KIMO INSTRUMENTS

Technical Data Sheet

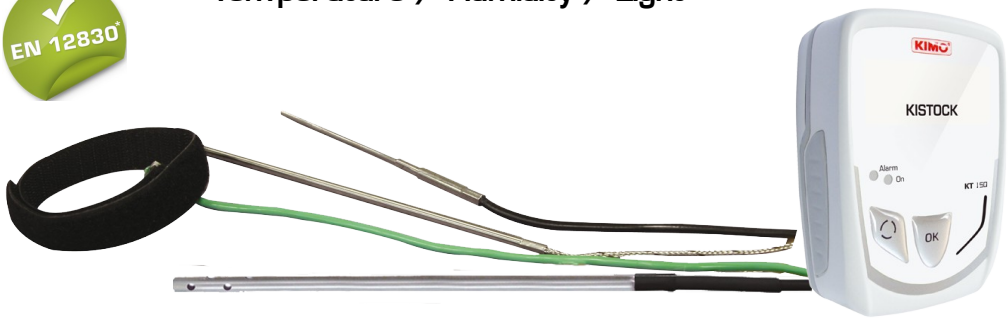
Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

CE

KISTOCK DATALOGGER
Food industry range : KT250 / KH250

Temperature / Humidity / Light

EN 12830



KEY POINTS

- 20,000 measurement points
- IP65 housing
- Up to 4 external inputs
- Up to 5 recordable parameters
- 2 configurable setpoint alarms
- Fast data download (1000 values/second)
- Magnetic mounting

REFERENCES

Part number	Internal sensor	Display	External input number	Parameters
KT-250-IN	yes	no	4	Temperature Current/voltage
KT-250-IO	yes	2 lines	4	
KH-250-AN	yes	no	2	Humidity, temperature and light Current/voltage
KH-250-AO	yes	2 lines	2	

TECHNICAL FEATURES

	KT250	KH250
Units displayed	°C, °F, mV, V, mA, A	°C, °F, %RH, Lux[1], °Ctd, °Ftd
Resolution	0.1 °C, 0.1 °F, 0.001 V, 0.001 mA, 0.1 A	0.1 °C, 0.1 °F, 0.1%RH, 1 Lux*
External inputs	4 Jack connectors 2.5 Stereo	2 Jack connectors 2.5 Stereo
Internal sensor	**Temperature sensor** NTC type : **Measuring range :** from -40 to +70 °C **Accuracy :** from -20 to +70 °C : ±0.4°C from -40 to -20 °C : ±0.8 °C	**Light sensor** photodiode type : **Measuring range :** from 0 to 10000 lux **Accuracy :** ±10 %
Setpoint alarms	2 setpoint alarms on each channel	
Frequency of the measurement	From 1 s to 24 h	
Working temperature	From -40 to +70 °C	From -20 to +70 °C
Storage temperature	From -40 to +85 °C	
Battery life[2]	5 years	

FEATURES OF HOUSING

Dimensions
98.7 x 67.8 x 34.7 mm

Weight
113 g

Display
2 lines LCD screen
Dimension : 45 x 28.5 mm

Control
2 keys : Select and OK

Material
Compatible with food industry environment
ABS housing
Sides and caps made of Elastomer

Protection
IP 65

PC communication
1 digital input for male Jack connector 3.5

Digital electronics
Lacquer protected circuit board
Meets RoHS standards

Battery power supply
Type lithium 3.6 V ½ AA

Visual alarm
2 electroluminescent diodes (green and red)

Environment
Air and neutral gases

**Only for KT250 dataloggers*

[1]Brightness data are recorded, the screen does not display them.

[2]on the basis of 1 measurement each 15 minutes at 20°C

TECHNICAL FEATURES FOR PROBES KT250

• TEMPERATURE PROBE (OPTIONAL)

Sensor type	NTC
Measuring range	From -40 to +120 °C (remove probe)
Accuracy*	Remove probe : ±0.3 °C (-40 °C<T<+70 °C) ±0.5 °C (beyond)

TECHNICAL FEATURES FOR PROBES KH250

• THERMO-HYGROMETRY PROBE (OPTIONAL)

	Hygrometry	**Temperature**
Sensor type	CMOS	
Measuring range	From 5 to 95 %RH	From -20 to +70 °C
Accuracy*	**Accuracy** (Repeatability, linearity, hysteresis)** : ±2%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)	**From -20 to 0°C :** 2% of displayed value ±0,6 °C **From 0 to 30 °C :** 0,5 °C **From 30 to 70 °C :** 1.5% of displayed value
Response time ($t_{0.63}$)	50 s (Vair = 2 m/s)	25 s (V = 2 m/s)

