SPEC NO.: D33020260702

Specification

TO:STE
Model Name: Sensor
PART NO: ZCGTF
CUSTOMER PART NO.:

Approval sheet:

Approved	Yes No.

Customer's comments are welcomed here.

Pls return this copy as a certificate of your approval by Email.

Approved By Date: _____

STRONG ELECTRONICS&TECHNOLOGY LIMITED
Service Hotline:86-755-84528985 Fax: 86-755-84528986
Email:info@strongfirst.com.cn
www.strongfirst.com.cn

History Record

Date	Part No.	SPEC No.	Description.	Remarks.
2018-11-17			Initial issue	
RoHS Compliant Lead free Lead-free soldering	conflict mineral free REACH compliant			
ISO9001:2000	ISO14001:2004	**Approved by**	**Check by**	**Design by**
		Nov-17-2018	**NOV-17-2018**	**NOV-17-2018**
Reversions	**Total Page**	*Xu gang dong*	*Liu jun*	*Wang hon*

1. Overview

The SAW wireless passive temperature sensor is designed for temperature measurement on metal surfaces and serves as a temperature measuring component directly mounted on the surface of measured objects. Adopting surface acoustic wave (SAW) passive wireless transmission technology, it acts as the terminal unit of the SAW passive wireless temperature monitoring system. It receives inquiry RF signals and returns RF signals embedded with temperature data to the data collector.

2. Product Features

.Direct contact with measuring points, wide temperature measurement range, high accuracy and excellent high-temperature resistance

.Real-time transmission of temperature data for convenient online monitoring

.Fully passive component, safe operation and maintenance-free after installation

.Two optional fixing methods: nut fastening or fixture clamping

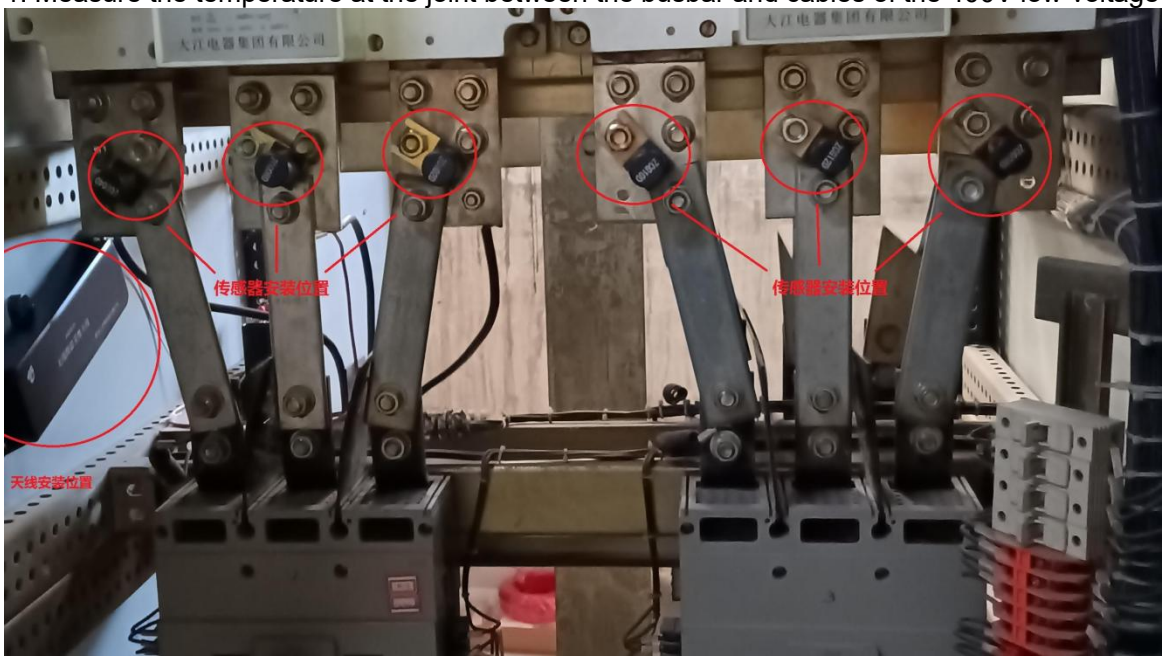
3. Applications

.Critical temperature monitoring points for high-voltage transformation and low-voltage power distribution facilities in power grid systems

