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Instrumentation | Flow meters, Level, Temp & Pressure Sensors

Medge Controls by Mega Switchgears

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ATE series Wireless Temperature Sensor

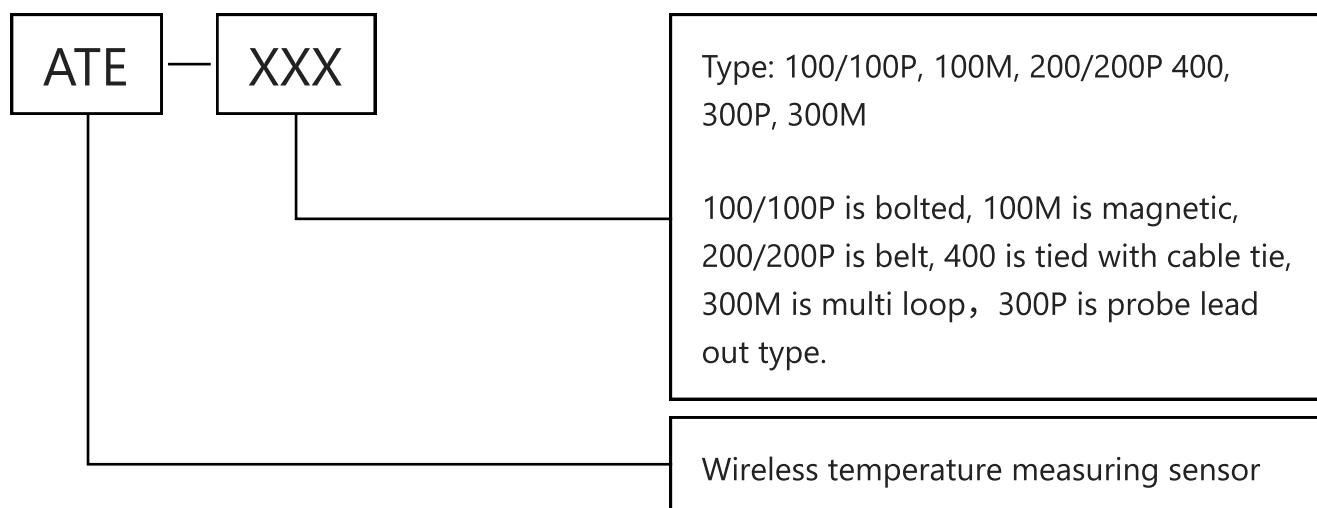


1 Installation Guide

1.1 Product Introduction

ATE series wireless temperature measuring sensor has been developed in compliance with specification for Wireless Temperature Measuring equipment, NB/T 42086-2016. It is suitable for 3-35kV indoor switchgears, including built-in switchgears, handcart switchgears, fixed switchgears and loop-net switchgears. It is also suitable for 0.4kV low-voltage switchgears such as fixed switchgears and drawer switchgears. The wireless temperature sensors can be installed at any heating point in switchgears, the device utilizes the wireless data transmission technology for real-time transmission of monitored temperature data. In addition, it can be transmitted to display device or remote intelligent monitoring system.

