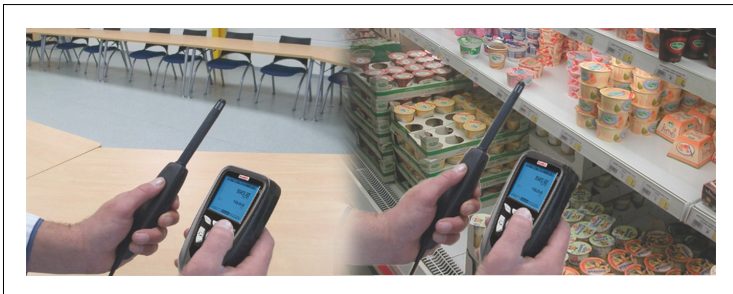




Supplied with Calibration certificate

New

HD 200 Thermo-hygrometer



Advantages

- Interchangeable measurement modules
- User-friendly (Joystick navigation)
- Large graphic display
- Blue backlight
- Up to 8,000 measurement points
- Up to 6 measurements simultaneously
- Instrument/PC wireless communication
- Wireless probes

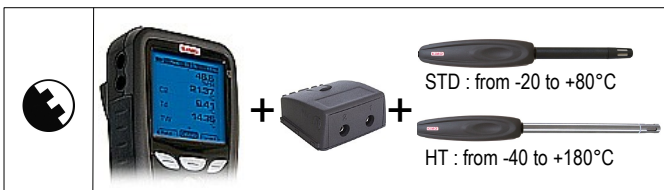
Connection



- Interchangeable measurement modules**
1 instrument = more than 1 range and 1 parameter available.
- Wireless connection**
Instrument / PC
Instrument / probe
- Smart-plus system**
Wireless or wired probes automatically recognized when connected to the instrument.

The thermo-hygrometers

HD 200 STD - Current/voltage module - Standard Smart-plus probe
HD 200 HT - Current/voltage module - High temperature Smart-plus probe



Wireless hygrometry probe - Large choice



Wired temperature probe - Large choice



Wireless temperature probe - Large choice



Thermocouple temperature module - 4 channels



Functions



Thermo-hygrometer

HYGROMETER

- Selection of units
- Minimum / maximum values and hold function
- Storage

PSYCHROMETER

- Dew point, wet temperature, enthalpy, absolute temperature
- Minimum / maximum values and hold function
- Storage

SURFACE DEW POINT

With contact temperature probe

- Minimum / maximum values and hold function
- Storage

WBGT index

For hygrometry probe with black ball.

- Calculation of comfort index inside / outside
- Storage



Thermometer

THERMOCOUPLE MODULE

- Dynamic delta T
- Selection of units
- Minimum / maximum values and hold function
- 4-channel storage of thermocouple K, J and T

TEMPERATURE PROBES

- Dynamic delta T
- Selection of units
- Minimum / maximum values and hold function
- Storage

Current / voltage module

- Adjustable ranges
- Minimum / maximum values and hold function
- Storage

Datalogger-10

- Multi-parameters recording
- Manual and automatic storage
- Memory : up to 8,000 measurement points or 50 datasets
- User-friendly with printing of customized report
- Management of instruments pool, follow-up of calibration periods
- Intervention planning
- Wired or wireless interface



Technical features

Sensing elements

Hygrometry : capacitive sensor

Temperature : Pt100 1/3 DIN

HD200 connection

On the top :

2 secured mini-DIN connectors for SMART-Plus probes

Left side :

1 USB port for KIMO cable only

1 power supply plug

Interchangeable measurement modules

Thermocouple module :

Connection : 4 inputs for compensated miniature male plug of thermocouple type K, J or T Class 1 (as per IEC 584-3 norm)

Current / voltage module :

Connection : 2 stereo jacks

Display

Graphic display 128x128 pixels

Dim. 50 x 54 mm

Blue backlight

Display of 6 measurements (including 4 simultaneously)

Housing

ABS shock-proof

IP54

Keypad

Metal-coated,

5 keys

1 joystick

Conformity

Electromagnetical compatibility

(NF EN 61326-1 norm)

Power supply

4 alkaline batteries 1,5V LR6

Operating environment

Neutral gas

Operating temperature

from 0 to +50°C

Storage temperature

from -20 to +80°C

Auto shut-off

adjustable from 0 to 120 min

Weight

340g

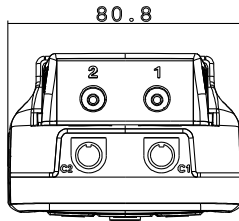
Languages

French, English, Dutch, German, Italian, Spanish, Portuguese, Swedish, Norwegian, Finn, Danish

