

## KISTOCK DATALOGGER

### Laboratories range : KTR350 / KTH350

Temperature / Humidity



#### KEY POINTS

- IP65 housing
- 100 000 measurement points
- Up to 3 recordable parameters
- 1 or 2 external inputs
- 2 configurable setpoint alarms
- Fast data download (1000 values/second)
- LCD screen with displaying of measurements and recordings
- Magnetic mounting

#### REFERENCES

Part number	Internal sensor	External input number	Parameters	Kits de livraison
KTR-350	no	2	Pt100 temperature Current/voltage	Basic Kistock
KTH-350-A	yes	1	Humidity and PT100 temperature Current/voltage	Kistock + integrated thermo-hygrometry probe made of polycarbonate
KTH-350-P	no	2		Kistock + remote thermo-hygrometry probe made of polycarbonate
KTH-350-I	no	2		Kistock + remote thermo-hygrometry probe made of stainless steel
KTH-350	no	2		Basic Kistock

#### TECHNICAL FEATURES

	KTR350	KTH350
Units displayed	°C, °F, mV, V, mA, A	°C, °F, %RH, mV, V, mA, A, °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, 1mV, 0.001V, 0.001mA, 0.1A
External input	2 Pt100 connectors	1 or 2 Pt100 connectors
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	
Storage temperature	From -40 to +85 °C	
Battery life*	5 years	

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

#### FEATURES OF HOUSING

##### Dimensions

98.7 x 67.8 x 34.7mm

##### Weight

113 g

##### Display

1 line LCD screen  
Dimension : 45 x 47 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

## TECHNICAL FEATURES FOR PROBES FOR KTH350

### THERMO-HYGROMETRY PROBE

#### • Hygrometry

Sensor type	Capacitive
Measuring range	From 0 to 100 RH
Accuracy*	<b>Accuracy** (Repeatability, linearity, hysteresis) :</b> ±1,5%RH (from 15°C to 25 °C) <b>Factory calibration uncertainty :</b> ±0,88%RH <b>Temperature dependence :</b> ±(0,04 x (T-20))%RH (if T<15°C or T>25°C)
Response time	T <sub>0,63</sub> =25 s (from 10%RH to 80%RH, Vair=2 m/s)

#### • Temperature

Sensor type	Pt100 Class 1/3 DIN as per IEC 751
Measuring range	From -20 to +70 °C (KTH-350-A) From -20 to +120 °C (KTH-350-P) From -40 to 180 °C (KTH-350-I)
Accuracy*	<b>KTH-350-A :</b> From +10 to +30°C : ±0.3 °C Beyond : ±0.5°C <b>KTH-350-P, KTH-350-I :</b> ±0.3% of the reading value ±0.25 °C
Response time	T <sub>0,63</sub> =9 s (from 10%RH to 80%RH, Vair=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.

## TECHNICAL FEATURES CABLES and PROBES for KTH350 and KTR350

### TEMPERATURE PROBE (OPTIONAL)

Sensor type	Pt100 class A as per IEC 751
Measuring range	From -100 to +400 °C (according probe)
Accuracy*	Remote probe : ±0.4 of the reading ±0.3°C

### CURRENT INPUT CABLE (OPTIONAL)

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

### VOLTAGE INPUT CABLE (OPTIONAL)

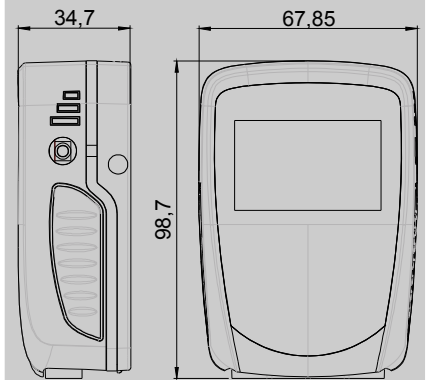
Measuring range	0-10 V
Accuracy*	±0.2 % of the measurement ±1 mV

### AMMETER CLAMP (OPTIONAL)

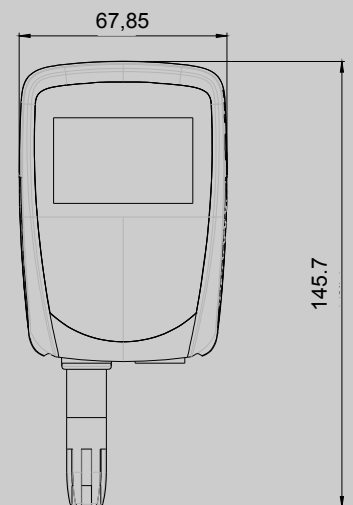
Measuring range	0-50 A / 0-100 A / 0-200 A / 0-600 A
Accuracy*	±1 to 2.5 % of the value displayed (according to measuring range)

## DIMENSIONS (mm)

### KTR350 – KTH-350-P - KTH-350-I



### KTH-350-A



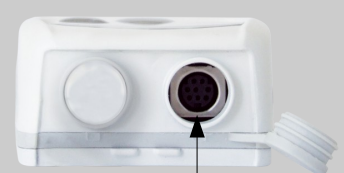
## CONNECTIONS

### External input (KTR 350, KTH-350-P et KTH-350-I)



Pt100 connectors

### External input (KTH-350-A)



Pt100 connector

## 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 :

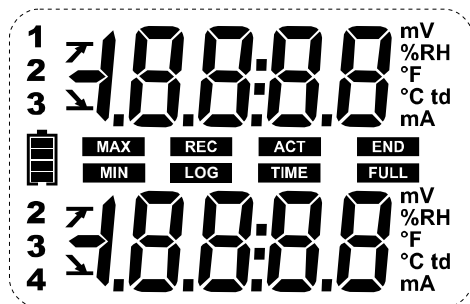
- According to a date and time (if it was started the same way)
- According to a period
- According to a predefined number of recording points
- Once the storage capacity is full
- With **"Stop"** option of the software
- By holding **"OK"** key for at least 5s, if this function has been previously activated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

## THERMOMETER FUNCTION

Once **"thermometer"** function is activated, KISTOCK allows you to display information as below :

- Difference of temperature between 2 external probes (**"Delta T"**),
- Minimum temperature
- Maximum temperature
- Hold the temperature measured (**"Hold"**).

## SCREEN



°C.. Temperature in degrees Celsius

°F.. Temperature in degrees Fahrenheit

%RH..... Relative humidity (KTH 350)

td.. Dew point temperature (KTH 350)

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

**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**

Displayed values correspond to maximum and minimum values of the channels

**MAX**



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

## PC CONNECTIONS

### Input for PC connection

Jack connector  
(3.5)  
Input for Kistock-  
PC software



## 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-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)

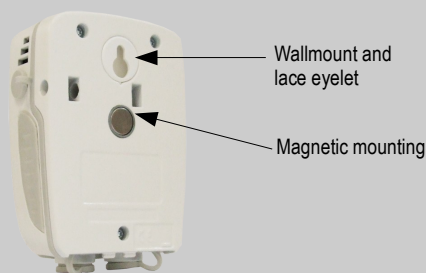
### • Lace. Ref. KDC

### • 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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EXPORT DEPARTMENT

Tel : + 33. 1. 60. 06. 69. 25 - Fax : + 33. 1. 60. 06. 69. 29

e-mail : [export@kimo.fr](mailto:export@kimo.fr)