1.2 Type Introduction



1.3 Technical Features

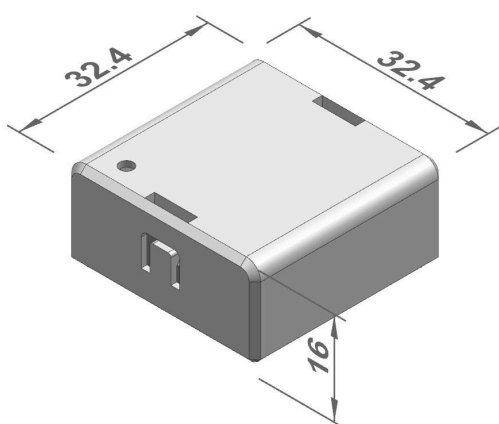
ITEMS		FEATURES
Environmental	Temperature	-40°C~85°C
	Humidity	≤95%
	Atmospheric pressure	86kPa~106kPa
ATE100M/100/200 Active wireless temperature sensor	Wireless frequency	470MHz, 433Mhz
	Communication distance	150m(470MHz), 50m(433MHz), 150m(470MHz), 50m(433MHz) in open area
	Sampling frequency	25s
	Transmitting frequency	25s-5min
	Power source	Battery
	Installation	Magnetic / bolted /Belt
	Range of temperature	-50°C~+125°C
	Precision	±1°C
	Application	Joints in high or low voltage switchgears
	Battery life	≥5 years(25°C)
400 Passive wireless temperature sensor	Wireless frequency	470MHz, 433Mhz
	Communication distance	150m(470MHz), 50m(433MHz), 150m(470MHz), 50m(433MHz) in open area
	Sampling frequency	15s
	Transmission frequency	15s
	Power Source	CT-powered, starting current≥5A, (Max current)≤5000A
	Precision	±1°C

	Application	Joints in low voltage switchgears
ATE300P Probe lead out temperature sensor	Wireless frequency	433/470 Mhz
	Communication distance	500 mm 500 mm in open area
	Sampling frequency	25s
	Transmitting frequency	25s-5min
	Power source	Battery
	Installation	Rail Type/Tie Type
	Range of temperature	-50°C~+300°C
	Precision	±1°C
	Battery life	≥5 years(25°C)
	Protection Level	IP65

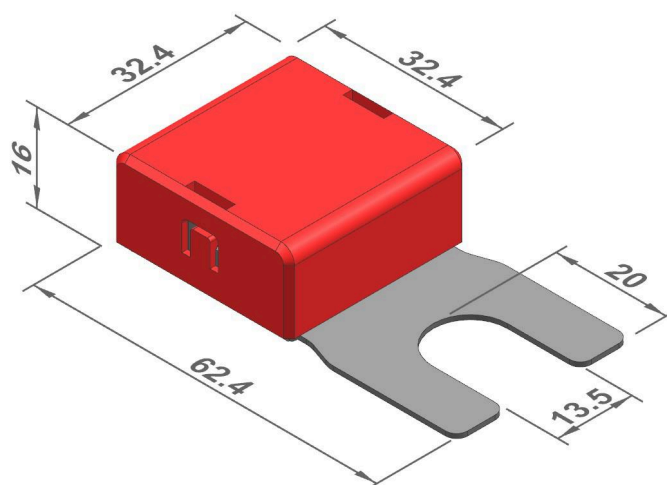
1.4 Product Installation

There are several types of wireless temperature sensors and mounting methods correspondingly, i.e. Magnetic , bolted , belt and alloy chip fixing.

