

## KISTOCK DATALOGGER KT 320 / KTT 320

Temperature / Humidity / Voltage/ Current / Impulsion

### KEY POINTS

- Software for configuration and data visualisation freely downloadable
- Software for configuration and data processing available in option
- Safety lock wall mount with inviolability system
- Storage capacity of 2 000 000 points
- Fast data downloading: 18 000 points/s
- Up to 5 recordable parameters simultaneously
- 2 configurable setpoint alarms for each channel
- 2 lines LCD screen
- Bluetooth® communication for smartphones and tablets (Android and IOS)
- Magnetic mounting



### REFERENCES

Device reference	Display	Internal sensor		External sensor		Parameters	Number of record points
		Number	Type	Number	Type		
KT 320	Yes	1	Temperature	2	Input for SMART PLUG* probes	Temperature, humidity, current, voltage, impulsion	2 000 000
KTT 320		-		4	Input for thermocouple probes	Temperature	

### HOUSING

#### Dimensions

110.2 x 79 x 35.4 mm

#### Weight

KT 320: 206 g  
KTT 320: 200 g

#### Display

2 lines LCD screen  
Dimensions of screen: 49.5 x 45 mm  
2 indication LEDs (red and green)

#### Control

1 OK key  
1 Selection key

#### Material

Compatible with food industry environment  
ABS housing

#### Battery power supply

2 lithium double AA 3.6 V batteries

#### Protection

IP 65: KT 320  
IP 54: KTT 320\*\*

#### PC communication

1 micro-USB input

#### Environmental conditions of use

Air and neutral gases  
Hygrometry: in non condensing conditions  
Maximum altitude: 2000 m

\* Input which allows to plug different compatible SMART PLUG probes: see optional probes and cables page 5.

\*\* With all thermocouple probes connected.

## TECHNICAL FEATURES

	KT 320	KTT 320
Parameter	Temperature, humidity, current, voltage, impulsion	Temperature
Units displayed <sup>1</sup>	°C, °F, °Ctd, °Ftd, %RH, mV, V, mA, A <u>Programmed units:</u> please see the <b>class 320 KISTOCK</b> user manual. <u>Free units:</u> for the free units creation, please see the <b>KILOG</b> software user manual.	°C, °F
Resolution	0.1°C, 0.1°F, 0.1 %RH, 1 mV, 0.001 V, 0.001 mA, 0.1 A	0.1°C, 0.1°F
External input	Micro-USB female connector	
Input for probe	2 SMART PLUG <sup>2</sup> inputs	4 inputs for thermocouple probes (K, J, T, N, S)
Internal sensor	Temperature	-
Type of sensor	NTC	Thermocouple
Measuring range	Measuring range of the internal sensor <sup>3</sup> : From -40 to +70°C	K: from -200 to +1300°C J: from -100 to +750°C T: from -200 to +400°C N: from -200 to +1300°C S: from 0 to 1760°C
Accuracies <sup>4</sup>	±0.4°C from -20 to 70°C ±0.8°C below -20°C	K, J, T, N: ±0.4°C from 0 to 1300°C ±(0.3% of the reading +0.4°C) below 0°C S: ±0.6°C
Setpoints alarms	2 setpoint alarms on each channel	
Frequency of measurement	From 1 second to 24 hours	
Working temperature	From -40 to +70°C	From -20 to 70°C
Storage temperature	From -40 to +85°C	
Battery life	7 years <sup>5</sup>	
European directives	2011/65/EU RoHS II ; 2012/19/EU WEEE ; 2014/30/EU EMC ; 2014/35/EU	

<sup>1</sup> Some units are available only with optional probes.

<sup>2</sup> Input which allows to plug different compatible probes: see optional probes and cables page 3.

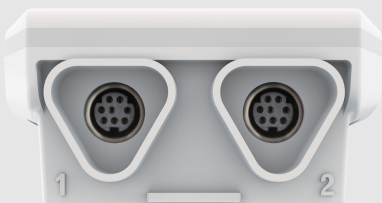
<sup>3</sup> Other measuring ranges are available according to the connected probe: see optional probes and cables page 3.

<sup>4</sup> All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurement carried out in the same conditions, or carried out with calibration compensation.

<sup>5</sup> On the basis of 1 measurement each 15 minutes at 25°C.

