



























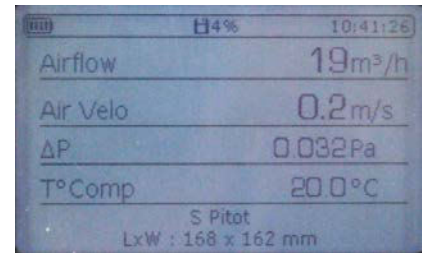


## 5. Using DBM610 in micromanometer mode

### 5.1. Starting up

The device is disconnected from airflow meter base.

- Press **On/Off** button.  
The device directly displays data below (see photo) :
  - Airflow
  - Air velocity
  - Pressure delta
  - Temperature compensation
  - Type of airflow sensor used and size of the surface



### 5.2. Set the micromanometer

- Press "**Menu**" button.
- Press "**Left arrow**" or "**Right arrow**" button until reach "**Configuration**".
- Press "**Ok**" button.

The sub-menu "**Configuration**" appears with following data :

- **Airflow sensor** : allows to select the airflow sensor used for the measurement : Pitot tube L, S, Debimo blade or Coefficient
- **Surface** : allows to define the of surface and its size
- **Units** : allows to define unit for airflow, air velocity, pressure and temperature
- **Damping** : allows to smooth the measurement and avoid unwanted variations
- **Solenoid valve** : allows to activate or not the solenoid valve
- **Thermocouple** : allows to set the thermocouple type : K, J, T ou S
- **Temp Comp** : allows to set the compensation temperature
- **Standard airflow** : allows to activate or not the standardized airflow as per DIN1343 standard

#### 5.2.1. Select the airflow sensor

- Go to "**Airflow sensor**" line then press **OK**.
- Press **OK** on the "**Element**".
- Select the airflow sensor (Pitot tube L, Pitot tube S, Debimo blade or Coefficient) with up arrow and down arrow then press **OK**.

It is also possible to select the corresponding coefficient to the airflow sensor :

- Go to "**Airflow sensor**" line then press **OK**.
- Press **OK** on the "**Coefficient**".
- Select the coefficient from 0 to 9 with up arrow and down arrow then press **OK**.  
Screen displays the required coefficient. It is possible to modify it with arrow buttons.
- Press **OK** to back to "**Airflow sensor**" sub-menu .
- Press **Esc** to quit "**Airflow sensor**" sub-menu and back to "**Configurations**" menu.

#### 5.2.2. Set the surface

Set length and width of the surface :

- Go to "**Surface**" and press **OK**.
- Go to "**Type**" line then press **OK**.
- Press **OK** on **LxI** line.
- Select the required dimensions with up and down arrows then press **OK**.
- If necessary, modify the length then the width with arrows then press **OK** (if no modification, just press **OK**).

Set diameter of the surface :

- Go to "**Surface**" then press **OK**.
- Go to "**Type**" line then press **OK**.
- Press **OK** on **Diameter** line.
- Select the required dimension with up and down arrows then press **OK**.
- If necessary, modify the diameter with arrows then press **OK** (if no modification, just press OK).

Set surface unit :

- Go to "**Surface**" then press **OK**.
- Go to "**Type**" line then press **OK**.
- Press **OK** on **Unit** line.
- Select the unit (mm or in) with arrows then press **OK**.

Set K factor :

- Go to "**Surface**" then press **OK**.
- Go to "**K factor**" line then press **OK**.
- Select the K factor with up and down arrows then press **OK**.
- If necessary, modify the value of K factor with arrows then press **OK** (if no modification, just press OK).
- Press **Esc** to quit "**Surface**" sub-menu and back to "**Configurations**" menu.

### 5.2.3. Set measurement units

- Go to "**Units**" line then press **OK**.
- Go to the required line (airflow, air velocity, pressure or temperature) then press **OK**.

Available units are :

- **Airflow** : m<sup>3</sup>/h, L/s, cfm
  - **Air velocity** : m/s, fpm, km/h, mph
  - **Pressure** : Pa, mmH<sub>2</sub>O, mmHg, inWg
  - **Temperature** : °C, °F
- Press **Esc** to quit "**Units**" sub-menu and back "**Configurations**" menu.

### 5.2.4. Set a damping

- Go to "**Damping**" line then press **OK**.
- Select the required coefficient (from 0 to 9) then press **OK**.

### 5.2.5. Activate or deactivate the solenoid valve

- Go to "**Solenoid valve**" line then press **OK**.
- Select **ON** or **OFF** with up and down arrows then press **OK**.

### 5.2.6. Set the thermocouple type

- Go to "**Thermocouple**" line then press **OK**.
- Select thermocouple type : K, J, T or S with up and down arrows then press **OK**.

### 5.2.7. Set the compensation temperature

- Go to "**Temp Compens**" line then press **OK**.
- Set the temperature with arrows then press **OK**. This temperature must be between **-20 and 80°C**.

### 5.2.8. Activate or deactivate the standardized airflow

The standardized airflow allows to have a calculation of airflow as per DIN 1343 standard.

- Go to "**Standard airflow**" line then press **OK**.
  - Select **ON** or **OFF** with up and down arrows then press **OK**.
- When standardized airflow is activated, "**NORMO**" indication is shown on screen on the left of time.*

### 5.3. Activate or deactivate air velocity and airflow

It is possible to activate or deactivate measurement in air velocity and/or airflow.

