



KISTOCK DATALOGGER

HVAC range : KT110 / KH110

Temperature / Humidity / Light



KEY POINTS

- Up to 16 000 measurement points
- Measure up to 3 parameters
- With or without external input
- 2 configurable setpoint alarms
- Fast data download (1000 values/second)
- Magnetic mounting
- IP40 housing

REFERENCES

Part number	Internal sensor	Display	External input number	Nb of recording points	Parameters
KT-110-IN	Yes	No	0	12 000	Temperature and Current/voltage
KT-110-IO	Yes	1 line	0	12 000	
KT-110-AN	Yes	No	1	16 000	
KT-110-AO	Yes	1 line	1	16 000	
KH-110-AN	Yes	No	0	16 000	Humidity, temperature and light
KH-110-AO	Yes	1 line	0	16 000	

TECHNICAL FEATURES

	KT110	KH110
Units displayed	°C, °F, mV, V, mA, A	°C, °F, %RH, °Ctd, Lux*, °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	1 Jack connector 2.5 stereo	
Internal sensor	Temperature	Humidity, temperature, light
Setpoint alarms	2 setpoint alarms on each channel	
Frequency of 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**	5 years	

FEATURES OF HOUSING

Dimensions

98.7 x 67.8 x 34.7 mm

Weight

113 g

Display

1 line LCD screen

Dimension of screen : 45 x 17 mm

Control

2 keys : Select and OK

Material

Compatible with food industry environment

ABS housing

Sides and caps made of Elastomer

Protection

IP 40

PC communication

1 digital input

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

* Brightness data are recorded, the screen does not display them.

** on the basis of 1 measurement each 15 minutes at 20°C

TECHNICAL FEATURES
PROBES, INTERNAL SENSOR AND CABLES

KT110

• TEMPERATURE PROBE (OPTIONAL)

Type of sensor	NTC
Measuring range	From -40 to +120 °C (remote probe)
Accuracy*	±0.3 °C (-25 °C < T < +70 °C) ±0.5 °C (beyond)

• INTERNAL SENSOR

Type of sensor	NTC
Measuring range	From -40 to +70 °C
Accuracy*	±0.4 °C (-20 °C < T < +70 °C) ±0.8 °C (beyond)

• 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)

See technical datasheet "Measuring probe and cable for class 110/210 kistock dataloggers"

TECHNICAL FEATURES FOR INTERNAL SENSOR

KH110

• THERMO-HYGROMETRY

	Hygrometry	Temperature
Type of sensor	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)

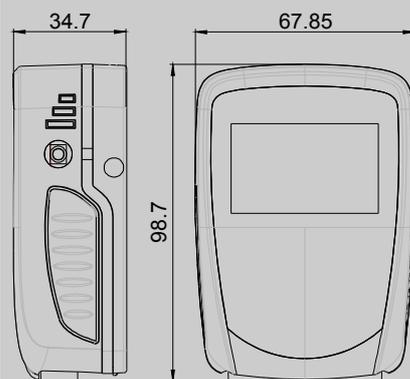
• LIGHT SENSOR

Type of sensor	Photodiode
Measuring range	From 0 to 10 000 Lux
Accuracy*	±10 %

*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.

DIMENSIONS (mm)



CONNECTIONS

External input (KT 110-A)



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

PC connection input

- Jack connector (3.5)
Input for Kistock-PC software



RECORDER FUNCTIONS

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.

SCREEN



The screenshot shows a digital display with two rows of numbers. The top row shows '1' and '2' on the left, followed by '18.8:8.8' and units 'mV', '%RH', '°F', and '°Ctd'. The bottom row shows '1.8.8.8' and units 'mA'. Below the display are five indicator LEDs labeled MAX, REC, ACT, END, MIN, LOG, TIME, and FULL. To the right of the screen, there are icons and text for each indicator: 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), ACT (Refresh of displayed measurements), TIME (Display of measurement and recording intervals), a battery icon (Status of battery life: 5 levels (4 blocks + empty battery); Flashes when only one block is remaining), MIN (Displayed values correspond to maximum and minimum values of the channels), MAX (Displayed values correspond to maximum and minimum values of the channels), and an alarm icon (Alarm action type: rising or falling action).

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

ACT Refresh of displayed measurements

TIME Display of measurement and recording intervals

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

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

12 Channel No, which is measuring

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



• 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.



• KISTOCK-PC interface K

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

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



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-N



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)

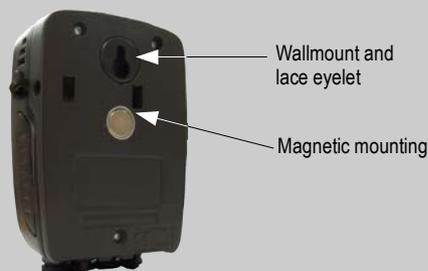
• Lace. Ref. KDC

• 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).