## CONNECTIONS

KT 320: 2 mini-DIN connections



KTT 320: 4 mini-thermocouples connections



PC connection



Micro-USB connector

## RECORDER FUNCTIONS

### 5 recording modes

KISTOCK can record in 5 different ways :

- **"Immediate"** mode records values according to 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 of dataset start

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

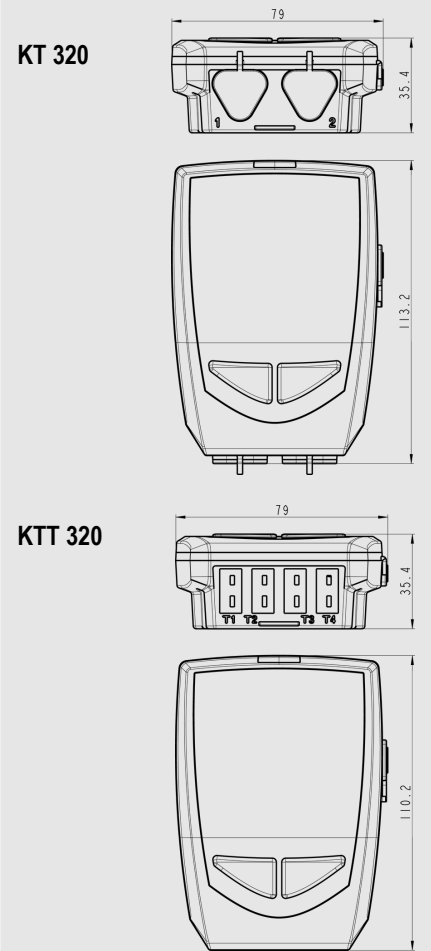
- With a delayed start (with predefined date and time)
- With the software
- With push-button
- With **"Online"** option. In this case, your datasets are directly sent, saved and displayed on your PC in real time.

### 6 types of dataset stop

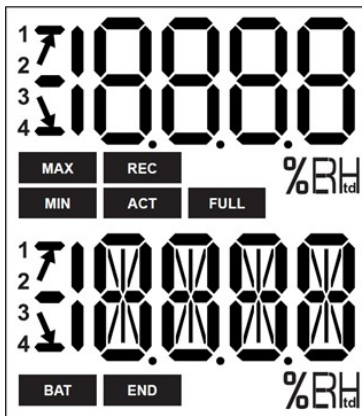
You can stop your dataset :

- 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 during 5 seconds, if this function has been previously activated by the software

## DIMENSIONS (mm)



## DISPLAY



**END** DATASET is finished.


**REC** Indicates that one value is being recorded.  
It flashes: the DATASET did not start already.

**FULL** Flashing slowly: DATASET is between 80 and 90 % of the storage capacity.  
Flashing quickly: DATASET is between 90 and 100 % of the storage capacity.  
Constant: storage capacity full.

**BAT** Constant: indicates that the batteries have to be replaced.

**ACT** Screen actualisation of measured values.

**MIN**  
**MAX** The displayed values are the maximum/minimum values recorded for the channels displayed.

 Indicates the alarm action type: rising or falling action.

 Temperature in °Celsius.

 Temperature in °Fahrenheit .

 Relative humidity

1  
2  
3  
4 Indicates the channel number which is measuring.

## OPTIONAL PROBES AND CABLES<sup>1</sup>



All the probes for the **KT 320** KISTOCK have the **SMART PLUG** technology. An automatic recognition and the adjustment parameters storage make them 100 % interchangeable.

Reference	Description	Measuring range
<i>External or ambient thermo-hygrometric probes</i>		
KITHA	Interchangeable hygrometry and ambient temperature probe	Hygrometry: from 0 to 100%HR Temperature: from -20 to +70°C
KITHP-130	Remote interchangeable hygrometry and temperature probe	
KITHI-150	Remote interchangeable hygrometry and temperature probe	Hygrometry: from 0 to 100 % HR Temperature: from -40 to +180°C
<i>General use or insertion Pt 100 temperature probes</i>		
KIRGA-50 / KIRGA-150	IP65 immersion probe (50 or 150 mm)	From -40 to +120°C
KIRAM-150	Ambient probe 150 mm	
KIRPA-150	Penetration probe IP65	From -50 to +250°C
KIPI3-150-E	IP68 penetration probe with handle	
KITI3-100-E	IP68 penetration probe with T-handle	
KITBI3-100-E	IP68 penetration probe with corkscrew handle	
KIRV-320	Velcro probe	From -20 to +90°C
KICA-320	Smart adapter for Pt100 probe	From -200 to +600°C according to the probe
<i>Input current, voltage and impulsion cables</i>		
KICT	Voltage input cable	0-5 V or 0-10 V
KICC	Current input cable	0-20 mA or 4-20 mA
KICI	Pulse input cable	Maximal voltage: 5 V Type of input: TTL frequency counting Maximal frequency: 10 KHz
<i>Clamp-on ammeters</i>		
KIPID-50	Ammeter clamp from 0 to 50 A, frequency range from 40 to 5000 Hz	From 0 to 50 A <sub>AC</sub>
KIPID-100	Ammeter clamp from 0 to 100 A, frequency range from 40 to 5000 Hz	From 1 to 100 A <sub>AC</sub>
KIPID-200	Ammeter clamp from 0 to 200 A, frequency range from 40 to 5000 Hz	From 1 to 200 A <sub>AC</sub>
KIPID-600	Ammeter clamp from 0 to 600 A, frequency range from 40 to 5000 Hz	From 1 to 600 A <sub>AC</sub>
<i>Thermocouple probes</i>		
<p>All the thermocouple temperature probes for the <b>KTT 320</b> KISTOCK have a class 1 sensitive element as per IEC 584-1, 2 and 3 standards. For more details about the available thermocouple probes, please see the "Thermocouple probes" datasheet.</p>		

<sup>1</sup> For more details, please see the "Measuring probes for KT 320 KISTOCK" and "Thermocouple probes" datasheets.