**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 calibration compensation.*
***As per NFX 15-113 standard 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.*

• TEMPERATURE PROBE (OPTIONAL)

Sensor type	NTC
Measuring range	From -40 to +120 °C(remove probe)
Accuracy*	Remove probe : ±0.3 °C (-25 °C<T<+70 °C) ±0.5 °C (beyond)

TECHNICAL FEATURES FOR CABLES KT250 and KH250

• CURRENT INPUT CABLE (OPTIONAL)

Measuring range	0/4-20 mA
Accuracy*	±0.2 % of the measurement ±1 µA

• VOLTAGE INPUT CABLE (OPTIONAL)

Measuring range	0-10 V
Accuracy*	±0.2 % of the measurement ±1 mV

• AMMETER CLAMP (OPTIONAL)

Measuring range	0-50 A / 0-100 A / 0-200 A / 0-600 A
Accuracy*	±1 to 2.5 % of the value displayed (according to measuring range)

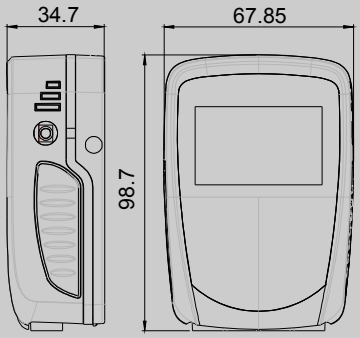
**All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.*
See technical datasheet "Measuring probe and cable for class 110/210 kistock dataloggers"

EN 12830 norm

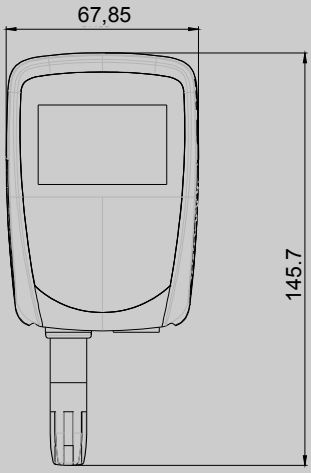
KT 250 models dedicated to food industry, meet with requirements of **EN 12830 norm**.
This certification is required for transportation, storage and distribution of refrigerated, freezed and deep-freezed food, and ice cream
Certification is done by an independent laboratory, **COFRAC** accredited.

DIMENSIONS (mm)

KT-250

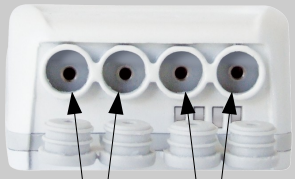


KH-250



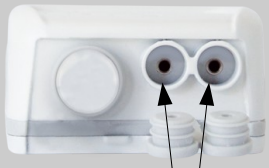
CONNECTIONS

External input (KT-250)



Jack connectors (2.5)
Probe input for :
- NTC temperature
- Current input cable
- Voltage input cable
- Ammeter clamp

External input (KH-250)



Jack connectors (2.5)
Probe input for :
- NTC temperature
- Current input cable
- Voltage input cable
- Ammeter clamp

RECORDER FUNCTION

5 recording modes

KISTOCK can record in 5 different ways :
• **"Immediate"** mode records values according a predefined interval.
• **"Minimum"**, **"Maximum"** and **"Average"** record automatically the calculation of minimum, maximum or average of measured values during an interval of recording.
• **"Monitoring"** mode allows to get an accurate history report during error events to help troubleshooting, without stopping the measurement logging. To proceed this way, you just have to define :
- a record interval to be used whilst the readings are beyond the setpoints.
- a record interval for the values measured during each reading beyond the setpoints..
Furthermore, you can also let your KISTOCK record non-stop (**"loop"** recording option).

4 types dataset start

Once your recording mode has been set, you can launch your dataset :
• With a delayed start (with predefined date and time)
• With the software
• With push-button
• With **"Online"** option. In this case, your datasets are directly sent, saved and displayed on your PC in real time.

6 types of dataset stop

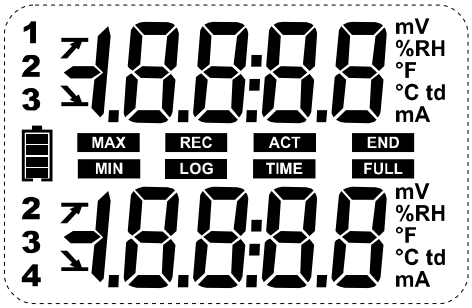
You can stop your dataset :
• According to a date and time (if it was started the same way)
• According to a period
• According to a predefined number of recording points
• Once the storage capacity is full
• With **"Stop"** option of the software
• By holding "OK" key for at least 5s, if this function has been previously activated by the software.

