control System

Accuracy (incl. linearity) (based on actual calibration)	±1.0% full scale
Turndown	1 : 50 (in digital mode up to 2 : 100)
Repeatability	<0.2% Reading
Settling Time (Controller)	Approximately 1 second
Control Stability	<±0.1% Full Scale (typical for 1 l/min N_2)
Operating Temperature	0 to +50°C
Operating Pressure	145 PSIG
Temperature Sensitivity	Zero: <0.1% Full Scale/°C; span: <0.1% Reading/°C
Leak Integrity, outboard	Tested < 2 x 10-9 mbar l/s He
Warm-Up Time	30 min. for optimum accuracy
Control Valve	Normally closed solenoid valve

Mechanical Parts

Material (wetted parts)	Stainless steel
Process Connections	1/4” BSPP female thread; Optional accessories: compression type or face seal couplings in various inch or metric sizes
Seals	Standard: Viton Options: Kalrez (FFKM)
Ingress Protection (housing)	IP40

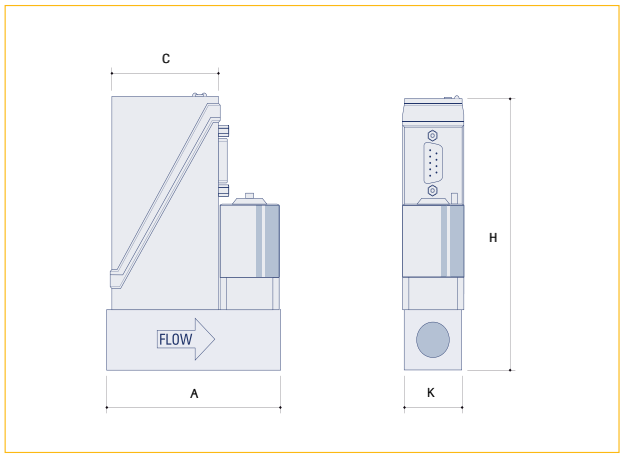
Electrical Properties

Power Supply	+15-24 Vdc
Power Consumption	Controller: max. 320 mA
Analog Output/Command	0-5 (10) Vdc or 0 (4)-20 mA - specify - (Sourcing output)
Digital Communication	RS232 or Modbus-RTU
Electrical Connection	9-pin D-connector (male)
EMC	CE declaration

Models and flow ranges

Model	Min. Flow	Max. Flow
601CB	0.2 to 10 ml/min	0.4 to 20 l/min
601AB	0.4 to 20 l/min	1.4 to 70 l/min

Dimensions



Model	A	C	K	H	Weight (kg)
601CB	77	47	25	111	0.5
601AB	78	47	26	123	0.6

Ordering Information

6 0 1CB Q A A D 00 V

Model

6	Controller

Pressure Rating

0	145 PSIG

Flow Ranges

1CB	0 to 10 ml/ 0 to 20 l/min
1AB	0 to 20 / 0 to 70 l/min

Nominal Range

Factory Selected

Communication (I/O)

A	RS232 + Analog or Modbus

Elastomers

V	Viton (Factory Standard)
K	Kalrez (FFKM)

Connections (in/out)

0	None

Supply Voltage

D	+15 to 24 Vdc

Analog I/O

A	0 to 5 Vdc
B	0 to 10 Vdc
F	0 to 20 mA Sourcing
G	4 to 20 mA Sourcing

WARNING – USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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WS-0050 Rev. B 2/15

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