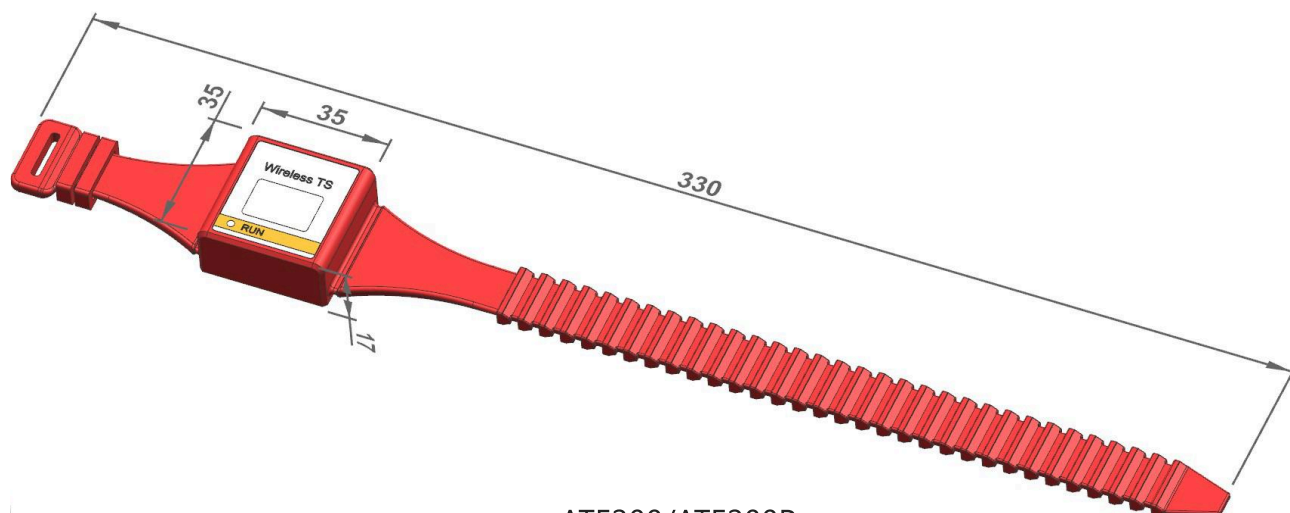
1.4.1 Shape Size



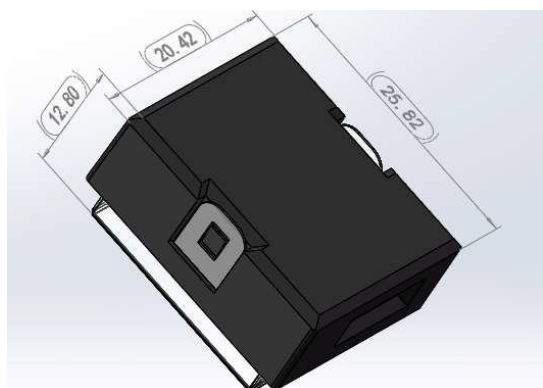
ATE100M



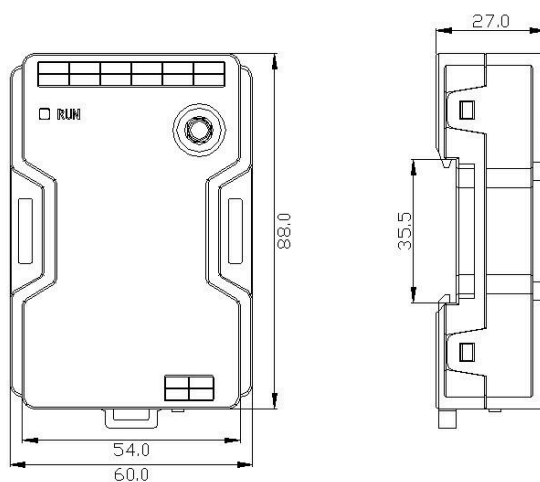
ATE100/ATE100P



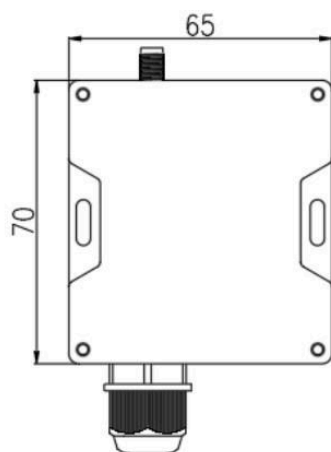
ATE200/ATE200P



ATE400



ATE300M



ATE300P

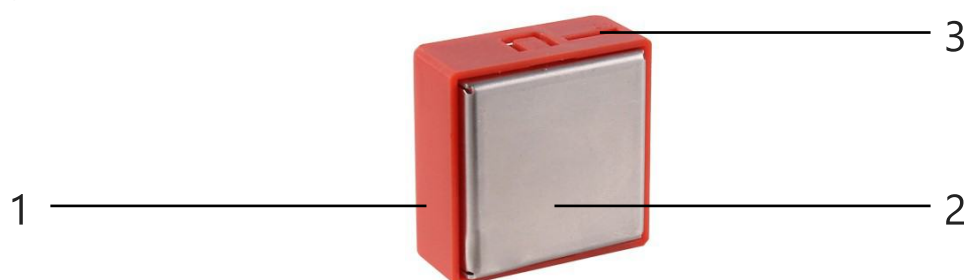
1.4.2 Installation Method

1.4.2.1 ATE100M

The magnetic wireless sensor ATE100M is suitable for iron electrical nodes or equipment surfaces.

Structure introduction of ATE100M:

1. The core of wireless temperature sensor ATE100M
2. Thermo-sensitive part
3. Battery switch



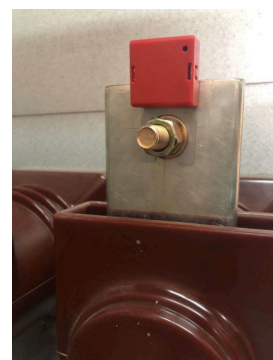
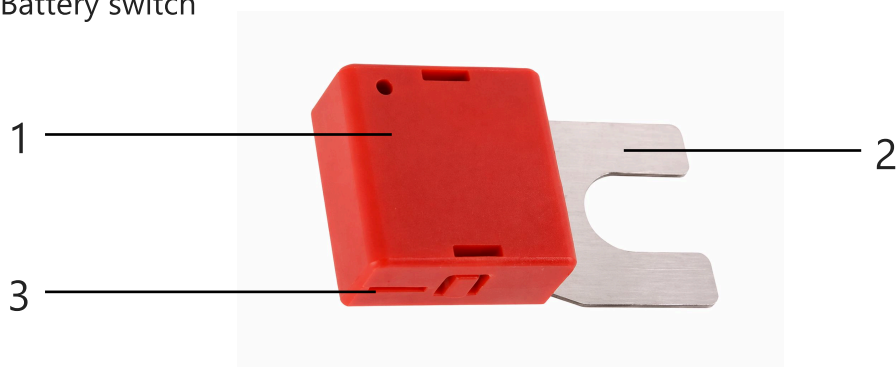
