

## **Portable instruments**

HVAC & Industry



Pressure / Temperature / Humidity / Air velocity & Airflow / Air quality / Solar / Sound level



European Manufacturer www.kimo.fr

#### **NEW RANGE**

# Portable instruments HVAC

Temperature / Humidity / Pressure / Air velocity Airflow / Air quality / Gas detection Light / Tachometry

U www.kimo.fr/portables



#### Class 50

- 1 line display
- Integrated probes
- Supplied with adjusting certificate and soft case







#### Class 110

- 2 lines backlit display
- Remote probes
- Adjustable automatic shut-off
- Supplied with calibration certificate and soft case with handle



#### Summary

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Pressure	C

Air velocity
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Temperature
Temperature probes

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ABS housing Integrated protection



Wireless Probes



#### Class 210

- Black & white graphical display
- Wired and wireless remote probes
- Interchangeable modules
- Lithium-ion battery
- Adjustable automatic shut-off
- Optional data processing software
- Supplied with calibration certificate and soft case with handle





#### AMI 310

- Measure all parameters
- Colour display
- Wired and wireless remote probes
- Interchangeable modules
- Lithium-ion battery
- User expandable memory
- Adjustable automatic shut-off
- Optional data processing software
- Supplied with calibration certificate and ABS transport case





Data processing
Software (option)

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#### Designed for the field

New portable, multi-function instruments are designed for ease of use in the field. An overmoulding made of elastomere protects the instrument, guarantees shockproofing and is comfortable to hold.

The internal memory of 1,000 datasets of 20,000 measuring points allows you to record all your measurements.



#### Ease of use

With a large, graphic, color display (AMI 310) or black and white display (Class 210), the new multi-function portable instruments are user-friendly:

- 10-key keypad
- graphic and intuitive interface
- built-in magnet system
- built-in probe holder.





#### Nonstop measurements

This new generation of instruments has an interchangeable and rechargeable Li-ion battery. Class 210 models have 48h battery life, and AMI 310 has 16h battery life.







#### Scalable instruments

With the different measuring modules (coming in option), the instruments can meet your technical requirements.

Modules: pressure, 4-thermocouple channels, climatic conditions, U coefficient.



#### Interchangeable probes

The new probes utilise a mini-Din connecting cable which is compatible with all probes.

KIMO has designed a new series of interchangeable probes including rotating vane and telescopic hotwire.





#### **NEW**





#### AMI 310 is a multi-probe instrument which can measure up to 6 parameters simultaneously.



Wireless Probes



Interchangeable Probes & Modules

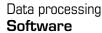


#### **Measuring ranges**

- ±500 Pa / ±2,500 Pa / ±10,000 Pa
- ±500 mbar / ±2,000 mbar
- Thermocouple: -200 to +1760°C
- Pt 100: -200 to +600°C
- Humidity: 3 to 98 %RH
- CO: O à 500 ppm
- CO<sub>2</sub>: O à 5,000 ppm

#### 10 www.kimo.fr/ami310











- Air velocity: -5 to 35 m/s
- Airflow: O to 99,999 m<sup>3</sup>/h
- Gas leak detection: O to 10,000 ppm
- Tachometry: 30 to 60,000 rpm



#### Expandable memory

Internal memory of 1,000 datasets of 20,000 measuring points.

AMI310 has a built-in location for a micro-SD memory card (supplied with the instrument)





#### Adapt your AMI 310

All our Smart 2014 probes and modules are compatible with AMI310 multi-function instrument.

You can either choose the kits in our product range or customize your own kit with probes and modules according to your needs.



**Technical data sheets** www.kimo.fr/ami310

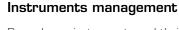
# Probes & modules available Imperature Hygrometry Vanes & Hotwires CO / CO2 Gas detection Tachometry Vanes & Hotwires CO / CO2 Gas detection Tachometry Vanes & Hotwires CO / CO2 Gas detection Tachometry Vanes & Hotwires CO / CO2 Gas detection Tachometry Vanes & Hotwires Vanes & H





#### Instruments configuration

Configure your operators, clients and sites.



