322

ATE series Wireless Temperature Sensor

Installation Instruction V1.7

Acrel Co., Ltd.

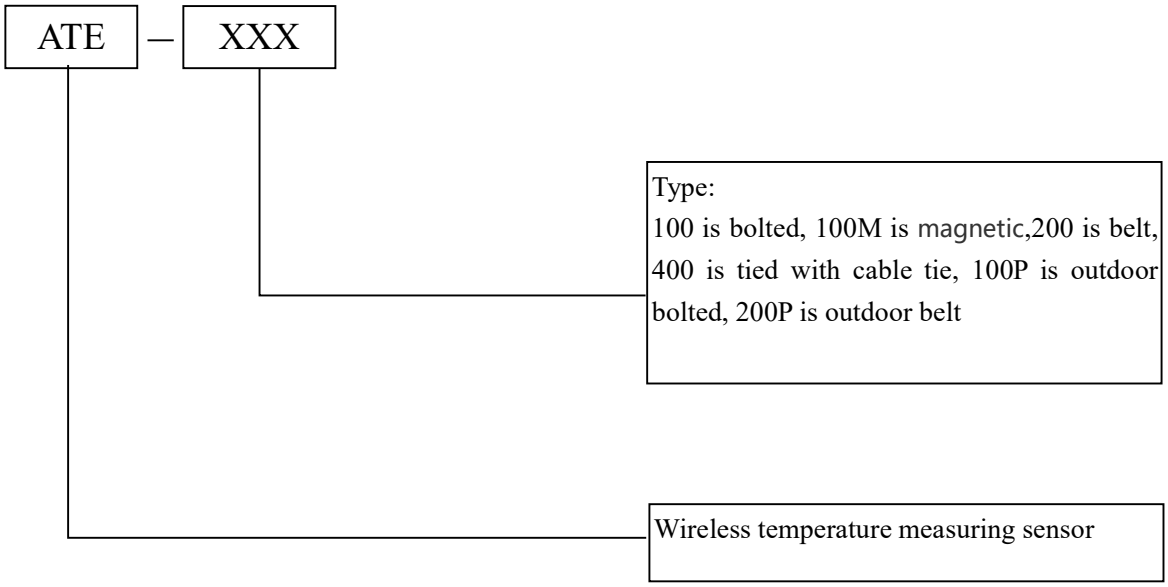
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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
Environment	Temperature	-40℃~125℃
	Humidity	≤95%
	atmospheric pressure	86kPa~106kPa
ATE100M/100/200 Active wireless temperature sensor	Wireless frequency	470MHz
	Communication distance	150m in open area
	Sampling frequency	25s
	Transmitting frequency	25s-5min

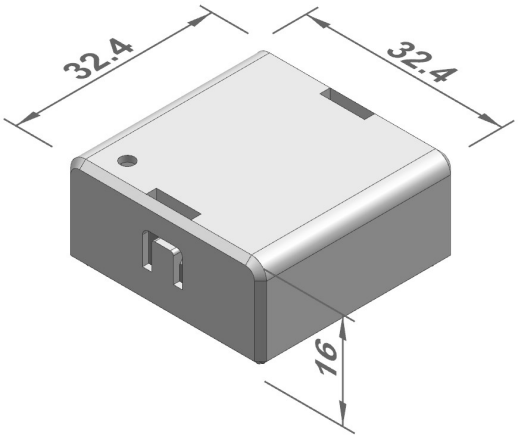
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

	Power source	Battery
	Installation	Magnetic / bolted /Belt
	Range of temperature	-50℃~+125℃
	Precision	±1℃
	Application	Joints in high or low voltage switchgears
	Battery life	≥5 years
400 Passive wireless temperature sensor	Wireless frequency	470MHz
	Communication distance	150m in open area
	Sampling frequency	15s
	Transmission frequency	15s
	Power source	CT-powered, starting current≥5A
	Installation	alloy chip fixing
	Sensor probe	alloy bottom
	Range of temperature	-50℃~125℃
	Precision	±1℃
	Application	Joints in high or low voltage switchgears
ATE100P/200P Outdoor wireless temperature sensor	Wireless frequency	470MHz
	Communication distance	150m in open area
	Sampling frequency	25s
	Transmitting frequency	25s-5min
	Power source	Battery
	Installation	bolted /Belt
	Range of temperature	-50℃~+150℃
	Precision	±0.5℃
	Application	Voltage switchgears
	Battery life	≥5 years
	Protection level	IP68

1.4 Product Installation

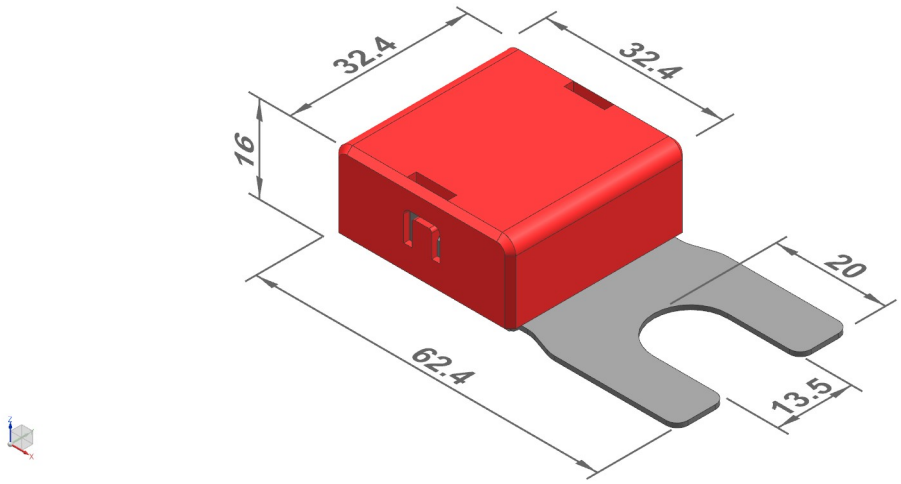
There are several types of wireless temperature sensors and mounting methods correspondingly, i.e. Magnetic , bolted , belt and alloy chip fixing.