Adsorbed directly at the iron temperature measuring point, open the battery switch before installation, the power indicator flashes twice.

1.4.2.2 ATE100

The bolted type wireless sensor ATE100 is suitable for use at joints between cable and bus bar and joints between cable and disconnecter.

Structure introduction of ATE100:

1. The core of wireless temperature sensor ATE100
2. Thermo-sensitive part
3. Battery switch



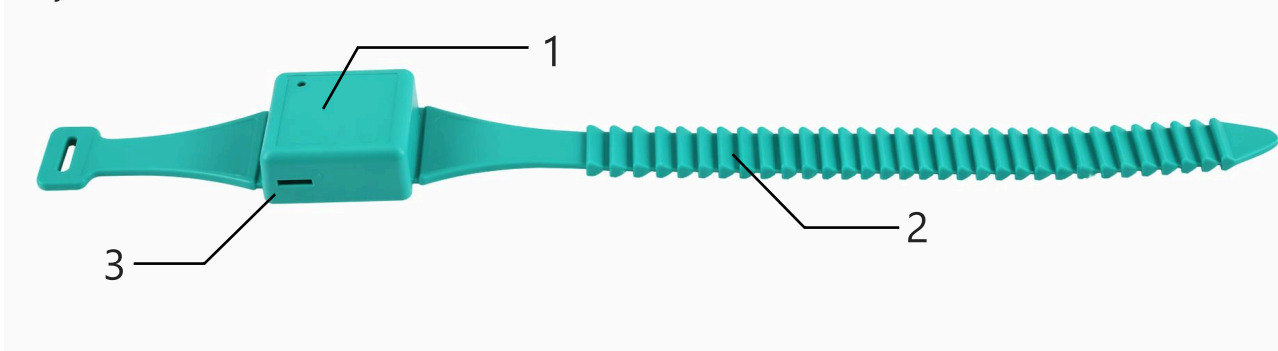
Remove the screw from the joints, and fixing the sensor on the position with the hole on the alloy baseplate, then tighten the screw, open the battery switch before installation, the power indicator flashes twice.