Record your instruments and their calibration certificate.

#### **Reports creation**

Customise your reports before printing or exporting them as PDF.

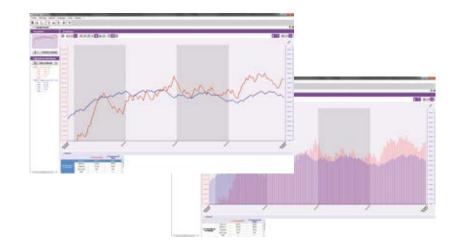






#### **Dataset** processing

- Customized channels
- Insert comments
- Insert legends and statistics
- Add mathematical functions





#### **Technical specifications**

 $\mathsf{DBM}$  610 can be used on any supply or exhaust, air distributors: rectilinear, helical and toric.

- Quick and simple hood changes
- Measuring range from 40 to 3,500 m<sup>3</sup>/h
- Simultaneous display of airflow and temperature
- Automatic airflow direction (extraction or air blast)
- Supplied with 610x610 mm hood
- 4 others hoods are available as options: 720x720 mm, 720x1,320 mm, 420x1,520 mm, 1,020x1,020 mm



Interchangeable Hoods



Micromanometer Function





#### Calculation functions and autonomous micro-manometer

The electronic housing can be disconnected to be used as a micro-manometer.

DBM 610 is a key instrument for your measurements in air systems: connected to a Pitot tube, it allows the measurement of air velocity or flow inside a duct, and connected to 2 silicone tubes, it allows the checking of filter condition in air-handling units.

#### Remote velocity grid



Designed for air velocity measurements on any type of large ceiling 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 (O to 90°). Struts of 3 differents lengths allow for correct positioning of the grid on the ceiling surface.

A backpack allows easy carriage of the grid and its accessories (telescopic pole, articulation,  $2 \times 2,5m$  of silicone tube, positioning strut and electronic housing).





#### NEW

#### MP 50 / 51

- Auto-zero function
- Hold function
- Supplied with silicone tubes
- MP 50: ±1,000 Pa
- MP 51: ±1,000 mmH<sub>2</sub>0

#### MP 55

- Atmospheric pressure
- 700 to 1,100 mbar

#### MP 110 / 111 / 112 / 115

- Auto-zero function
- Hold/Min/Max Functions
- Supplied with silicone tube (MP 110 and 111)
- Supplied with cristal tube (MP 112 and 115)
- Safety connectors (MP 112 and 115)
- MP 110: ±1,000 Pa
- MP 111: ±1,000 mmH<sub>2</sub>0
- MP 112: ±2,000 mbar
- MP 115: ±500 mbar



#### MP 130

- Gastightness special manometer for gas network
- Supplied with ABS transport case
- ±500 mbar









#### MP 120

- Temperature and atmospheric pressure compensation
- Adjustable K coefficient for different pressure elements
- ±1,000 Pa
- 0 to 40 m/s

## Pressure / Air velocity / Airflow MP 210





#### **Measuring ranges**

- ±500 Pa / ±2,500 Pa / ±10,000 Pa
- ±500 mbar / ±2,000 mbar
- Thermocouple: -200 to +1,760°C
- Pt 100: -200 to +600°C
- CO: O to 500 ppm
- Air velocity: -5 to 35 m/s
- Airflow: 0 to 99,999 m<sup>3</sup>/h
- Gas leak detection: O to 10,000 ppm
- Tachometry: 30 to 60,000 rpm



Wireless Probes



Interchangeable Probes & Modules



Data processing Software



## Air velocity / Airflow Class 50/110

#### NEW



#### VT 50

- Hotwire probe
- Hold function
- 0.15 to 30 m/s
- 0 to +50°C



#### LV 50

- Integrated Ø100 mm vane probe
- Hold function
- 0.3 to 35 m/s
- 0 to +50°C



#### Technical data sheets www.kimo.fr/portables



Wide range of measuring cones for vane and hotwire probes.





