

TECHNICAL DATASHEET

KTH 300 KISTOCK

Temperature and humidity datalogger



- Up to 3 parameters
- Thermometer and thermo-hygrometer functions
- Large LCD display
- 1 or 2 external inputs
- Fast data download (1,000 values/second)
- Up to 100,000 measurement points
- 2 configurable setpoint alarms
- Dew point calculation
- Small dimensions
- Magnetic mounting
- IP 67 or IP 54 housing and Elastomer protection pads

Technical features

Units displayed..... °C, °F, %RH, mV, V, mA, A, °Ctd, °Ftd
 Resolution..... 0.1°C, 0.1°F, 0.1%RH,
 1mV, 0.001V, 0.001mA, 0.1A
 External inputs..... 1 or 2 Mini-DIN connectors
 Setpoint alarms..... 2 setpoint alarm 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

• Hygrometry

Type of sensor..... Capacitive
 Measuring range..... 0 to 100%RH
 Accuracy *(GAL)..... ± 2.58%RH of value displayed
 between 18°C and 28°C
 Response time..... $t_{0.63} = 25s$ (of 10% RH to 80%RH, $V_{air} = 2m/s$)

• Temperature

Type of sensor..... Pt100 Class 1/3 DIN as per IEC 751
 Measuring range..... -20 to +70°C (KTH 300A)
 -20 to +120°C (KTH 300P)
 -40 to +180°C (KTH 300I)
 Accuracy..... KTH 300A
 ±0.4% of value displayed
 ±0.25°C (+10°C < T < +30°C) and ±0.5°C beyond
 KTH 300P, KTH 300I
 ±0.3% of value displayed ±0.25°C
 Response time..... $t_{0.63} = 9s$ for $V_{air} = 2m/s$ based on a probe with no filter

*Guaranteed Accuracy Limits (GAL)

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

EMG (GAL) = ±2.58 %RH between 18 and 28°C (normal measurement range)
 Measuring range: 3 to 98%RH, u_{cal} : uncertainty of calibration = ± 0.51%RH
 Short-term drift: 1%RH / year, u_r : uncertainty of resolution = ± 0.003%RH
 $EMG = E_t + E_{nl} + k(u_{air}^2 + u_r^2 + u_d^2 + u_{u_0}^2)^{1/2}$, u_m : manufacturing dispersion = ± 0.15%RH
 E_{nl} : linearity and hysteresis = ± 1.19%RH, u_s : comparison repeatability = 0.10%RH
 E_t : temperature coefficient error = ± 0.31%RH with: k : coverage factor value = 2

Temperature probes (optional)

Type of sensor..... Pt100 class A as per IEC 751
 Measuring range..... -100 to +400°C (according to the probe)
 Accuracy..... ±0.4% of value displayed ±0.3°C
 See technical datasheet « Measuring probes and cables for Class 300 KISTOCK dataloggers ».

Current input cable (optional)

Measuring range..... 0/4-20mA
 Accuracy..... ±0.05mA

Ammeter clamps (optional)

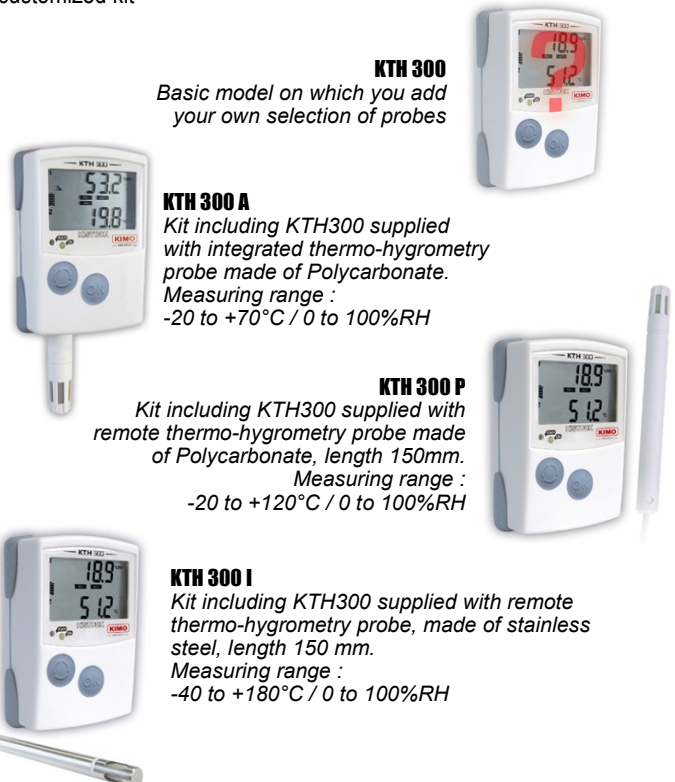
Measuring range..... 0-600A
 Accuracy..... ±1 to 2.5% of value displayed according to the range
 *All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

