



MODEL
DFM-01, DFM-02, DFM-03



MODEL : DFM-04



MODEL : DFM-06

Technical Specifications

• Flow Range	: DFM-01 : 1 ml/min. to 50 ml/min. with least count of 0.1 ml/min. : DFM-02 : 5 ml/min. to 500 ml/min. with least count of 1 ml/min. : DFM-03 : 200 ml/min. to 2000 ml/min. with least count of 0.1 ml/min. : DFM-04 : 1 ml/min. to 500 ml/min. with least count of 0.1 ml/min. (auto range) : DFM-06 : 10 ml/min. to 400 ml/min. with least count of 0.1 ml/min. (auto range)
• Accuracy	: $\pm 2\%$ of reading, ± 1 digit
• Power Supply	: 230 V AC, 50 Hz, 10W
• Resolution	: 0.1 ml/min. & 1 ml/min.
• Dimensions	: DFM-01 : 24 cm (H) x 13 cm (W) x 10 cm (D) : DFM-02 : 24 cm (H) x 13 cm (W) x 10 cm (D) : DFM-03 : 24 cm (H) x 13 cm (W) x 10 cm (D) : DFM-04 : 25 cm (H) x 16 cm (W) x 4 cm (D) : DFM-06 : 20 cm (H) x 10 cm (W) x 4 cm (D)
• Optional Attachment	: Battery operated rechargeable system

Salient Features

- Direct Digital Readout
- Microcontroller Based
- Digital Display of LED/LCD
- Highly Accurate & Fast Readout
- Useful for measuring any gas flow rate specially for G.C. & Analytical instruments
- Easy to Operate
- Free of Operational & Human Errors
- DFM-01, 02, 03 & 04 - Table Mounting (Soap Solution Based)
- DFM-05, DFM-06 - Portable (Direct Measurement)

Principle

The DIGITAL GAS FLOW METER is based on the classical method viz. Soap Film Method. The instrument is automated by using Microcontroller which provides highly accurate measurement and direct digital read out of gas flow rate. The time required for the soap film to pass through a fixed known volume is measured. The soap film is sensed by IR sensors. When the soap film passes through first sensor, it activates the timer of Microcontroller. Timer is stopped when the film crosses second sensor. The flow rate is then calculated by Microcontroller and instantly displayed in ml/min. Where as DFM-05 & DFM-06 are direct flow measurement based & battery operated.



Rotameter : is used to measure flow of different gases.

Body : Acrylic body or glass body (aluminium encased) with appropriate float as per flow and gas requirement.

Size : Standard size available is 6" - 8" length with needle valve.

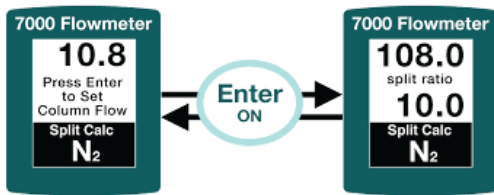
Inlet & Outlet Connection : Back side with 1/4" BSP female connection with panel mounting, table mounting stand are also available.

Range : Any range in LPM or ml/min. (cc/min.) or LPH

DIGITAL GAS FLOW METER DFM-05 (ELLUTIA 7000 GC FLOWMETER)



MODEL : DFM-05 (Ellutia 7000 GC Flowmeter)



Salient Features

Accurate & repeatable gas flow measurements are a crucial part of obtaining good results from the gas chromatograph. The new DFM-05 flow meter makes gas flow measurement easier and more accurate, helping to eliminate user errors.

Linear Velocity

The user is able to select their column diameter in the options menu, the linear velocity can then be calculated and displayed. The user can easily switch between standard flow and linear velocity with a single button press.

Split Flow Calculation

Split flow mode allows the user to measure and store a column flow, the user can then measure the split flow and the DFM-05 flowmeter displays both the flow rate and the split ratio.

Specification

- Range : 10 to 500 ml/min. (1 to 275 ml/min. for Carbon Dioxide)
- Resolution : 0.1 ml/min
- Accuracy : ± 0.4 ml/min. or 2.5% of reading (whichever is greater)
- Gases : Air, Argon, Argon / 5% Methane, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Oxygen
- Size : 68 x 130 x 30 mm
- Weight : 150 gm
- Calibration : Annually
- Traceability : Calibration traceable to UKAS standards

Digital Gas Flow Meter DFM-08 (Restek ProFLOW-6000)



MODEL : DFM-08 (Restek ProFLOW-6000)

PC Control System : Gas Flow Management System (GFMS 5.0)



Technical Specification

- Type of Measurement : Volumetric Flow
- Accuracy of Measurements : $\pm 2\%$ of flow reading or ± 0.2 ml/min. whichever is greater
- Power Requirements : 2 AA alkaline batteries 1.5 V DC each / 3 V DC 200 ma
- Operating Flow Range : 1 to 500 ml/min.
- Operating Temperature Range : 0° - 48° C
- Available Communication : USB data port
- Warranty : 3 Years
- Calibration : NIST traceable. Yearly calibration is recommended
- Certification : CE, Ex
- Compliance : WEEE, RoHS

Salient Features

- Flow for gases across a range of 1-500 ml/min.
- Yearly Calibration
- Over-range warning indicator
- Auto shutoff feature
- Ergonomic design and side grips for comfort
- Use as a benchtop or handheld unit
- Measures most gas types
- Convenient carrying / storage case included
- Uses 2 AA batteries (included)
- Data output via USB port

RESTEK
Certificate of Calibration
110 Benner Circle, Bellefonte, PA 16823

Calibration Date:	06/08/2020
Calibrated By:	LD
Test Location:	853
NIST Traceability Document:	93-16-11
Calibration Procedure Number:	93-16-38
Temperature PC:	21.889
Pressure Unit:	14.23
Calibration Unit:	ml/min

Calibration

Request Accuracy: $\pm 2\%$ or 0.2% whichever is greater

Reference Flow	R.O.V. Error	% Error	Fixed Error (ml/min)	Result
0.000	1.00	n/a	-0.004	0.000
2.000	2.00	n/a	-0.005	0.000
4.000	4.00	n/a	-0.010	0.000
6.000	6.00	n/a	-0.006	0.000
8.000	7.98	n/a	-0.005	0.000
9.998	10.0	0.00	n/a	0.000
10.000	20.0	0.00	n/a	0.000
20.000	20.0	0.20	n/a	0.000
30.000	40.0	0.40	n/a	0.000
50.000	40.0	0.71	n/a	0.000
100.000	100	0.00	n/a	0.000
200.000	200	0.00	n/a	0.000
375.000	375	0.00	n/a	0.000
499.999	500	0.00	n/a	0.000

*Device Under Test

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