#### LV 110 / 111 / 117

- Ø14 mm, Ø70 mm, Ø100 mm vane probes
- Hold/Min/Max functions
- Airflow and Airflow with cones
- Self-acting average
  - Detection of flow direction (Ø70 mm and Ø100 mm vanes)
- 0.3 to 35 m/s
- O to +50°C

#### LV 130

- Integrated Ø100 mm vane probe
- Hold/Min/Max functions
- Airflow and Airflow with cones
- Self-acting average
- Detection of flow direction
- 0.3 to 35 m/s
- O to +50°C

#### VT 110 / 115

- Hotwire and telescopic hotwire
- Hold/Min/Max functions
- Airflow and Airflow with cones
  - Self-acting average
  - 0.15 to 30 m/s
  - O to +50°C

# Air velocity / Airflow / Humidity





#### **Measuring ranges**

- Air velocity: -5 to 35 m/s
- Airflow: O to 99,999 m<sup>3</sup>/h
- Humidity: 3 to 98 %RH
- Dew point: -50 to +80°C<sub>td</sub>
- Thermocouple: -200 to +1,760°C
- Pt 100: -200 to +600°C
- Atmospheric pressure: 800 to 1,100 hPa
- Tachometry: 30 to 60,000 tr/min







Data processing **Software** 



### A Humidity **NEW** Class 50/110 HD 50 HM 50 • Thermo-hygrometer • Pin Moisture meter • Hold function • Hold function • 5 to 95 %RH • Compatible with 4 types of materials: wood, plaster, brick and concrete • -20 to +70°C • Supplied with 2 extra pin sets and a protective cap HD 110 • Thermo-hygrometer • Hold/Min/Max functions • 5 to 95 %RH • -20 to +70°C • -40 to +70°C dew point | Air quality 企 Class 50/110 CO 50 CO 110 • CO-meter • CO-meter

- Hold function
- O to 500 ppm
- -20 to +80°C



- Hold/Min/Max and CO max functions
- O to 500 ppm
- -20 to +80°C

#### AQ 110

- CO<sub>2</sub>-meter
- Hold/Min/Max functions
- O to 5,000 ppm
- -20 to +80°C



# Humidity / Air quality





#### **Measuring ranges**

• Humidity: 3 to 98 %RH

- Dew point: -50 to +80°C<sub>td</sub>
- CO<sub>2</sub>: O to 5,000 ppm
- CO: O to 500 ppm
- Air velocity: 0 to 5 m/s
- Thermocouple: -200 to +1,760°C
- Pt 100: -200 to +600°C
- Atmospheric pressure: 800 to 1,100 hPa
- Light: O to 150,000 lux







Interchangeable Probes & Modules







NEW

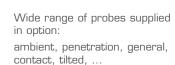
#### TR 50 / 52

- Pt 100 Thermometers
- 1 or 2 channels
- Hold function
- -100 to +400°C



#### TK 50 / 52

- Thermocouple Thermometers
- Type K, J, T and S
- 1 or 2 channels
- Hold function
- -200 to +1,760°C









