

# PORTABLE INSTRUMENTS HVAC & Industry



# Portable instruments

### **HVAC**

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





#### Class 50

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







#### Class 60/110

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



### Summary

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ABS housing Integrated protection



Wireless Probes











#### **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

#### 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



Interchangeable Probes & Modules

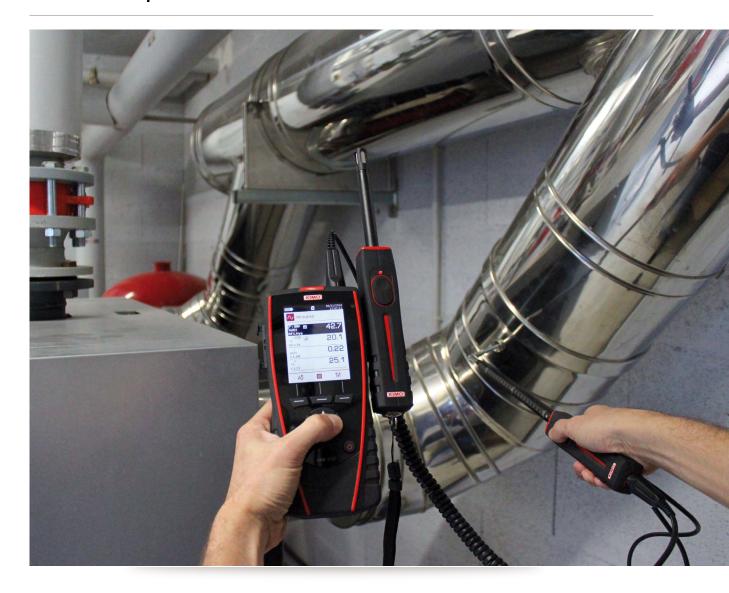


Data processing Software (option)



# New features

### **Multi-function portables 210/310**



### 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.



# New features

### Multi-function portables 210/310

#### **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.





## Multi-function

**AMI 310** 



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



Wireless Probes



Interchangeable Probes & Modules



Graphical Display



Data processing Software



Micro-SD Card



Color Wide screen

#### **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
- Humidity: 3 to 98 %RH
- CO: 0 à 500 ppm
- CO<sub>2</sub>: 0 à 5,000 ppm

- Air velocity:
  -5 to 35 m/s (with vane)
  3 to 85 m/s (with Pitot tube)
- Airflow: 0 to 99,999 m3/h
- Gas leak detection: 0 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.



# Data processing software

### **Datalogger**



#### **Instruments configuration**

Configure your operators, clients and sites.



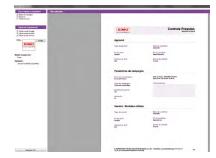
#### **Instruments management**

Record your instruments and their calibration certificate.



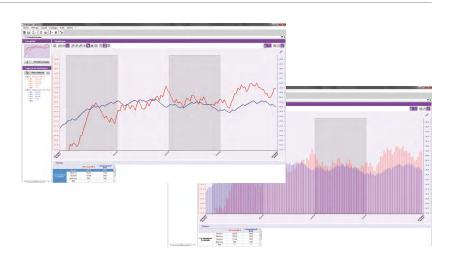
#### **Reports creation**

Customise your reports before printing or exporting them as PDF.



#### **Dataset processing**

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



# Airflow / Pressure / Air velocity

### DBM 620 - For airflow commissioning and balancing

#### **Technical specifications**

DBM 620 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 620 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 DBM 620 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 (0 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 x 2,5m of silicone tube, positioning strut and electronic housing).



### Pressure

#### Class 50/110

#### 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>O

#### **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>O
- 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: 0 to 500 ppm
- Air velocity: -5 to 35 m/s (with vane) 3 to 85 m/s (with Pitot tube)
- Airflow: 0 to 99,999 m<sup>3</sup>/h
- Gas leak detection: 0 to 10,000 ppm
- Tachometry: 30 to 60,000 rpm





Interchangeable Probes & Modules



Data processing Software

### Probes & modules available

Vanes & Hotwires

Temperature

CO

Gas detection

**Tachometry** 





Modules
4 channels thermocouple
Pressure

# Air velocity / Airflow

#### Class 50/110



#### **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





#### 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
- 0 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
- 0 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
- 0 to +50°C



Wide range of measuring cones for vane and hotwire probes.