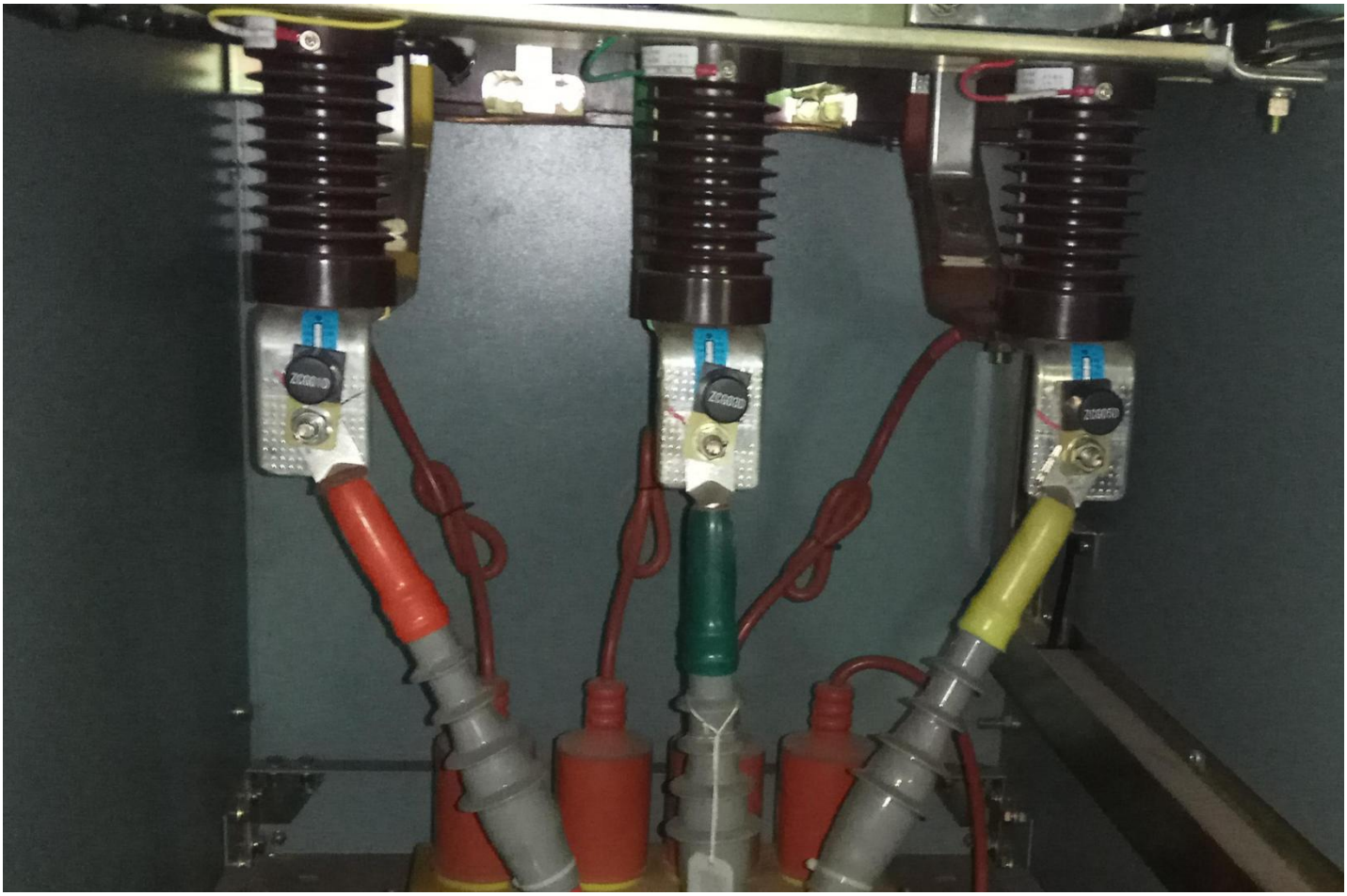
.Temperature monitoring points in computer rooms, production lines and various industrial equipment

