

KH 100 KISTOCK

Temperature and humidity datalogger



With or without display

- Measure up to 3 parameters
- LCD display
- Light sensor
- Fast data download (1,000 values/second)
- Up to 12,000 measurement points
- 2 configurable setpoint alarms
- Small dimensions
- Magnetic mounting
- IP 40 housing and Elastomer protection pads

Technical features

Units displayed..... °C, °F, %RH, Lux, °Ctd, °Ftd
 Resolution..... 0.1°C, 0.1°F, 0.1%RH, 1 Lux
 External input..... none
 Setpoint alarm..... 2 setpoint alarms on each channel
 Frequency of measurement..... from 1s to 24h
 Working temperature..... from -20 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

Thermo-hygrometry Probe

Type of sensor..... CMOS

• Hygrometry

Measuring range..... 5 to 95%RH
 Accuracy*(GAL)..... ± 2.95 %RH between 18°C and 28°C
 Response time..... $t_{0,63} = 50s$ ($V_{air} = 2m/s$)

• Temperature

Measuring range..... -20 to +70°C
 Accuracy..... ±1% of value displayed, ±0.4°C
 (+5°C ≤ T < +70°C)
 ±2% of value displayed ±0.6°C
 (-20°C < T < +5°C)
 Response time..... $t_{0,63} = 25s$ ($V_{air} = 2m/s$)

***Guaranteed Accuracy Limits (GAL)**

As per NFX 15-113 standard and as per the Charter « 2000-2001 HYGROMETERS »

EMG (GAL) = ±2.95 %RH between 18 and 28°C

(normal measurement range)

Measuring range: 5 to 95%RH,

Short-term drift: 1%RH / year

$EMG = E_t + E_{nl} + k(u_{et}^2 + u_{er}^2 + u_{eg}^2 + u_{es}^2)^{1/2}$

E_{nl} : linearity and hysteresis = ±1.33%RH

E_t : temperature coefficient error = ± 0.42%RH with

u_{et} : uncertainty of calibration = ± 0.55%RH

u_{er} : uncertainty of resolution = ± 0.003%RH

u_{eg} : manufacturing dispersion = ± 0.2%RH

u_{es} : comparison repeatability = 0.13%RH

k : coverage factor value = 2

Light sensor

Type of sensor..... photodiode
 Measuring range..... 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.

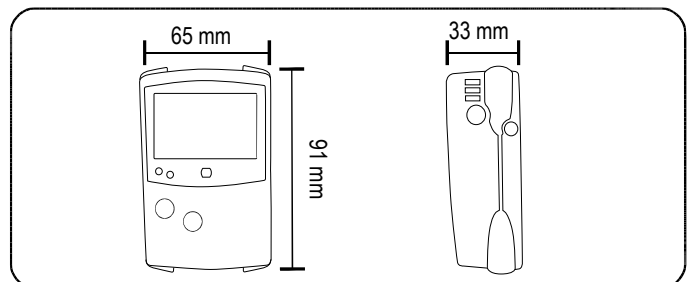
References

Part number	Internal sensor	Display	External inputs	Protection
KH-100-AN	Yes	No	0	IP 40
KH-100-AO	yes	1-line	0	IP 40

Features of housing

Dimensions..... 91 x 65 x 33 mm
 Weight..... 85g
 Display..... 1-line LCD display
 Dimensions of screen: 45 x 17 mm
 Control..... 2 keys (« SELECT » and « OK »)
 Material..... Compatible with food industry environment
 Housing made of Polycarbonate
 Sides and caps made of Elastomer
 Protection..... IP 40
 PC communication..... 1 input for Jack connector (male 3.5)
 Electronics..... Digital electronics
 Lacquer protected circuit board
 Meets RoHS standards
 Battery power supply..... Lithium 3.6V 1/2 AA
 Visual alarm..... 2 electroluminescent diodes (green, red)
 Environment..... Air and neutral gases

Dimensions

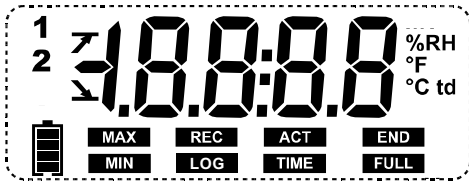


Connections

PC connection input



Display



%RH..... Relative humidity
°F..... Temperature in degrees Fahrenheit
°C..... Temperature in degrees Celsius
td..... Dew point temperature

END Data set is finished

REC One value is being recorded


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

FULL Slow Flashing: data set is taking 80-90% of storage capacity
Fast Flashing: data set is taking 90-100% of storage capacity
Constant: storage capacity filled up


1 Channel no. which is measuring
2

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 The values displayed 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 : mean 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 measurement error → Press « **Select** » and « **OK** » keys to reset the instrument.

Recorder functions

5 recording modes

KISTOCK can record in 5 different ways:

- « Immediate » mode => to record values according to a predefined interval
- « Minimum », « Maximum » and « Average » => to record automatically the calculation of minimum, maximum or average of values measured during an interval
- « Monitoring » => 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 of data set start

Once your recording mode has been set, you can launch your data set:

- with a delayed start (with predefined date and time)
- with the software
- with push-button
- with « Online » option. In this case, your data sets are directly sent, saved and displayed on your PC in real time.

6 types of data set stop

You can stop your data set:

- 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.

■ KILOG 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*
- **USB interface**.....Ref. *I-KIC2*
- **Complete set***..... Ref. *KIC2 KILOG*
- * including *KILOG software + 1 USB interface*



• KISTOCK-PC interface

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

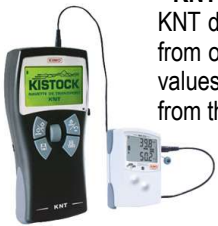
• KILOG CFR software

KILOG CFR software is the key tool for users who require 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 CFR software + 1 interface... Ref. *KIC2 CFR*

■ Accessories



• KNT data collector

KNT data collector allows you to collect measurements from one or several KISTOCK directly on-site (500,000 values stored). Data can then be displayed and printed from the KNT or downloaded 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 unlocked or damaged: your installation is fully secured.
Ref. *KAV*



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.

- **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 photo)
- **Secured mounting** (optional, see accessories)



Wallmount system and lace eyelet

Magnetic mounting

■ How to change the battery

With 5-year battery life (*), KISTOCK guarantee long-term measurements.

To change the 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

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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