# Air velocity / Airflow / Humidity

**VT 210** 





#### **Measuring ranges**

Air velocity: -5 to 35 m/s
 Airflow: 0 to 99,999 m³/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 rpm







Data processing Software

### Probes & modules available

Vanes & Hotwires

Temperature

Hygrometry

Multifunction

Tachometry





Modules
4 channels thermocouple
Climatic conditions

# Humidity

#### Class 50/110

#### **HD 50**

- Thermo-hygrometer
- · Hold function
- 5 to 95 %RH
- -20 to +70°C



#### **HM 50**

- · Pin Moisture meter
- · Hold function
- Compatible with 4 types of materials: wood, plaster, brick and concrete
- 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  $+70^{\circ}$ C dew point





# Air quality

#### Class 50/110

#### **CO 50**

- CO-meter
- · Hold function
- 0 to 500 ppm
- -20 to +80°C



#### CO 110

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

#### **AQ 110**

- CO<sub>2</sub>-meter
- Hold/Min/Max functions
- 0 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>: 0 to 5,000 ppm
- CO: 0 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: 0 to 150,000 lux





Interchangeable Probes & Modules



Data processing Software

## Probes & modules available

CO / CO,

Hygrometry

Omnidirectionnal

Temperature

Light





# Modules 4 channels thermocouple Climatic conditions

# Temperature

### Class 60

#### TR 61 / 62

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







Wide range of probes supplied in option: ambient, penetration, general, contact, tilted, ...





#### TK 61 / 62

- 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





#### **Measuring ranges**

- Measure and display up to 6 channels
- Thermocouple K: -200 to +1,300°C
- Thermocouple J: -100 to +750°C
- Thermocouple T: -200 to +400°C
- Thermocouple S: 0 to +1,760°C
- Pt 100: -200 to +600°C







### Probes & modules available

Thermocouple K, J, T, S
Pt 100





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

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#### **Penetration probes**

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



#### **Pipes probes**

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

#### **Accessoiries**



Saturated salt solutions For hygrometers



**Measuring cones**For vanes and hotwires



Magnetic protective housing For class 50/60/110



Backpack For class 210/310



Infrared printer
For class 210/310



**ABS transport case** For class 50/60/110



**Debimo blades** For class 210/310



**Distance guide rod**For air system vent



Telescopic extension Tilting at 90°

# Services & Maintenance

### **Control / Repair**



#### **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.

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

- Air flow
- Air velocity
- Combustion
- Temperature
- Humidity
- Pressure
- Electrical current
- Tachometry



#### **Customer service portail**

Use our new services portal to contact us.

http://kimo-fr.custhelp.com



Field services



Help line



Calibration and settings



### 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°C.

# Infrared temperature

#### **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



#### **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

#### Class 110



#### **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





# Tachometry

#### Class 50/110

#### 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





# Illuminance

#### Luxmeters



#### **LX 50**

- · Class C luxmeter
- · Hold function
- 0 to 10,000 lux
- 0 to 929 fc
- · Supplied with adjustement certificate



### **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





#### LX 200

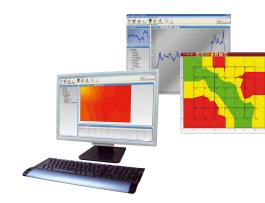
- · Class B luxmeter
- · Instantaneous measurement
- · Relative illuminance function
- Evolution of illuminance according to weather conditions
- Cartography of illuminance
- Uniformity
- · Hold/Min/Max function
- 0.1 to 200,000 lux
- 0.01 to 18,585 fc
- Supplied with LLX 200 software and calibration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

EN 12193









Operating software for data processing and printing of customizable reports.

# Solar power

### Solarimeters / Pyranometers

#### **SL 100**

- · Measurement and spot check of solar
- · 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**

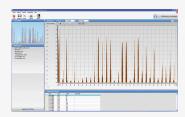
- Measurement and spot check of solar irrigation (instantaneous, average, time-recording)
- Calculation of energetic exposure
- · Storage and saving of average values of power
- · Recorded datas can be read on the display, and the graphic function allows a fast interpretation of the measured file
- Hold/Min/Max 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







### Accessories For solarimeters



#### LSL 200 (SL 200 only)

Configuration, download and data processing software of stored instrument data



Fixing kit For solar panels



Tripod

SL 200

Manufacturer of innovative solutions for the measurement and control of indoor air quality.



### Accredited temperature laboratory as per ISO 17025 standard

KIMO can perform COFRAC calibrations on any type of thermometer (measuring chain, Pt100, thermocouple, etc.) 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 10 to 95 %RH, for a dry temperature from +10 to +50°C.