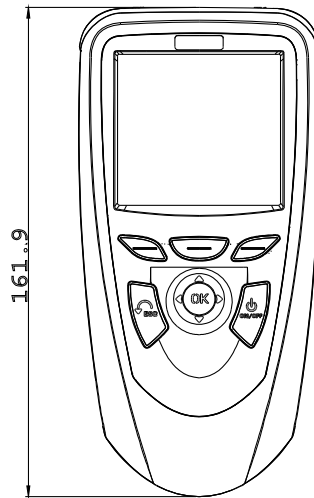


Dimensions

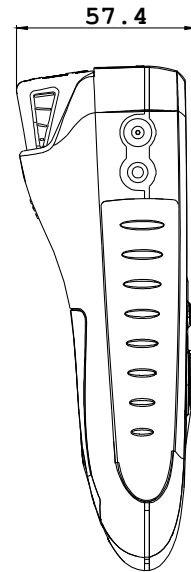
• On the top








• Front view



• Side view



Specifications

	Measuring units	Measuring range	Accuracy*	Resolutions
CURRENT / VOLTAGE				
	V, mA	from 0 to 2,5 V from 0 to 10 V from 0 to 4/20 mA	±1mV ±10mV ±0.01mA	0.001 V 0.01 V 0.01 mA
THERMOCOUPLE (See related datasheet)				
	°C, °F	K: from -200 to 1,300°C J: from -100 to 750°C T: from -200 to 400°C	±1,1°C or ±0,4% of reading*** ±0,8°C or ±0,4% of reading*** ±0,5°C or ±0,4% of reading***	0.1 °C 0.1 °C 0.1 °C
HYGROMETRY PROBES				
STD 	Relative humidity Absolute humidity	%RH g/Kg	From 3 to 98 %RH From 0 to 600 g/Kg	Accuracy** (Repeatability, linearity, hysteresis): ±1,5%RH (from 15°C to 25°C) Factory calibration uncertainty: ±0,88 %RH Temperature dependence: ±0.04 x (T-20) %RH (if T<15°C or T>25°C)
	Dew point Ambient temperature	°C _{td} , °F _{td} °C, °F	From -50 to +80°C _{td} From -20 to +80°C	±0.6% of reading ±0.5°C ±0.3% of reading ±0.25°C
H.T 	Relative humidity Absolute humidity	%RH g/Kg	From 3 to 98 %RH From 0 to 600 g/Kg	Accuracy** (Repeatability, linearity, hysteresis): ±1,5%RH (from 15°C to 25°C) Factory calibration uncertainty: ±0,88 %RH Temperature dependence: ±0.04 x (T-20) %RH (if T<15°C or T>25°C)
	Dew point Ambient temperature	°C _{td} , °F _{td} °C, °F	From -50 to +80°C _{td} From -40 to +180°C	±0.6% of reading ±0.5°C ±0.3% of reading ±0.25°C
WIRED OR WIRELESS Pt100 PROBES (See related datasheet)				
	°C, °F	From -50 to 250°C (According to model)	±0,3% of reading ±0.25°C (According to model)	0.01 °C

* 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.

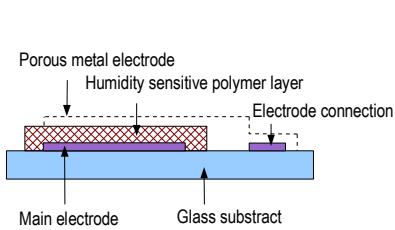
** As per NFX 15-113 and the Charter 2000/2001 HYGROMETERS, GAL (Guaranteed Accuracy Limit) which has been calculated with a coverage factor value of 2 is ±2.88%RH between 18 and 28°C on the measuring range from 5 to 95%RH. Sensor drift is less than 1%RH/year.

***The accuracy is expressed either by a deviation in °C, or by a percentage of the value concerned. Only the bigger value is considered.

Working principle

Capacitive sensing element for relative humidity measurement

Inside the probes, a capacitive polymer layer reacts with the humidity present between two metal layers which cover a glass substract. Water absorption is a function of relative humidity of the surrounding environment, and modifies the dielectric constant. The measured signal is directly proportionnal to the relative humidity and is dependent on the atmospheric pressure.

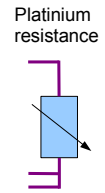


$$C(RH) = \frac{\epsilon_{RH} * \epsilon_0 * A}{d}$$

C Capacity of relative humidity sensor
 ϵ_{RH} Relative dielectric permittivity, humidity dependent
 ϵ_0 Void permittivity
 A Electrodes area
 d Electrodes spacing
 RH Relative humidity

Thermometer : Pt100 probe

Pt100 is a resistance with a positive temperature coefficient which varies according to the temperature. The higher the temperature is, the more the value of the resistance increases. ie : for 0°C ≈ 100 Ω - for 100°C ≈ 138,5 Ω.



WBGT index (Wet bulbe globe temperature)

For hygrometry probe with black ball.

The wet bulbe globe temperature (ISO 7243 norm) is a composite temperature used to estimate the effect of temperature, humidity and solar radiation on humans.

Supplied with...

● Supplied with ○ Option




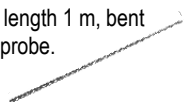
DESCRIPTION	HD 200 STD	HD 200 HT	HD 200
Current / voltage module	●	●	●
Thermocouple temperature module	○	○	○
Standard hygrometry probe	●	○	○
Wireless standard hygrometry probe	○	○	○
High temperature hygrometry probe	○	●	○
Wireless high temperature hygrometry probe	○	○	○
Thermocouple K, J and T probe	○	○	○
SMART-Plus Pt100 probe	○	○	○
Wireless Pt100 probe	○	○	○
8 rechargeable batteries with charger	○	○	○
Input current /voltage cable	●	●	●
Calibration certificate	●	●	●
Transport case	●	●	●

Large choice of temperature probes (See related datasheet) :

- ambient
- contact
- penetration
- food industry penetration
- general use



Accessories (See related datasheet)

Datalogger-10	KPIJ 20 – 50 – 100 – 200 - 600	ADS
Datalogger-10 PC software for data recording and processing. Wired (LPCF) or wireless (LPCR) interface. 	Ammeter clamp with PVC cable lg. 2m and jack connector. 	Adaptor for power supply 230 Vac
CE 200	GST	RTS
Hands-free protective cover	Silicone heat conductive grease for temperature probes 	Telescopic extension, length 1 m, bent at 90° for measuring probe. 
CTC-P	BN (See related datasheet)	
Input current/voltage cable	Black ball Ø 150mm with junction for temperature probe Ø 4,5mm. Further dimensions available.	

Warranty period

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

www.kimo.fr

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