4. Typical applications:

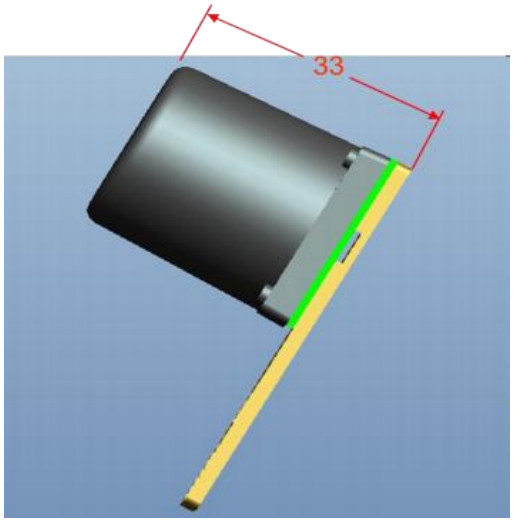
1. Measure the temperature at the joint between the busbar and cables of the 400V low-voltage cabinet.

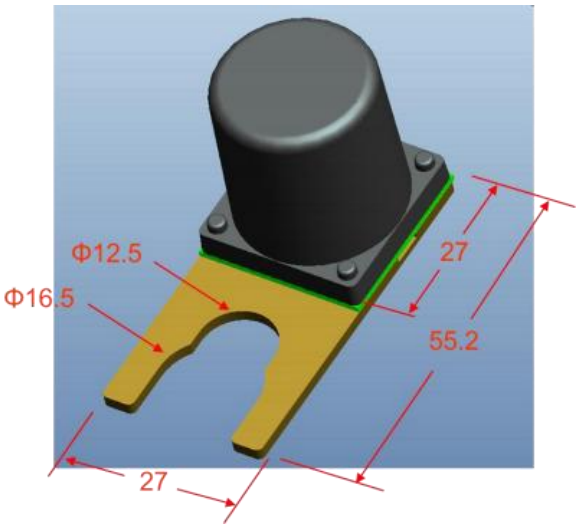


2. 10KV high-voltage switch cabinet, temperature measurement at the overlap between busbar and cable.



5、 Overall dimensions：





6. Product Technical Specifications

No.	Item	Technical Parameters
1	Power Supply Mode	Fully passive, no external power required
2	Working Principle	Copper substrate directly contacts measuring points for thermal conduction; passive wireless RF signal transmission
3	Operating Ambient Temperature	-50℃ ~ 150℃ (Sensor will not be damaged within this range)
4	Effective Temperature Measuring Range	-20℃ ~ 125℃ (Guaranteed measurement accuracy within this range)
5	Operating Frequency Range	426MHz ~ 442MHz (for reference only)
6	Wireless Communication Distance	30mm ~ 2000mm
7	Temperature Resolution	0.1℃
8	Measurement Accuracy	±2℃
9	Recommended Installation Positions	Cable terminal joints of power cabinets, moving/static contacts of isolating disconnecting switches
10	Overall Dimensions	53.5mm × 27mm × 33.5mm
11	Number of Frequency Points	48 total (4 frequency bands A/B/C/D, 12 points per band)
12	Service Life	More than 10 years (excluding damage caused by mechanical force)
13	Compatible Mounting Aperture	Φ12mm ~ Φ16mm
14	Weight	30g

7. Installation Recommendations

7.1 Accessories

No supporting accessories are provided.

7.2 Installation Instructions

Secure the product with flat washers, spring washers and nuts.

7.3 Installation Precautions

1.Keep the mounting plane as smooth and flat as possible to ensure full contact between the sensor and the measured object for more accurate temperature data.

2.During installation, place the sensor directly facing the panel antenna of the collector as far as possible.

8. General Cautions

8.1 This product is an electrostatic-sensitive electronic component. Take anti-static measures when handling it.8.2 This sensor is designed for temperature measurement on metal surfaces. For temperature measurement of non-metallic objects (such as liquids, human bodies, etc.), please consult the manufacturer for alternative products.8.3 Complex operating environments, especially environments filled with metal structures, may interfere with signal transmission and degrade sensor performance. Please contact the manufacturer for any technical inquiries.8.4 The RF coaxial cable connected to the collector's panel antenna should be kept shorter than 5 meters to prevent excessive path loss which reduces the readable distance of the sensor. If an RF extension cable longer than 5 meters is required, please consult the manufacturer in advance.

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