

## Latooyete

### 1. Description

Latooyete is our latest demonstrator for autonomous devices. Featuring our unique overmoulding technology for the creation of highly protected and durable sensors, as well as a set of attractive technologies, Latooyete is a coffee stir stick today but could be your product tomorrow.

Latooyete's first function is to arouse your curiosity, but it doesn't stop there. It can also sense and log temperature, transfer data wirelessly onto your smartphone while providing visual feedback and pull its energy from a built-in battery (that can later be extracted for eco-friendly recycling). All of this while stirring the sugar in your freshly brewed coffee!

The overmoulded packaging is food and beverages compliant, protects the electronics from water ingresses and mechanical impacts and its performance, shape, colour or material can be adapted to meet your specific needs.

### 2. Technical data

- **Temperature sensor**  
TMP 112, Texas Instruments
- **Microcontroller and NFC**  
RF430FRL NFC transponder, Texas Instruments
- **Battery life in continuous operation (5 min intervals)**  
approx. 3 months
- **Typical range** (depending on smartphone)  
approx. 1cm, with range extender max. 10cm
- **Accuracy of temperature measurements**  
 $\pm 0.5^{\circ}\text{C}$  between  $-25^{\circ}\text{C}$ ... $+85^{\circ}\text{C}$
- **Temperature measurement range**  
 $-40$ ... $+125^{\circ}\text{C}$  (temperature sensor)  
 $-40$ ... $+85^{\circ}\text{C}$  (battery)
- **Storage temperature**  
 $-40$ ... $+85^{\circ}\text{C}$
- **Resolution of temperature measurement**  
 $0.5^{\circ}\text{C}$  between  $0^{\circ}\text{C}$ ... $+65^{\circ}\text{C}$  and  
 $1.0^{\circ}\text{C}$  between  $-40^{\circ}\text{C}$ ... $+125^{\circ}\text{C}$
- **Proprietary battery removal mechanism**  
(patent filed)
- **Proprietary optional range-extender**  
(patent filed)
- **Size**  
130 x 18 x 8mm
- **Weight (incl. battery)**  
8.7g



### 3. Operation modes

Requirements: the Latooyete App and a compatible NFC device are required

- **Live measurement mode**  
temperature measurement powered by NFC sender
- **Data logging mode**  
battery powered temperature measurement and logging

### 4. Availability

Available on Google Play Store:



The App has been tested on Android 4.4 to 8.0 and NFC-V compatible devices.

Detailed information available at  
[www.turck-duotec.com/latooyete](http://www.turck-duotec.com/latooyete)



## 5. Data display

Data display with LED (red, green) on Latooyete and in the Latooyete App

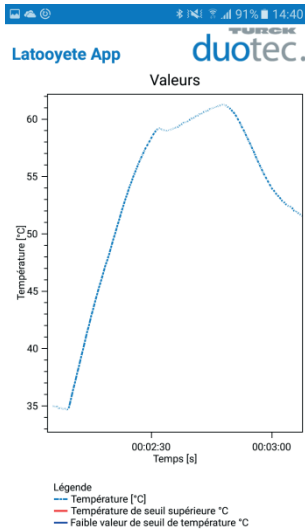


Figure 1: Temperature measured inside a coffee mug

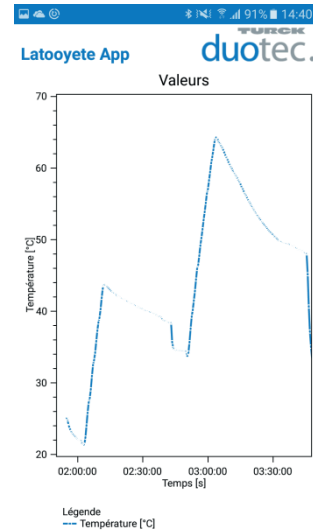


Figure 3: Temperature measured inside a dishwasher

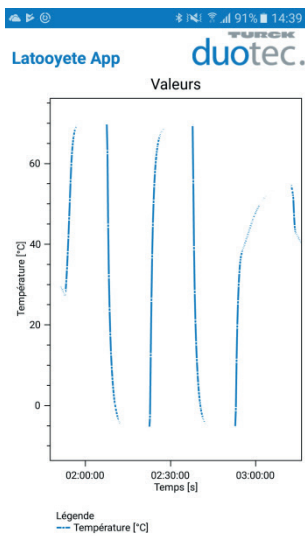


Figure 2: Temperature shock cycles

## 6. Disclaimer

This is a technology demonstrator only. It is not for sale or for non-commercial or commercial use.

Turck duotec declines all responsibility or guarantee linked to the use of Latooyete.

Keep out of reach of children and pets. Do not swallow. Dispose of battery and electronics properly (special waste).

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