1.4.2.3 ATE200

The strap-secured type called ATE200 is suitable for use at moving contacts and fixed contacts of breaker, cable joints and bus bar.

Structure introduction of ATE200:

1. The core of wireless temperature sensor ATE200, temperature measuring probe is on the other side
2. Strap and hasp
3. Battery switch



Fixing the body of sensor on the position, then strapping it on the bus bar or breaker contact and frapping it through the hole on the strap, fixing the strap by hasp. Clipping the strap if it is too long when finished, if it is too short, contacting us for strap parts before installation. Open the battery switch before installation, the power indicator flashes twice. The installation examples see images below.

Note: ATE200 can be installed with fixed contact, copper plate and cable head.



1.4.2.4 ATE400

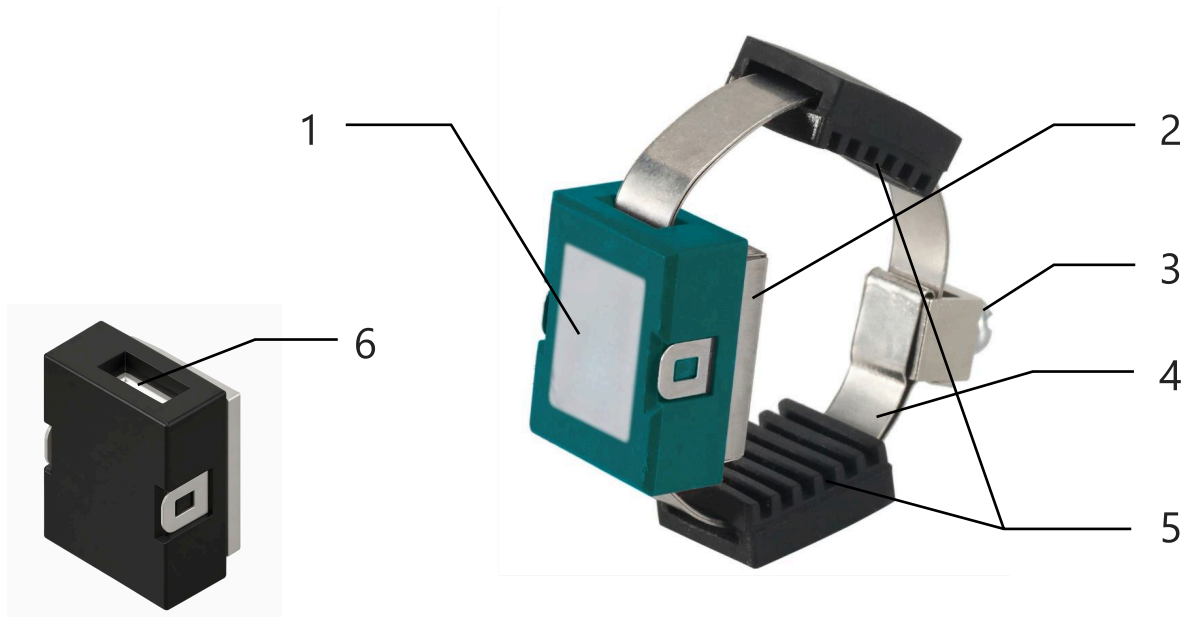
The mini type called ATE400 is suitable for using at moving contacts, bus bars, cables and joints between bus bar and cable.

