

## Product model

TSC250905-K32

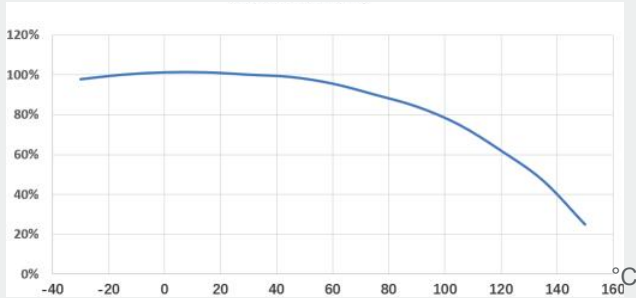
## Product introduction

TSC250905-K32 is a temperature sensor specially designed for power switchgear cabinet moving contact, which has characters, such as wide temperature measurement scope, high precision, long communication distance, small dimension. It can be installed without changing the original equipment status of ring main unit and installed directly.

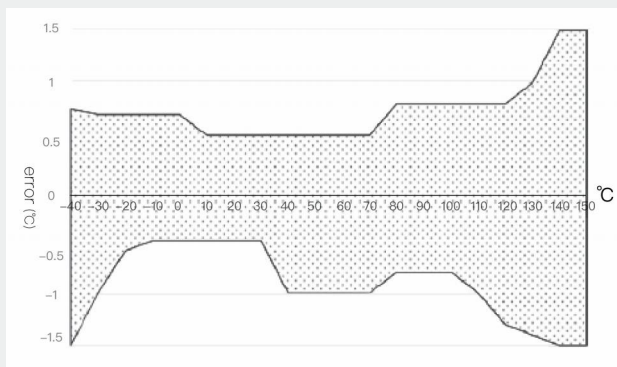


## Temperature measurement scope

Communication distance/max communication distance



Normalization sensor read distance and temperature relationship curve



Temperature error curve in range

## Key parameters

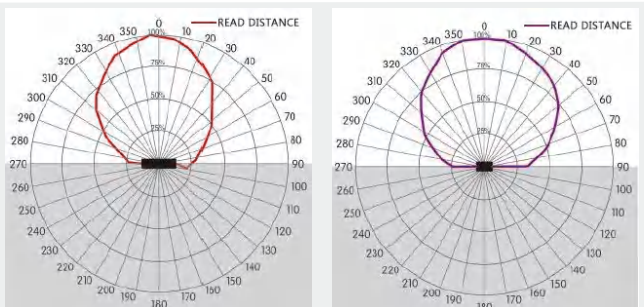
### Core performance

|                                       |   |
|---------------------------------------|---|
| Protocol                              | EPC Global C1G2 v1.2  |
| Frequency                             | 902MHz~928MHz   |
| Communication distance<br>( EIRP=4W ) | 2.0m  |
| Chip series                           | LTU3 series   |
| TID memory                            | 128 bits  |
| EPC memory                            | 96 bits   |
| User memory                           | 160 bits (user editable part-128bits,<br>sensor parameter-32bits) |
| Frequency offset                      | <2MHz   |
| With endurance                        | 100, 000 cycles   |

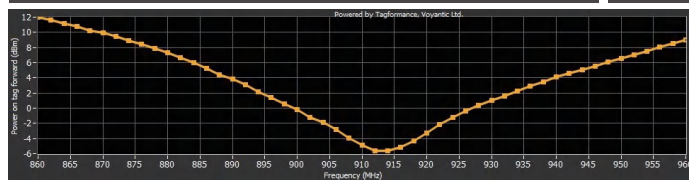
### Use environment ( Application background )

|                        |                                |
|------------------------|--------------------------------|
| Working temperature    | -40°C~+150°C                   |
| Endurance temperature  | -40°C~+225°C                   |
| IP protection grade    | IP55                           |
| Fall                   | 1 m 200 times (plastic ground) |
| Application background | Switchgear moving contact      |
| Data retention         | >25 years                      |

