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 dislayed	°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*	**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)
Response time	$T_{0,63}$=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*	**KTH-350-A :** From +10 to +30°C : ±0.3 °C Beyond : ±0.5°C **KTH-350-P, KTH-350-I :** ±0.3% of the reading value ±0.25 °C
Response time	$T_{0,63}$=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*	Remove 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

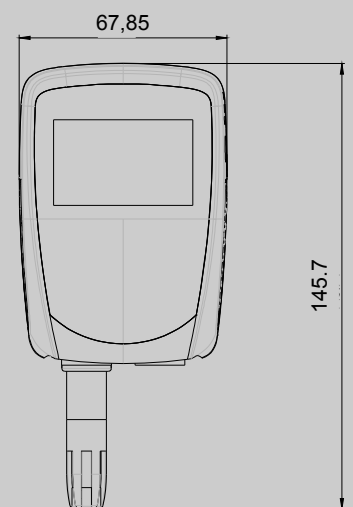### AMMETER CLAMP (OPTIONAL)

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

34,7   67,85   98,7

KTH-350-A

67,85   145.7
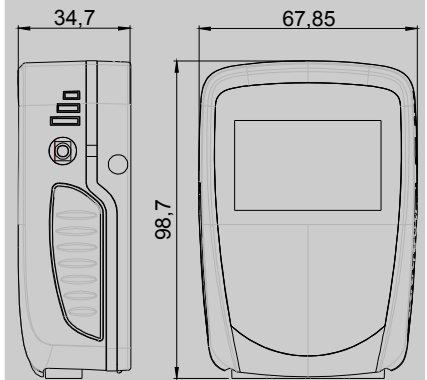
CONNECTIONS

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

Pt100 connectors

External input (KTH-350-A)

Pt100 connector

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
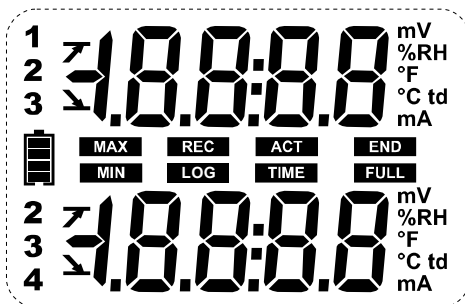
°C…Temperature in degrees Celsius
°F…Temperature in degrees Fahrenheit
%RH..........Relative humidity *(KTH 350)*
td...Dew point temperature *(KTH 350)*
V or mV Voltage expressed in V or mV
A or mA Current expressed in A or mA

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*
(battery)	*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*
(arrows)	*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

KTH-350-P
ABS remote probe

KTH-350-I
ST.steel remote probe

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

• **Printer for KNT 300 data collector**
Ref. ITP

• **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*
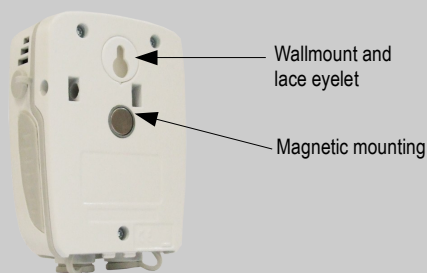
• **Lithium ½ AA battery.** *Ref. KBL*

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)

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).

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