

# iAccess

## Manhole Cover Sensor



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### Product Description

The **TST iACCESS** Manhole Cover Sensor is especially designed for the detection of movement of manhole covers such as in underground electrical equipment or sewage systems. When the manhole cover is moved, open or an abnormal situation occurs, the device detects the status and sends an alarm via the sensor.

### LoRaWan Module

Through the built-in LoRaWan module, the detector passes status information to the network server via the LoRaWan gateway, then to the application server. Users can remotely monitor the manhole status, whether moved after installation or not. This equipment can be widely used in smart city projects. Based on a low-power algorithm, the internal battery can work for more than 10 years. The IP68 protection level meets stringent requirements.

### Features

- Internal battery can work for more than 10 years
- Wireless technology GPRS
- IP68 waterproof
- Sensitivity can be adjusted online
- Water level detection function (premium version)

### Applications

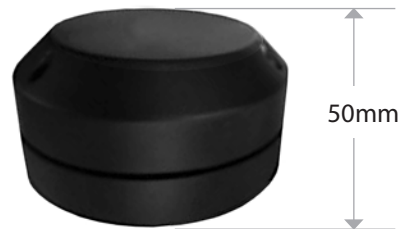
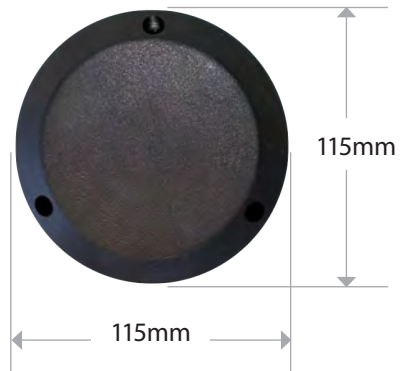
- Manhole movement detection
- Sewerage test (advanced version)

## Technical Specifications

DESCRIPTION	PARAMETER	VALUE
Overview	Dimension	H115mm x W115mm x D50mm
	Weight	150g
	Colour	Black
	Material	ABS
Detector	Accuracy Rate	Can be adjusted online
Controller	MCU	STM32, 32bit ARM® core controller
Radio	LoRaWan	LoRaWan® EU868/US915/AU915/AS923/CN470
	Activation	OTAA (default) ABP (optional)
Power	Lifetime for one charge	More than 10 years
	Internal Battery	ER18505M non-recharged Lithium Battery 7000mAh @ 3.6V
	Current	<210mA@3.6V(uploading) <100mA@3.6V(normal)
Environment	Operating Temperature	-20 – +70°C
	Storage Temperature	-40 – +85°C
	Protection Level	IP68



## Dimensions



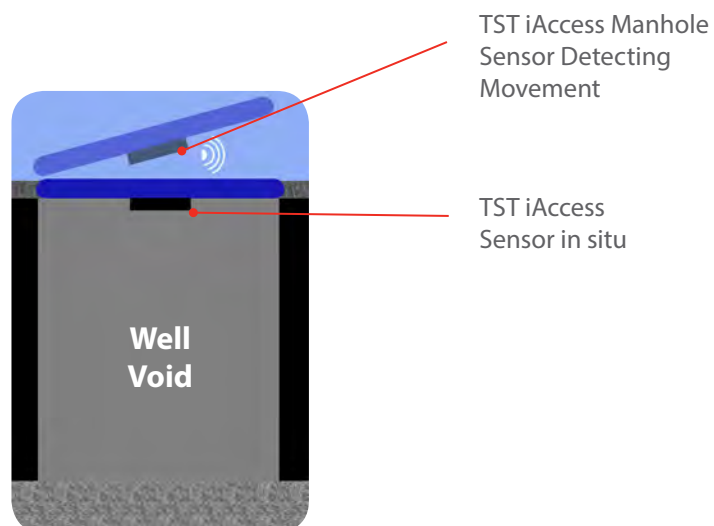
## Installation

After removing the packaging, the battery is not connected to the sensor. Open the cover of sensor, connect the power connector. The sensor will then be powered on.

## Mounting

Fix the **TST iAccess** sensor with screws to the inside of the manhole cover, face downward.

To mount the **iAccess** it is necessary to drill 3 holes and fasten with screws. Ensure the sensor is mounted vertically.





## Monitoring

The supporting SmartCity application checks the status of the **iAccess** manhole sensor in any position or location. The information is directed through the network server to the end user. A customized version of the **TST** monitoring is available based on customers requirements. Please contact with our sales team to discuss a customised version.

## Protocol

The protocol is available for the user who wants to develop their own application through their engineer team.

The protocol is disclosed only after NDA agreement is signed and order is placed. Please contact our sales team if you wish to discuss further.

## Monitoring the data through the TST SmartCity Platform





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