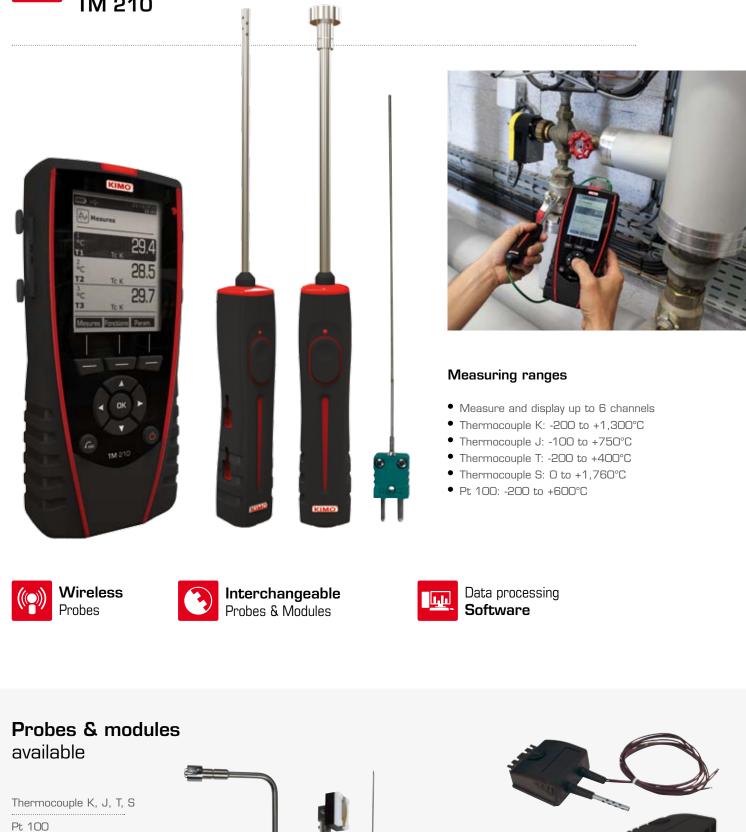
#### TR 110 / 112

- Pt 100 Thermometers
- 1 or 2 channels
- Hold/Min/Max functions
- -100 to +400°C

#### ТК 110 / 112

- Thermocouple Thermometers
- Type K, J, T and S
- 1 or 2 channels
- Hold/Min/Max functions
- -200 to +1,760°C

# Temperature Pt 100 & thermocouple



Modules 4 channels thermocouple U coefficient

# Temperature probes

#### For HVAC portable instruments



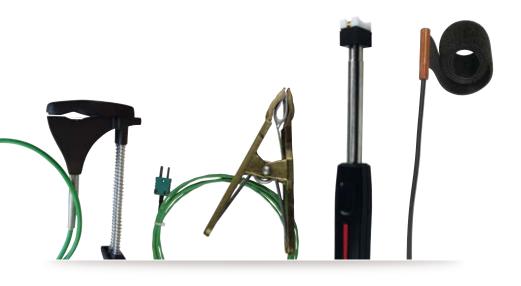
#### **Contact** probes

- Contact with lamella
- Copper contact
- Straight lamella
- Angled at 90° lamella
- Magnetic lamella
- On wheels for moving surface
- Wireless probes
- ...

#### **Penetration probes**

- Stainless steel sheath with pointer tip
- 150 or 300 mm length
- With or without handle
- IP65 waterproof models
- Needle probes
- T-shape handle
- Wireless probes
- ...





#### **Pipes probes**

- Lamella contact and spring for pipes
- Contact with clamp
- Lamella contact with curved tip
- Velcro
- ...







Saturated salt solutions For hygrometers



For vanes and hotwires



Magnetic protective housing For class 50/110



Backpack For class 210/310



Infrared printer For class 210/310



ABS transport case For class 50/110



Debimo blades For class 210/310



**Distance guide rod** For air system vent



**Telescopic extension** Tilting at 90°



Thermometers

Diagnose, inspect and check any temperature, with the advantage of using "no-contact" technology. You can safely measure surface temperatures of hot, dangerous or difficult to access objects.

#### Kiray 100

- -50 to +800°C
- Optical D.S: 20:1
- Dual laser sighting
- Emissivity: adjustable from 0.10 to 1.00 (pre-set at 0.95)
- High/low alarm
- Supplied with case







#### Kiray 200

- -50 to +850°C
- Optical D.S: 30:1
- Single laser sighting
- Emissivity: adjustable from 0.10 to 1.00 (pre-set at 0.95)
- Input for K thermocouple probe
- High/low alarm
- Memory: 20 temperature values
- Supplied with case and K thermocouple probe



Single or dual Laser sighting



Technical data sheets www.kimo.fr/kiray

#### Kiray 300

- -50 to +1,850°C
- Optical D.S: 50:1
- Dual laser sighting
- Emissivity: adjustable from 0.10 to 1.00 (pre-set at 0.95)
- Input for K thermocouple probe
- Memory: 100 temperature values
- High/low alarm
- Supplied with transport case, K thermocouple probe and tripod





# Gas detection



#### DF 110

- Detector of refrigerant gases and hydrogen (HFC, HCFC, Nidron 5...)
- Visual and audible alarm
- Manual and automatic self-calibration



