

DB09

Thermal Mass Flow Meter and Regulator

- **Sturdy, heavy-duty stainless steel sensor, also suitable for corrosive gases**
- **Measuring ranges: from 5...100 ml/min to 50...1000 l/min**
- **Integral proportional control valve**
- **Measuring system unaffected by temperature and pressure**
- **High accuracy**
- **Direct-flow method, low sensitivity to contamination and moisture**



Description:

The DB09 thermal mass flow meter and regulator is a modular measuring system for detecting and regulating the flow of gases. The device features a directly operated integral proportional control valve. The DB09 can be fitted with either a 3-place LCD flow-rate display or an 8-place counter. The device generates a voltage output (0...5 VDC) or a current output (4...20 mA) based on the amount of flow.

Typical Applications:

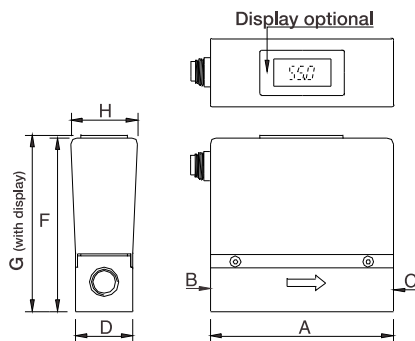
Because it has a modular design, can be installed in any position and is extremely easy to clean without requiring recalibration, the DB09 is suitable for use in numerous applications, such as in analytical devices, in the semiconductor industry, in compressed-air systems, laser systems, welding systems or fuel cells. Depending on its intended use, the DB09 can be supplied with an aluminum or stainless steel housing.

Dimensions:

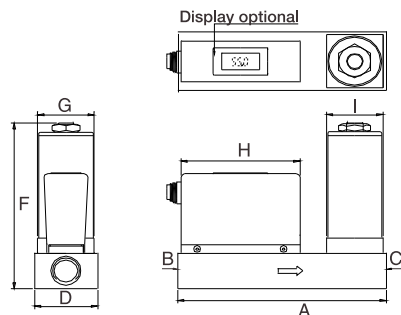
No.	Models	A	B	C	D	F	G	H
1	DB09.x.08-12 to DB09.x.08-15	95	G 1/4	G 1/4	30	90	92	35
2	DB09.x.15-15 to DB09.x.15-45	145	G 1/2	G 1/2	50	132	45	95
3	DB09.x.15-55 and DB09.x.15-16	*	G 1/2	G 1/2	*	*	*	*

* for dimensions, please inquire

Pos. 1



Pos. 2



Electrical Specifications:

Voltage supply: 24 VDC +/- 10 %

Maximum current values:

up to measuring range 08-14: 325 mA max.
as of measuring range 08-24: Switch-on current:
500 mA max.

Without flow: 325 mA max.
100% flow: 425 mA max.

Output: 0...5 VDC or 4...20 mA

Control range: 5-100 %

Inlet pipe section:

up to measuring range 08-14: 10 x D
as of measuring range 08-24: None required

Technical Specifications:

Max. pressure: 10 bar

Max. media temperature: 0...70 °C

Accuracy: +/- 3% of end value for air

Repeatability: +/- 0,5% of end value

Protection type: IP 40

Connection: 6-pin DIN plug

Model Coding:

Order Number: DB09. E. 08-12. L. A. 0

**Thermal Mass Flow
Meter and Regulator**

Materials:

Al = Aluminum housing (anodized)
E = Stainless steel housing, 1.4435/1.4404

Measuring Ranges: (Air)

Measuring system: bypass

08-12 = 0.005...0.1 NI/min, G 1/4 female thread
08-22 = 0.010...0.2 NI/min, G 1/4 female thread
08-52 = 0.025...0.5 NI/min, G 1/4 female thread
08-13 = 0.05...1 NI/min, G 1/4 female thread
08-23 = 0.1...2 NI/min, G 1/4 female thread
08-53 = 0.25...5 NI/min, G 1/4 female thread
08-14 = 0.5...10 NI/min, G 1/4 female thread

Measuring system: direct flow

08-24 = 1...20 NI/min, G 1/4 female thread
08-54 = 2.5...50 NI/min, G 1/4 female thread
08-15 = 5...100 NI/min, G 1/4 female thread
15-15 = 5...100 NI/min, G 1/2 female thread
15-25 = 10...200 NI/min, G 1/2 female thread
15-45 = 20...400 NI/min, G 1/2 female thread
15-55 = 20...500 NI/min, G 1/2 female thread
15-16 = 50...1000 NI/min, G 1/2 female thread

Media:

L = Standard-medium: Air
N₂ = Standard-medium: N₂
O = Standard-Medium: O₂
S = Pure-gas calibration

Output:

A = Analog output, 4...20 mA
V = Voltage output, 0...5 VDC
S = Special

Special features:

0 = None
1 = LCD flow-indication display
2 = Counter display
99 = Please specify in writing.

Materials:

Sensor: 1.4435/1.4404

Device housing: 1.4435/1.4404
aluminium anodized

Strainer/retaining ring: Stainless steel / PTFE

Gaskets: Viton (standard)