Voltage input cable (optional)

Measuring range..... 0-2.5V
 Accuracy..... ±0.002V
 Measuring range..... 0-10V
 Accuracy..... ±0.02V

Accessories supplied

KTH 300 can be supplied with or without thermo-hygrometry probe. Several standard kits are available, and you can also select your customized kit



KTH 300

Basic model on which you add your own selection of probes

KTH 300 A

Kit including KTH300 supplied with integrated thermo-hygrometry probe made of Polycarbonate. Measuring range : -20 to +70°C / 0 to 100%RH

KTH 300 P

Kit including KTH300 supplied with remote thermo-hygrometry probe made of Polycarbonate, length 150mm. Measuring range : -20 to +120°C / 0 to 100%RH

KTH 300 I

Kit including KTH300 supplied with remote thermo-hygrometry probe, made of stainless steel, length 150 mm. Measuring range : -40 to +180°C / 0 to 100%RH

	KTH 300	KTH 300A	KTH 300P	KTH 300I
External inputs	2	1	2	2
Thermo-hygrometry probe	0	X PC integrated	X PC remote	X st. steel remote
Temperature probe	0	0	0	0
Current input cable	0	0	0	0
Voltage input cable	0	0	0	0
Ammeter clamp	0	0	0	0

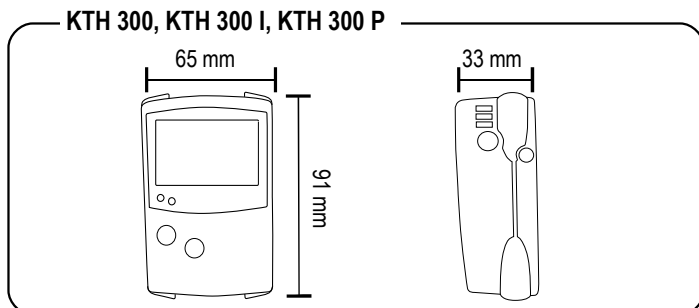
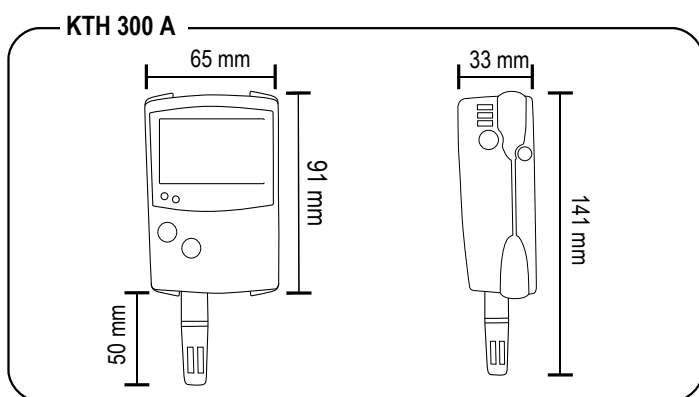
X : Supplied in standard with the instrument - 0 : optional

⚠ KTH300 KISTOCK can work either with 1 or 2 external temperature probes or a single thermo-hygrometry probe, current/voltage input cable or ammeter clamp.

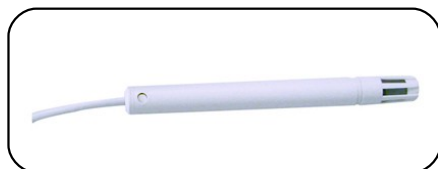
■ Features of housing

Dimensions.....	91 x 65 x 33 mm
Weight.....	85g
Display.....	2-line LCD display Dimensions of screen : 45 x 28,5 mm
Control.....	2 keys (« SELECT » and « OK »)
Material.....	Compatible with food industry environment Housing made of Polycarbonate Sides and caps made of Elastomer
Protection.....	IP67 (KTH300, KTH300P, KTH300I) IP54 KTH300A
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 and red)
Environment.....	Air and neutral gases

■ Dimensions



■ Features of probes



Probes made of Polycarbonate

Length.....	150 mm (300 mm available on request)
Diameter.....	13 mm
Cable.....	Silicone, diameter 4.8 mm length 2 m (further lengths available on request)



Tips for probes made of Polycarbonate

Material of the tip.....	ABS / PC
Material of the filter.....	STAINLESS STEEL
Type of filter.....	mesh
Maximum particles.....	25 µm
Maximum air velocity.....	25 m/s
Length.....	30 mm