#### FG 110

- Gas leak detector
- Detection of gas such as methane (CH<sub>4</sub>), LPG (isopropanol and isobutane) and others combustible gas (hydrocarbons)
- Hold/Min/Max functions
- Audible alarm
- Supplied with check-report





Technical data sheets www.kimo.fr/portables



#### CT 50 / 110

- Portable tachometers
- Optical and contact
- Hold function (CT 50)
- Hold/Min/Max functions (CT 110)
- Optic: 60 to 60,000 rpm
- Contact: 30 to 20,000 rpm
- 4 to 2,500 m/min
- Supplied with 1 meter of reflective tape









#### LX 100

- Class C luxmeter
- Instantaneous measurement
- Timed measurement
- Relative illuminance function
- Hold/Min/Max functions
- 0.1 to 150,000 lux
- 0.01 to 13,940 fc
- Supplied with calibration certificate









Instruments compliant to **NF C 42-710** 

#### LX 200

- Class B luxmeter
- Instantaneous measurement
- Relative illuminance function
- Evolution of illuminance according to weather conditions
- Cartography of illuminance
- Uniformity
- Hold/Min/Max function
- 0.1 to 200,000 lux
- 0.01 to 18,585 fc
- Supplied with LLX 200 software and calibration certificate





Operating software for data processing and printing of customizable reports.



#### SL 100

- Measurement and spot check of solar power
- Calculation of energetic exposure
- Results saved when instrument is switched off
- Hold/Min/Max functions
- 1 to 1300 W/m<sup>2</sup>
- 1 Wh/m<sup>2</sup> to 500 kWh/m<sup>2</sup>
- Supplied with calibration certificate

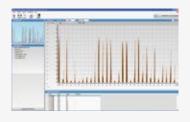


#### SL 200

- Measurement and spot check of solar irrigation (instantaneous, average, time-recording)
- Calculation of energetic exposure
- Storage and saving of average values of power
- Recorded datas can be read on the display, and the graphic function allows a fast interpretation of the measured file
- Hold/Min/Max functions
- 1 to 1300 W/m<sup>2</sup>
- 1 Wh/m<sup>2</sup> to 500 kWh/m<sup>2</sup>
- Supplied with calibration certificate







LSL 200 (SL 200 only) Configuration, download and data processing software of stored instrument data



Fixing kit For solar panels











#### Sound level meters



#### DB 100

- Class 2 sound level meter
- 30 to 130 dB
- Frequency weighting A
- Sound-pressure level LA
- Time averaged sound level LAeq
- Supplied with calibration certificate

#### DB 200

- Class 2 sound level meter integratingaveraging with storage function
- 30 to 130 dB
- Frequency weighting A, C, Z
- Weighted sound level L
- Equivalent continous level Leq
- Sound exposure level LE
- Peak pressure level LpK
- Supplied with calibration certificate and LDB 23 software

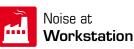


As per standards NF EN 61672-1 / NF EN 60651 NF EN 60804



#### DB 300/2 & DB 300/1

- Class 2 or class 1 sound level meter integrating-averaging with storage function
- Dynamic range: 30 to 137 dB (class 2), 20 to 137 dB (class 1)
- Real time analyser by octave bands: 31,5 Hz to 8 kHz (class 2), 16 Hz to 16 kHz (class 1)
- Audio recordings on treshold
- Frequency weighting A, C, Z
- Weighted sound level LXY
- Equivalent continous level LXeq
- Sound exposure level LXE
- Peak pressure level LUpK
- Supplied with calibration certificate and LDB 23 software















Data processing software

In option for DB 200 and 300, LDB 300 software is specific for industry and work environment. It allows for elaborated data processing and reports printing as per NF S31-010 standard.