- Press "**Menu**" button.
- Go to "**Measurement**" with left and right arrows then press **OK**.
- Go to "**Airflow**" or "**Air velocity**" then press **OK**.
- Select **ON** or **OFF** then press **OK**.

### 5.4. Perform averages

The micromanometer can perform 3 types of averages : automatic average, point/point average and automatic point/point average.

- Press "**Moy/Avg**" button.
- Select the type of required average then press **OK**.

#### 5.4.1. Automatic average

*This function allows the calculation of the average value measured by the device in a selected time interval. First, select "**Auto average**", the device displays measurement screen.*

- Press **OK** to launch measurement.  
*The device displays measured values and measurement duration.*
- Press **OK** to stop measurements and get results.
- Press up and down arrows to get to results of different parameters.
- Press "**Save**" button to save dataset or **Esc** to cancel and back to measurement screen.

#### 5.4.2. Point/point average

*This function allows the calculation of the average between different measurement points selected by the user. First, select "**Pt/Pt average**", the device displays measurement screen.*

- Press **OK** to validate the 1<sup>st</sup> point.  
*The device displays measured values and the number of measurement points.*
- Press **OK** to add measurement points.
- Press "**Moy/Avg**" button to get to screen results when the required number measurement points has been reached.
- Press up and down arrows to get to results of different parameters.
- Press "**Save**" button to save dataset or **Esc** to cancel and back to measurement screen.

#### 5.4.3. Point/point automatic average

*This function allows the calculation of average value of different measurement points which are calculated on a given duration. It is necessary to give the duration while each point will be calculated.*

First, select "**Auto Pt/Pt average**", the device displays measurement screen.

- Press **OK** to validate the 1<sup>st</sup> point.
- Enter the duration in minute and second with arrows then press **OK**.
- Press **OK** to launch the measurement of the 1<sup>st</sup> point.  
*The device displays measurements and the remaining measurement duration.*
- Press **OK** to add measurement points.
- Press "**Moy/Avg**" button to get to screen results when the required number measurement points has been reached.
- Press up and down arrows to get to results of different parameters.
- Press "**Save**" button to save dataset or **Esc** to cancel and back to measurement screen.



## 5.5. Perform an autozero

The autozero allows to offset from time to time any drift of the sensitive element during time by a manual adjustment of the zero. The autozero is made automatically when the solenoid valve is activated.

- Press "**Zero**" button during measurement.

## 6. Manage dataset recordings

This part allows to display or delete recorded dataset in the device.

To get to dataset from "**Measurement**" screen :

- Press "**Menu**" or "**Save**" button.
- Go to "**Savings**" with left and right arrows.
- Press **OK**.

### 6.1. Get to recorded datasets

- Go to "**Display**" line then press **OK**.  
*Dataset list is displayed.*
- Go to the required dataset then press **OK**.  
*Dataset opens with following features :*
  - *Number of points*
  - *Dataset type*
  - *Date and time of beginning and end*
- Press **OK** to display values.  
*Values table opens.*
- Use left and right arrows to change of page.
- Use up and down arrows to change parameters.
- Press **Esc** to back to the recorded dataset list.

### 6.2. Delete recorded datasets

- Press "**Delete**" line then press **OK**.  
*A message is displayed asking to all erase.*
- Press **OK** to all erase or **Esc** to cancel.



**Totality of recordings will be definitively deleted**

## 7. Set the device

This part allows to set the different general parameters of the device.

- Go to "**Menu**".
- Go to "**Settings**" with left and right arrows.
- Press **OK**.

### 7.1. Set date and time

- Go to "**Date/Time**" line then press **OK**.
- Set date and time with arrows.
- Press **OK** to validate and back to "**Settings**" sub-menu.

### 7.2. Set language

- Go to "**Languages**" line then press **OK**.
- Select the required language (French or English) with up and down arrows.

- Press **OK** to validate.

### **7.3. Set automatic shut-off**

- Go to " **Extinction** " line then press **OK**.
- Select **OFF** to deactivate it or the time before automatic shut-off (15, 30, 45 min or 1h).
- Press **OK** to validate.

### **7.4. Set brightness**

- Go to " **brightness** " line then press **OK**.
- Select the required level of brightness (from 1 to 9 or AUTO) with up and down arrows.
- Press **OK** to validate.

### **7.5. Set contrast**

- Go to " **Contrast** " line then press **OK** .
- Select the required level of contrast (from 0 to 3) with up and down arrows.
- Press **OK** to validate.

### **7.6. Activate or deactivate beep**

- Go to " **Beep** " line then press **OK**.
- Select **ON** to activate or **OFF** to deactivate beep of the keyboard of device
- Press **OK** to validate.

## **8. Information about the device**

This part allows to have any information about identification, calibration and after sales service.

To get to it from measurement screen :

- Press " **Menu** ".
- Go to " **Informations** " with left and right arrows.

### **8.1. Identification**

- Go to " **Identification** " then press **OK**.  
*Screen displays software version number and device serial number.*
- Press **Esc** to back to " **Informations** " menu.

### **8.2. Calibration**

- Go to " **calibration** " then press **OK**.  
*Screen displays calibration date of the device.*
- Press **Esc** to back to " **Informations** " menu.

### **8.3. After sales service**

- Go to " **After sales service** " then press **OK**.  
*Screen displays Kimo after sales services phone number and email.*
- Press **Esc** to back to " **Informations** " menu.