Mini type passive temperature sensor structure introduction:

1. The core of wireless temperature sensor ATE400
2. Alloy bottom, touched with temperature probe
3. Metal hasp, for fixing alloy chip
4. Alloy chip, for CT-powered

5. silicone gasket, used to support the alloy chip

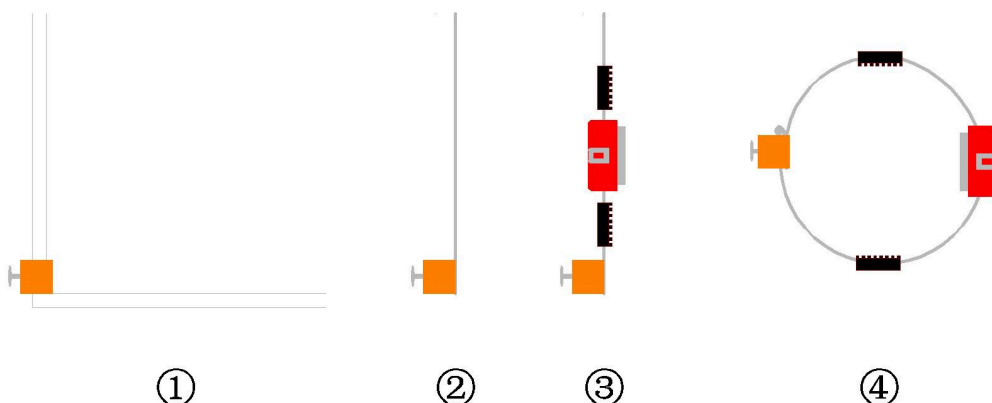
6. Alloy chip hole, used to install the alloy chip

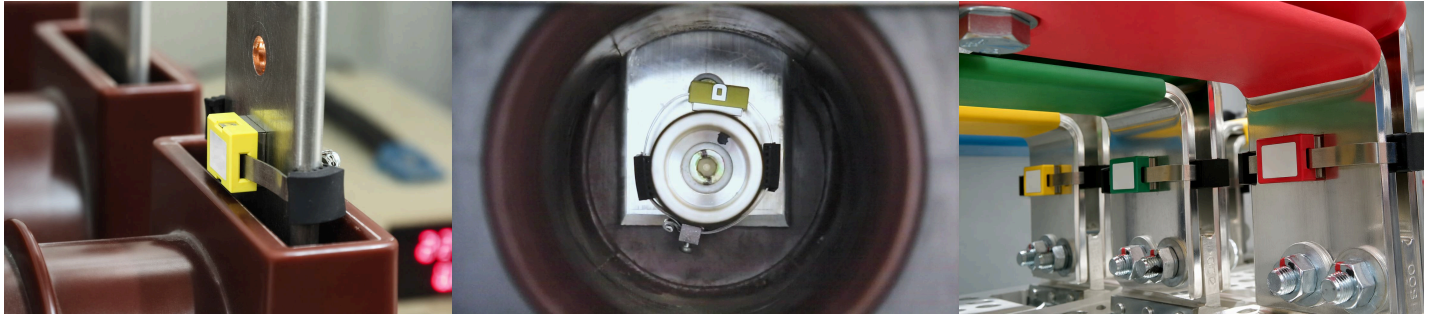


Firstly, take 2 pieces of alloy chips through the mounting hole of metal hasp, meanwhile fold the alloy chips and fix the metal hasp in the middle of alloy chips. Secondly, take the folded alloy chips through one silicone gasket, the core of ATE400 and another silicone gasket in turn. Thirdly, circle the whole alloy chips around the mounting position and tension the alloy chips, then tighten the screw on the metal hasp. Finally, subtract the excess alloy chips. The complete installation process is shown in Figures 1 to 4.

Note: ATE400 can be installed with fixed contact, copper plate and cable head; If it is necessary to install moving contacts, it is necessary to consider the height of plum blossom head and sleeve is sufficient.