## Sound exposure level

#### Noise dosimeters

#### DS 200

- Noise pressure level: LAF, LAS, max, min
- Equivalent continuous level: LAeq, LCeq, max, min
- Peak pressure level: LCpk, LZpk
- Detection and peak counting: 135 dB, 137 dB, 140 dB
- Daily sound exposure level: Lex,d
- Sound exposure: EA,T : in Pa<sup>2</sup>h
- DOSE
- Supplied with calibration certificate and LDS 23 software



Applicative standards NF EN ISO **9612 : 2009** (previously NF S 31-084)

*	**
*	*
*	*
**	***

#### 2003/10/CE Directive

#### DS 300

- Only one dynamic range extended from 100 dB: 40-140 dB
- Noise pressure level: LAF, LAS, max, min
- Equivalent continuous level: LAeq, LCeq, LXeq
- Daily sound exposure level: Lex,d
- Detection and peak counting: 135 dB, 137 dB, 140 dB
- Frequency analysis: 63 Hz 8 kHz
- Audio recording on treshold
- Two-channel measurement
- DOSE
- Supplied with calibration certificate and LDS 23 software







Data processing software In option for DS 200 and 300, LDS 300 software allows for elaborated data processing, metrological configuration of measurement and custom prints.

#### Accessories For sonometers & dosimeters



Microphone For dosimeters



CTL 100 Automatic check for DB 100



CAL 200 / 300 Acoustic calibrators class 1 and class 2



**Tripod** For sonometers





#### Metrology

• 100% reliable measurements

Calibration checks the measurements accuracy of the instrument, compared to COFRAC certified standard reference instruments.

Calibration certificates show the details of KIMO standard reference instruments and their connection to National Standards such as COFRAC in France.

KIMO can perform COFRAC calibrations to your specification.

0 www.kimo.fr/laboratories



**Calibration/Adjustment** of measuring instruments

#### 1,500 m<sup>2</sup> of laboratories

- Temperature
- Hygrometry
- Air velocity
- Airflow
- Pressure
- Gas analysis

- Acoustic
- Weighting
- Solar power
- Tachometry
- Illuminance
- Electricity





## Accredited temperature laboratory as per ISO 17025 standard

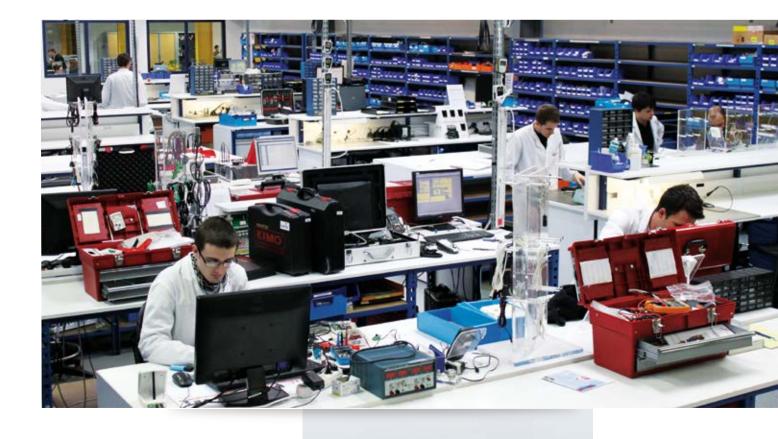
KIMO can perform COFRAC calibrations on any type of thermometer: measuring chain, PT100, Thermocouple) within a range from -70 to +200°C, in sterilizer or in baths.



## Accredited hygrometry laboratory as per ISO 17025 standard

KIMO can perform COFRAC calibrations on any type of hygrometer within a range from 5 to 95 %RH for a dry temperature from +10 to  $+50^{\circ}$ C.

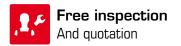




#### **Customer support**

On receipt of your instrument, our technicians take care of it in accordance with our quality procedures. A complete check is performed and a quotation is issued.

The instrument is cleaned and repaired. A complete test is done prior to return shipment.



0 www.kimo.fr/cs



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on www.kimo.fr







Flue gas analysers



Dataloggers

Doc Portable Générale - V1 - Anglais - 01/15

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**KIMO** - Export Sales Department Tel.: +33 1 60 06 69 25 - Fax: +33 1 60 06 69 29 Email: export@kimo.fr

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