## Radiation Chart

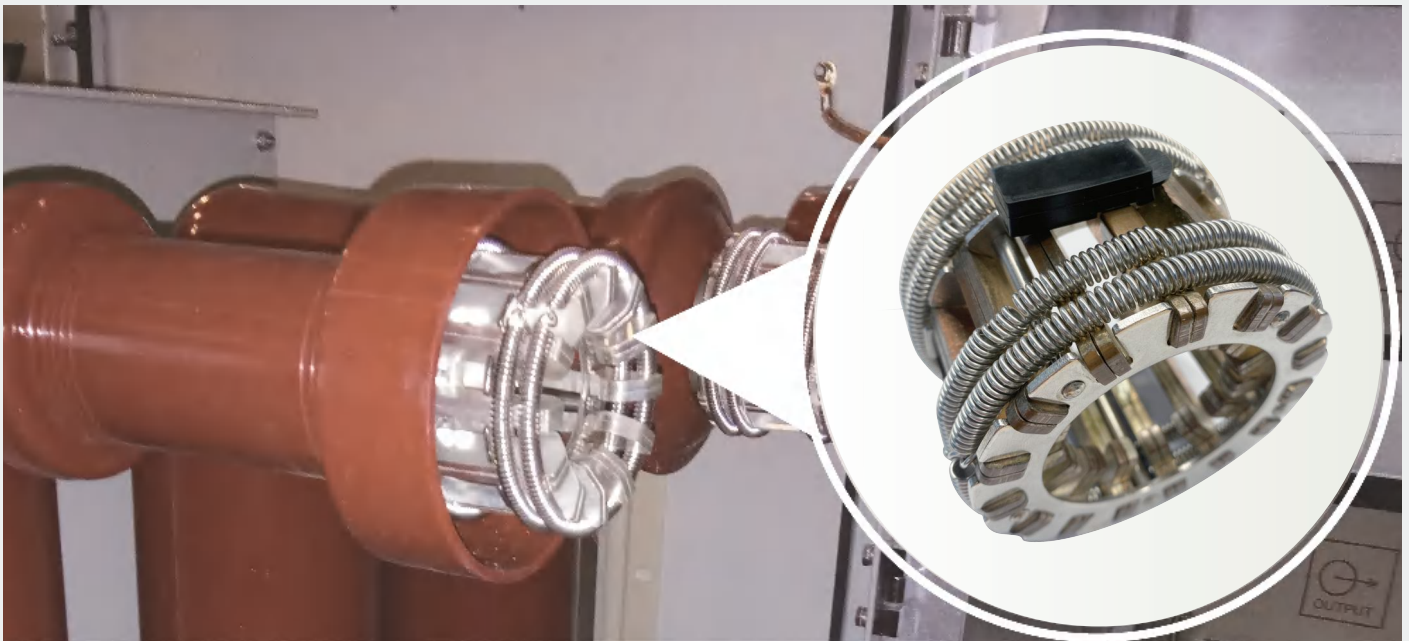


## Sensitivity curve



## Installation methods and examples

**Installation method:** The snap is fixed on the moving contact.



## Key features

- Battery free, safe and reliable;
- Independent IDs, data never interface with each other;
- Small size, match the temperature measurement requirements of the moving contact of the switchgear;
- UHF RFID technology is used, which is not affected by the electrical parameters and power load of primary equipment;
- Long temperature measurement range:  $-40^{\circ}\text{C}\sim+150^{\circ}\text{C}$ ;
- Ultra high temperature resistant design ensures no damage at  $-40^{\circ}\text{C}\sim+225^{\circ}\text{C}$ ;
- Contact with the actual hot spot, achieve higher accuracy to  $\pm 1^{\circ}\text{C}$ .
- Combined with moving contact:
  - Insulation resistance  $\geq 2000\text{M}\Omega$
  - Power frequency withstand voltage:  $39\text{kV}/5\text{min}$ ,  $42\text{kV}/1\text{min}$
  - Partial discharge level:  $24\text{kV}\leq 10\text{pC}$
  - Lightning protection grade:  $170\text{kV}/50\text{ms}$
  - Radiation immunity level:  $\geq 10\text{V}/\text{m}$

## Application

- Power switchgear moving contact online temperature real-time monitoring.

## Appearance characters

|           |              |
|-----------|--------------|
| Color     | Black        |
| Size (mm) | 35*20.5*18.2 |