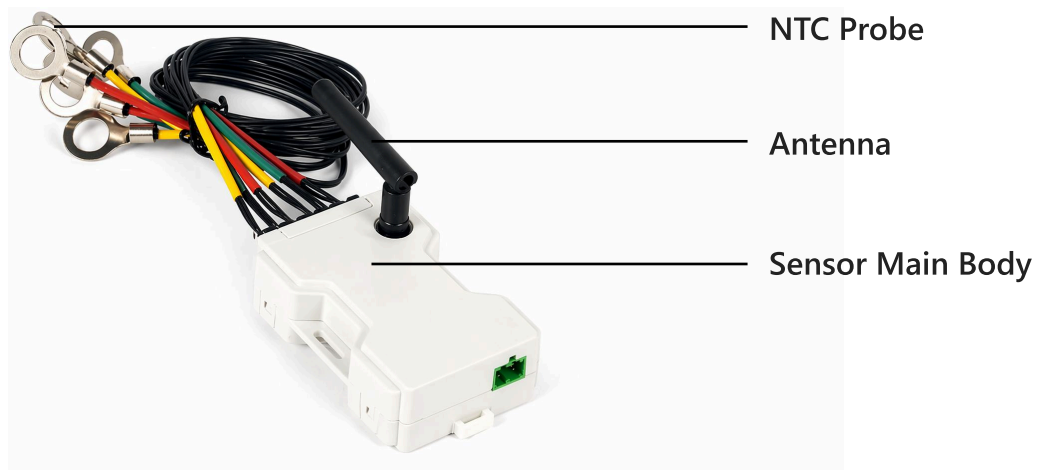
The length of the alloy sheet is 270mm after folding, the circumference of the installation is more than 270mm, and 1 alloy sheet needs to be added to each point of the sensor.





1.4.2.5 ATE300M

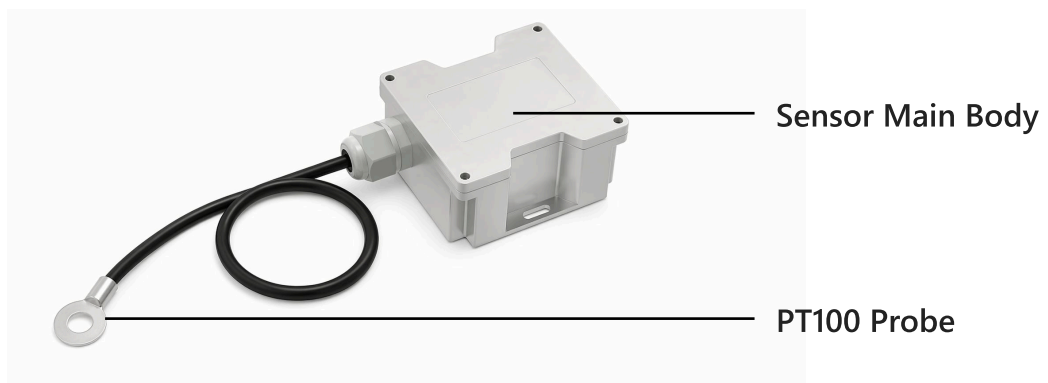
ATE300M multi circuit temperature sensor is applicable to various occasions such as electrical connectors in low-voltage cabinet.



Fix the sensor body in a suitable position inside the cabinet by binding it with guide rails or straps; The NTC probe is fixed by means of screws, bundling, or silicone bonding. Power the sensor with an AC/DC 85-265V power supply, and the power indicator light flashes red twice when powered on.

1.4.2.5 ATE300P

The ATE300P probe lead out temperature sensor is suitable for various occasions such as equipment casings, bus duct casings, etc.



Fix the sensor body in a suitable position by binding it with guide rails or straps; The PT100 probe is fixed by means of screws, bundling, or silicone bonding. The PT100 standard wiring is 2 meters long and has an aperture of 12mm.