## SOFTWARE



- **KILOG LITE:** free software to download on the KIMO website (kimo.fr). Allows the data download (graphics and points statement) and the datalogger configuration.



- **Configuration and data processing software**  
**KILOG** software allows to configure, save and process your data in a very simple way.
- Software only: Ref. *KILOG-3-N*
- Complete set: software + 1 USB cable, Ref. *KIC-3-N*

## SAFETY LOCK WALL MOUNT WITH PADLOCK



The system allows to secure your KISTOCK datalogger on sensitive sites.



- Mount the safety lock support on the required place.

1. Present the KISTOCK datalogger on the support **starting with the inferior part**
2. Clip the KISTOCK on the support by falling back the superior part
3. Insert the padlock to ensure the safety lock function










The padlock can be replaced by a fail-safe sealed



The datalogger can be placed on the screw-mount without the safety lock function

- To remove the datalogger from the support, proceed on reverse order.

## ACCESSORIES

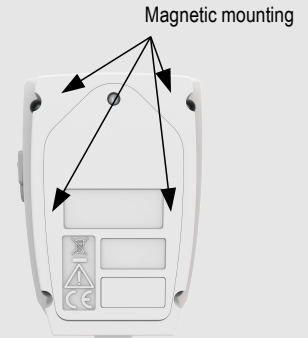
Accessories	Part numbers	Illustrations
<b>1 AA lithium 3.6 V battery</b> (  2 batteries are required for class 320 dataloggers)	KBL-AA	
<b>Safety lock wall mount with padlock</b>	KAV-320	
<b>Wired extension for class 320 KISTOCK probes</b> In polyurethane, 5 m length with male and female mini-DIN connectors <u>Note:</u> several extensions can be wired in order to obtain up to 25 m cable length	KRB-320	
<b>Data collector</b> Collects up to 20 000 000 points from one or several KISTOCK directly on-site Results restitution on PC of realised datasets	KNT-320	
<b>USB micro-USB cable</b> which allows to plug your KISTOCK datalogger to your PC	CK-50	
<b>Neck size hand strap</b>	KDC	



Only the accessories supplied with the device must be used.

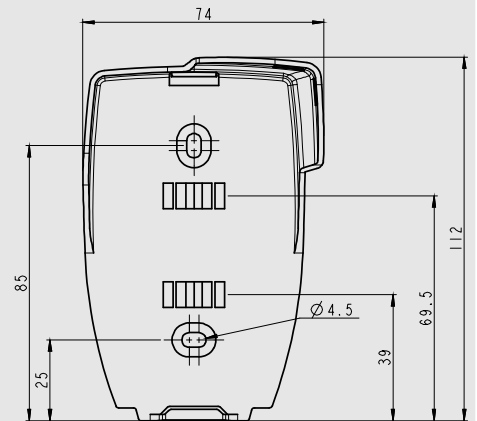
## MOUNTING

The KISTOCK class 320 have a magnetic mounting, so you can fix it easily.

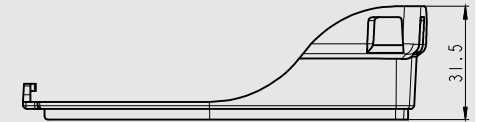


## DIMENSIONS OF THE WALL MOUNT (in mm)

### Front view



### Side view



---

## CALIBRATION

---

A calibration certificate is available as option in paper format.  
We recommend to carry out a yearly checking.

---

## MAINTENANCE

---

Please avoid any aggressive solvent.  
Please protect the device and probes from any cleaning produce containing formalin, that may be used for cleaning rooms and ducts.

---

## GUARANTEE PERIOD

---

KISTOCK dataloggers have 1-year guarantee for any manufacturing defect (return to our After-sales service required).

---

## PRECAUTIONS FOR USE

---

Please always use the device in accordance with its intended use and within parameters described in the technical features in order not to compromise the protection ensured by the device.

## REPLACE THE BATTERIES



With 7 years\* of battery life, the KISTOCK devices guarantee long-term measurements.


### To replace the batteries:

- Unscrew the screw on the back side of the KISTOCK, on the battery hatch, with a cross-headed screwdriver.
- Remove the hatch and the old batteries.
- Insert the new batteries and respect the polarity.
- Replace the battery hatch and screw it.

\* On the basis of 1 measurement each 15 minutes at 25°C.



**BE CAREFUL! Material damages can happen, so please apply the precautionary measures indicated.**

 Once returned to KIMO, required waste collection will be assured in the respect of the environment in accordance to guidelines relating to WEEE.

[www.kimo.fr](http://www.kimo.fr)

Distributed by :



**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)