Probes made of stainless steel

Length.....	150 mm (300 mm available on request)
Diameter.....	13mm
Cable.....	Silicone, diameter 4.8 mm length 2 m (further lengths available on request)



Tips for probes made of stainless steel

Material of the tip.....	STAINLESS STEEL
Material of the filter.....	STAINLESS STEEL
Type of filter.....	mesh
Maximum particles.....	25 µm
Maximum air velocity.....	25 m/s
Length.....	30 mm

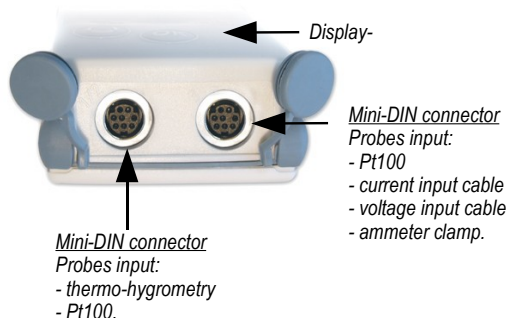
■ Connections

External inputs

• KTH 300 A external inputs

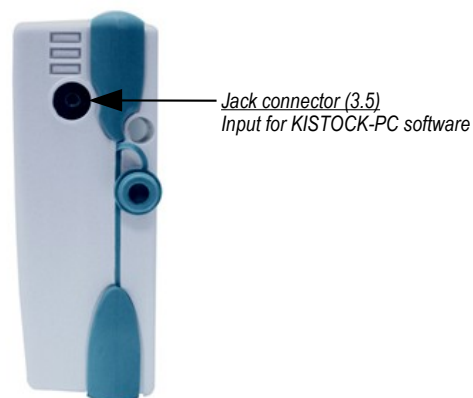


• KTH300, KTH 300I, KTH 300P external inputs

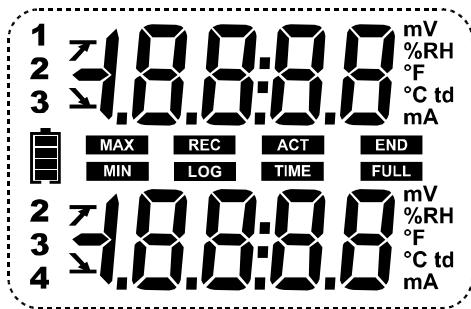


⚠ Only Class 300 probes shall be connected (not any other probes), as described above.

Input for PC connection



Display



%RH..... Relative humidity

°C..... Temperature in degrees Celsius

°F..... Temperature in degrees Fahrenheit

td.....Dew point temperature

V or mV.....Voltage expressed in V or mV

A or mA.....Current expressed in A or mA

END One value is being recorded

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

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

12
23 Channel no. which is measuring


34
OFF Auto switch-off (from 1 to 30 minutes)

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 The values displayed correspond to maximum and minimum values of the channels

 Alarm action type: rising or falling action

DT Difference of temperature between 2 external probes

UNIT Measurement unit selected

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.

Thermo-hygrometer function



Thermometer function

Once thermometer function is activated, KISTOCK allows you to measure in real-time and display information as below:

difference of temperature between 2 external probes (« Delta T »),

- « Minimum »,
- « Maximum »
- or hold the temperature measured (« Hold »).

Thermo-hygrometer

Once thermo-hygrometer function is activated, you can display:

- « Minimum »
- « Maximum »
- or hold the temperature and humidity measured (« Hold »).

Measuring probes and cables

Large choice of Pt100 Class A temperature probes: general use, penetration, ambient, wire, Velcro, with handle...

- Remote thermo-hygrometry probes made of Polycarbonate and stainless steel
- Current and voltage input cables
- Ammeter clamps

See technical datasheets « Measuring probes and cables for Class 300 KISTOCK dataloggers »)

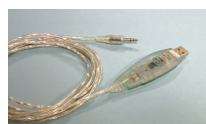
KILOG software



• Configuration and data processing software

KILOG software enables you to configure, save and process your data in a very simple way.

- Software..... Ref. KILOG
- Complete set.....
- 1 KILOG software + 1 USB interface..... Ref. KIC2
- 1 KILOG software + 2 USB interfaces..... Ref. KIC12



• KISTOCK-PC interface

This USB cable enables you to connect your KISTOCK to your PC.

Ref. I-KIC2

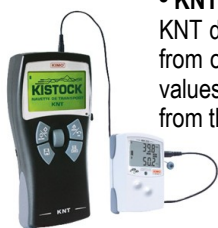
• KILOG CFR software

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.

• Cable for Pt 100 temperature probe

Made of PVC (10 cm), supplied with Jack connectors (male and female) Ref. KCA

• 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.

(*) 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).

EXPORT DEPARTMENT

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