INLEC.COM

DATASHEET

Nationwide Low Call
0333 6000 600

WHY BUY WHEN YOU CAN HIRE

KIMO
INSTRUMENTS

CE

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

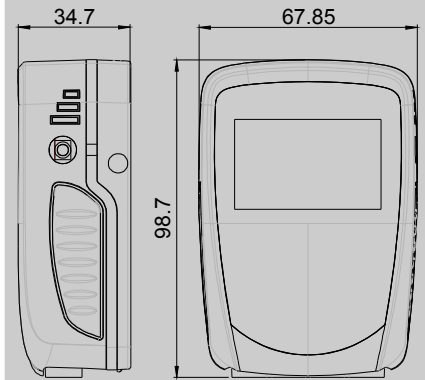|	Hygrometry	Temperature
Type of sensor	CMOS	
Measuring range	From 5 to 95 %RH	From -20 to +70 °C
Accuracy*	**Accuracy** (Repeatability, linearity, hysteresis) :** ±2%RH (from 15°C to 25°C) **Factory calibration . uncertainty :** ±0,88 %RH **Temperature dependence :** ±0.04 x (T-20) %RH (if T<15°C or 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.
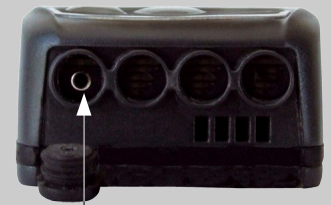**As per NFX 15-113 standard and the charter 2000/2001 Hygrometers, GAL (Guaranteed Accuracy Limit) which has been calculated with a coverage factor value of 2 is ±2,88%RH between 18 and 28°C on the measuring range from 5 to 95%RH. Sensor drift is less than 1%RH/year.*

34.7   67.85   98.7

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

1 2 ⟋⟍ *1.8.8:8.8* mV %RH °F °C td mA

| MAX | REC | ACT | END |
| MIN | LOG | TIME | FULL |

°C.. Temperature in degrees Celsius
°F.. Temperature in degrees Fahrenheit
%RH.......... Relative humidity (KH 110)
td.. Dew point temperature (KH 110)
V or mV Voltage expressed in V or mV (KT 110)
A or mA Current expressed in A or mA (KT 110)

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

1 2 — *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-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)

Wallmount and lace eyelet

Magnetic mounting

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).
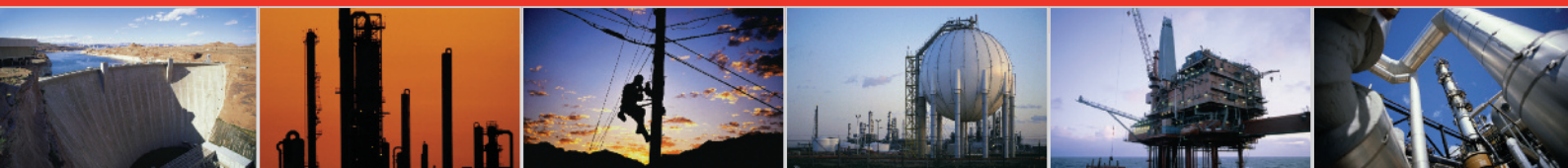
www.kimo.fr

Distributed by :

afaq
ISO 9001
Qualité
AFNOR CERTIFICATION

EXPORT DEPARTMENT
Tel : + 33. 1. 60. 06. 69. 25 - Fax : + 33. 1. 60. 06. 69. 29
e-mail : export@kimo.fr

INLEC, supporting you to deliver a world class service, every day, in every sector ...

OUR COMMITMENT TO YOU

A wealth of knowledge and experience.

You can take advantage of expert advice to ensure you get the best, most appropriate and cost effective equipment for the job. We supply a wide variety of industries, so if there is another way to do the job or save you time and money we'll pass on the benefit of our experience for free.

Honest advice, just a phone call away.

If we don't have a particular item, rather than hiring you something that won't do the job, we would rather direct you to an alternative supplier. You will always be provided with full instructions and if you still need help, call our technical team on Nationwide Low Call 0333 6000 600. Our aim is to save you time, frustration and money.

Top quality equipment from major manufacturers.

With Inlec you'll get the most accurate, reliable and well-maintained equipment available. Prices are regularly reviewed to ensure you always enjoy the best value for money. We have made a significant investment in test equipment so we ensure that it's well packed to minimise damage and delay.

We really do listen to you.

You won't waste your time contacting Inlec. Every request for equipment is logged and carefully considered. Listening to our customers helps keep our product range up to date and relevant. If you are unhappy about any aspect of our service please let us know so we can put it right.

YOUR 5 WAY GUARANTEE

❶ GUARANTEE SAME DAY DESPATCH

We understand why prompt delivery is important to you. So, if we confirm your order before 3pm, you are guaranteed same day despatch.

❷ OUR PRICE GUARANTEE

Inlec guarantee you real value for money. Our price match policy is simple - if you can hire the same product for less elsewhere, we guarantee to match that price and reduce it by a further 10% of the difference - and still deliver our industry leading technical and customer support.

For full details check our price-match guarantee online

❸ TOP QUALITY GUARANTEED

All equipment is thoroughly checked prior to dispatch to ensure you receive it in full, safe working order. Your shipment will be securely packed and include manufacturer's instructions, accessories or consumables and a valid calibration certificate where appropriate. In addition, Inlec offer a 24 hour replacement service if you decide the equipment is not suitable for your application*.

❹ FRIENDLY, KNOWLEDGEABLE ADVICE GUARANTEED

Inlec are happy to provide you with free advice, from anunbeatable team of experienced, knowledgeable and friendly engineers and hire experts.

❺ YOUR GUARANTEE OF THE BEST CUSTOMER SERVICE

Throughout your hire we will work hard to ensure you enjoy the very best in support and service from Inlec. We guarantee you won't find better service anywhere in the industry.

*subject to availability and conditions

Europe's leading Test Equipment Hire Specialist