PC CONNECTION

PC connection input

Jack connector (3.5)
Input for Kistock-PC software

SCREEN



***°C**.. Temperature in degrees Celsius*
***°F**.. Temperature in degrees Fahrenheit*
%RH**..... Relative humidity **(KH 250)
td**.. Dew point temperature **(KH 250)
***V or mV** Voltage expressed in V or mV*
***A or mA** Current expressed in A or mA*

END *DATASET is finished*

REC *One value is being recorded*

LOG *Flashing : dataset has not started yet*
Constant : data set is in progress

FULL *Slow flashing : dataset is taking 80-90% of storage capacity*
Fast flashing : dataset is taking 90-100% of storage capacity
Constant : storage capacity filled up

12
23
34 *Channel No. which is measuring*

ACT *Refresh of displayed measurements*

TIME *Display of measurement and recording intervals*

Status of battery life : 5 levels (4 blocks + empty battery)
Flashes when only one block is remaining

MIN **MAX** *Displayed values correspond to maximum and minimum values of the channels*

Alarm action type : rising or falling action

bAt *flashing on the screen + flashing of LEDs : means that battery must be changed*

Err *+ flashing of the green LED : detection of communication error → Press **"Select"** and **"OK"** keys to reset the instrument*

Err *+ flashing of the red LED : detection of measurement error → Press **"Select"** and **"OK"** keys to reset the instrument*

SOFTWARE

• Configuration and data processing software
KILOG software enables you to configure, save and process your data in a very simple way.
Software.....*Ref. KILOG-N*
USB interface.....*Ref. I-KIC2*
Complete set : soft + 1 interface.....*Ref. KIC2 KILOG*

• KISTOCK-PC interface K
This USB cable enables you to connect your KISTOCK to your PC.
Ref. I-KIC2

• KILOG CFR software
KILOG CFR software is the key tool for users who requires traceability, in accordance with 21CFR-Part11 standards. Security and integrity of data are guaranteed : it is not possible to modify or tamper with the data.

Interface..... *Ref. I-KIC2*
Complete set : KILOG 1CFR software + 1 interface..*Ref. KIC2-CFR-N*

NOTE Software is compatible with the former range of Kistock.

ACCESSORIES

• KNT data collector.
KNT data collector allows you to collect measurements from one or several KISTOCK directly on-site (up to 500,000 values stored). Data can be displayed and printed from the KNT or download to your PC.
Ref. KNT 300

• Secured wall-mounting bracket
KIMO has designed a new proprietary anti-theft system with no padlock. Your system cannot be unlock or damaged : your installation is fully secured.
Ref. KAV-B

Once your KISTOCK is set on the mounting plate, insert the key to lock the mounting system.

To unlock : insert the key inside the metallic axis, and make ¼ turn.

Remove the key to release the metallic axis. Your KISTOCK is now unlocked.

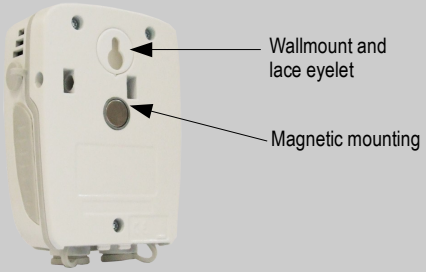
• Wire extensions for NTC temperature probe.
Made of PVC HT, 5m long, with Jack connectors (male and female)
Ref. KRC 5
Note : you can connect several extensions together (maximum length 25m)

• Lace. *Ref. KDC*

• Lithium ½ AA battery. *Ref. KBL*

MOUNTING

KISTOCK can be mounted in different ways ; you can also move it or install it very easily.
• Magnetic mounting or wallmounting (see photos)
• Secured mounting (optional, see accessories)



HOW TO CHANGE THE BATTERY

With 5-year battery life*, KISTOCK guarantee long-term measurements.
To change battery :
• Remove the screw located at the back, with a screw driver
• Remove the front part, along with the old battery.
• Insert the new battery observing the proper polarity
• Replace the front.
• Tighten the screw.
• **Press "SELECT" and "OK" keys for 2 seconds to refresh battery level.**
** on the basis of 1 measurement each 15 minutes at 20°C*

CALIBRATION (Optional)

KISTOCK dataloggers can be supplied with calibration certificate as an option.

WARRANTY PERIOD

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

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