KIMO INSTRUMENTS

Technical Data Sheet

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

DBM610
Airflow meter



KEY POINTS

- Measuring range from **40 to 3500 m³/h**
- **Quick and simple** hood changes
- Software for data processing on computer
- Sturdy, lightweight and easy to handle
- **Removable** measuring unit
- **Interchangeable** hoods

AVAILABLE HOODS

DBM610 airflow meter comes in standard with a 610 x 610 mm hood.
4 others hoods are available as options :
- 1020 x 1020 mm
- 720 x 720 mm
- 720 x 1320 mm
- 420 x 1520 mm

Hoods are airtight and have a transparent part on each side allowing the user to see through the vent and ensure that the hood is in a good position.
The rods, made of fiberglass, provides a good hoods sturdiness.

FLOW AREA

The flow area is attached to the base and allows the measurement on 48 points, all over the surface of the flow area.

Measurement is performed using a differential pressure sensor, calibrated and compensated in atmospheric pressure and in temperature.

AUTONOMOUS MICROMANOMETER

Once removed, the measuring unit can be used as a micromanometer :
- With a Pitot tube, it allows measurement of airflow in a duct
- With two silicone tubes, it allows to check filters fouling.





FUNCTIONS OF THE AIRFLOWMETER

- Simultaneous display of airflow and temperature
- Automatic airflow direction (extraction or air blast)
- Automatic averaging or point by point averaging
- HOLD function
- Removable measuring unit (micromanometer function)
- Data processing on computer with USB port
- Different languages available



TECHNICAL FEATURES



• AIRFLOW

Measuring range	From 40 to 3500 m^3/h
Accuracy*	3% of the measurement ±10 m^3/h
Resolution	1 m^3/h

• AIR VELOCITY

Measuring range	From 0.2 to 10 m/s
Accuracy*	±3% of the measured value ±0.04 m/s
Resolution	0.01 m/s up to 3 m/s and 0.1 m/s above

• TEMPERATURE (on the base)

Measuring range	From 0 to 50°C
Accuracy*	2% of the measured value ±0.1 °C
Resolution	0.1°C

• TEMPERATURE THERMOCOUPLE (on the micromanometer)

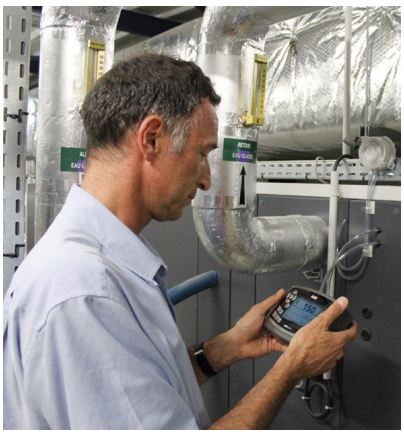
Thermocouple type	K, J, T, S
Measuring range	K : from -200 to 1300°C J : from -100 to 750°C T : from -200 to 400°C S : from 0 to 1760°C
Accuracy*	K, J, T : from -200 to 0 °C : ±0.4°C ±0.3 % of reading from 0 to 1300 °C : ±0.4°C S : ±0.6 °C
Resolution	0.1°C

• PRESSURE

Measuring range	From -2500 to +2500 Pa
Accuracy*	±0.2% of reading ±2Pa
Resolution	From 0.001 to 0.1 Pa

**All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.*

FUNCTIONS OF THE MICROMANOMETRE HOUSING



The electronic housing has the following functions when it is used alone :

In air velocity and airflow :
- Selection of the Pitot tube, Debimo blades, coefficient or measurement grid
- Selection of the section
- Selection of units
- Point/point, automatic or automatic point/point average
- Manual compensation in temperature
- Hold, minimum and maximum values
- Standardized airflow
- K factor

In pressure :
- Manual or automatic autozero
- Selection of units
- Integration of the pressure (from 0 to 9)
- Point/point, automatic or automatic point/point average
- Hold, minimum and maximum values

GENERAL TECHNICAL FEATURES

Display	Large graphic back-lighted LCD / Sizes : 86 x 51 mm
Connectors	ABS connectors, Ø 7 x 4 mm
Storage capacity	200 datasets of 100 points
Housing	Shock-proof made of ABS, IP54 protection
Keypad	12 keys
Conformity	Electromagnetical compatibility (NF EN 61326-1 guideline)
Power supply	4 alkaline batteries LR6 Rechargeable battery Li-ion 3.7 V 4400 mhA (optional)
Environment	Neutral gases
Operating temperature	From 0 to +60 °C
Storage temperature	From -20 to +70 °C
Auto-shut-off	Adjustable from 0 to 120 min
Weight	3600 g
Languages	French, English, German, Finnish, Dutch, Italian, Norwegian, Portuguese, Slovak, Swedish, Chinese

ACCESSORIES

GMDB : Measurement grid kit for DBM610 instrument
Designed for air velocity measurements on any types of large celling vent or diffuser. The grid is similar to the DBM610 grid. It calculates the average air velocity from 24 points to guarantee a reliable measurement.. The grid is attached to a telescopic (maximum length is 2.05 m) and articulated pole (from 0 to 90°). Struts of 3 different lengths allow a correct positioning of the grid on the celling surface.
A bagpack allows easy carriage of the grid and its accessories (telescopic pole, articulation, 2 x 2.5 m of silicone tube, positioning struts and electronic housing).
- **Measuring range :** from 0.2 to 10 m/s
- **Accuracy :** ±3 % of the measured value ±0.04 m/s
- **Resolution :** 0.01 m/s up to 3 m/s and 0.1 m/s beyond
- **Struts length :** 5 cm / 15 cm / 25 cm



LPCF-S : Saving and visualisation of measurements datasets software

KBC-610 : Lithium battery with power supply adapter

DBM610-S : Alone removable unit. Range from 40 to 3500 m3/h / -2500 Pa to 2500 Pa, micromanometer function : measurement of air velocity and airflow with different differential pressure instruments (Pitot tube, Debimo), compensation of the measurement according to thermocouple temperature. Supplied with 2 x 1 m of silicone tube and calibration certificate

M-610 : Transport case for DBM 610 instrument and hoods

HO610 : 610 x 610 mm hood / **HO720 :** 720 x 720 mm hood / **HO713 :** 720 x 1320 mm hood
HO415 : 420 x 1520 mm hood / **HO1020 :** 1020 x 1020 mm hood
Each hood is supplied in its transport bag.



Bag for hood

DELIVERY KITS

DBM 610 : airflowmeter supplied with :
- 610 x 610 mm hood
- Pitot tube length 300 mm
- 2 x 1 m of silicone tube
- USB cable
- Calibration certificate
- Transport case

DBM 610 C : airflowmeter supplied with :
- 5 hoods : 610 x 610 mm, 720 x 720 mm, 720 x 1320 mm, 420 x 1520 mm and 1020 x 1020 mm
- Pitot tube length 300 mm
- 2 x 1 m of silicone tube
- USB cable
- Calibration certificate
- Transport case



Transport case

MAINTENANCE

We carry out calibration, adjustment and maintenance of your devices to guarantee a constant level of quality of your measurements. As part of Quality Assurance Standards, we recommend you to carry a yearly checking.

WARRANTY PERIOD

Devices have 1-year guarantee for any manufacturing defect (return to our After-Sales Service required for appraisal).

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