1.4.1 Shape Size

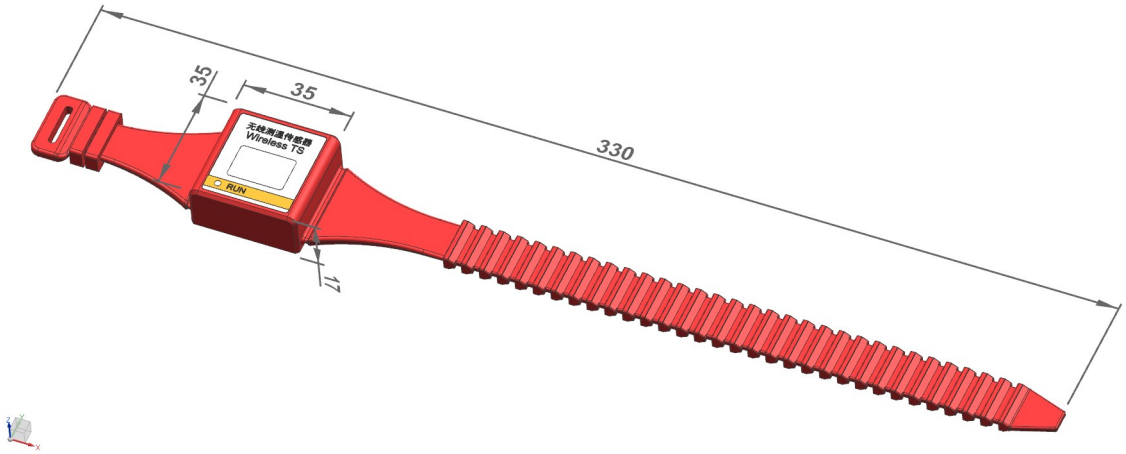


Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

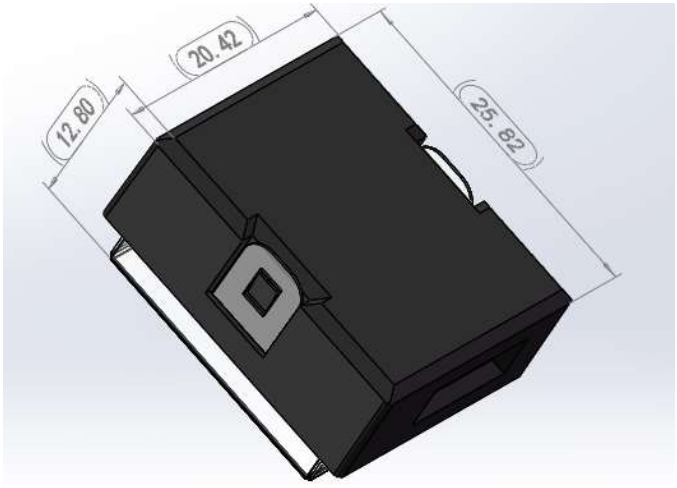
ATE100M



ATE100/ATE100P



ATE200/ATE200P



ATE400

1.4.2 Label Instructions

1.4.2.1 ATE sensor with ASD/ARTM-Pn device

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



ASD320



ARTM-Pn



ATE100M



ATE100



ATE200



ATE400



ATE100P



ATE200P

If the sensor is ATE100M/ATE100/ATE200/ATE400/ATE100P/ATE200P, the number behind "**组号：**" should be same as number underlined in "***51809190240001***", the sequence of installation is base on the label, "**编码：1A**" is first one on the phase A, "**编码：1B**" is first one on the phase B， and so on.

Notice: wireless temperature sensors and display device in the package have been matched before delivery. Do not use them with other display device or other wireless temperature sensors together. Please installing them with label on the sensor.

1.4.2.2 ATE sensor with ATC600/ATC450-C coordinator



ATC600



ATC450-C

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



ATE100M



ATE100



ATE200



ATE400



ATE100P



ATE200P

According to the above pictures, If the sensor is ATE100M/100/200/400/100P/200P, the group number of ATE must be same with the group number of ATC450-C/ATC600 and the installation order is base on the label. The code of each sensor is used to distingguish each sensor from same group. **“code: 001”** is recommended to be installed on the first temperature measuring point of the first cabinet, and then installed other sensors in this order.

In case of any special situation, please contact the relevant engineers for communication.

1.4.3 Installation Method

1.4.3.1 ATE100M Installation Method

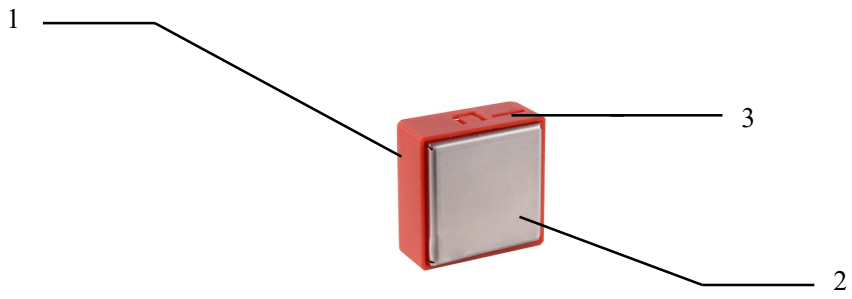
The magnetic wireless sensor ATE100M is suitable for iron electrical nodes or equipment surfaces.

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. The installation examples see images below.

1.4.3.2 ATE100 Installation Method

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

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

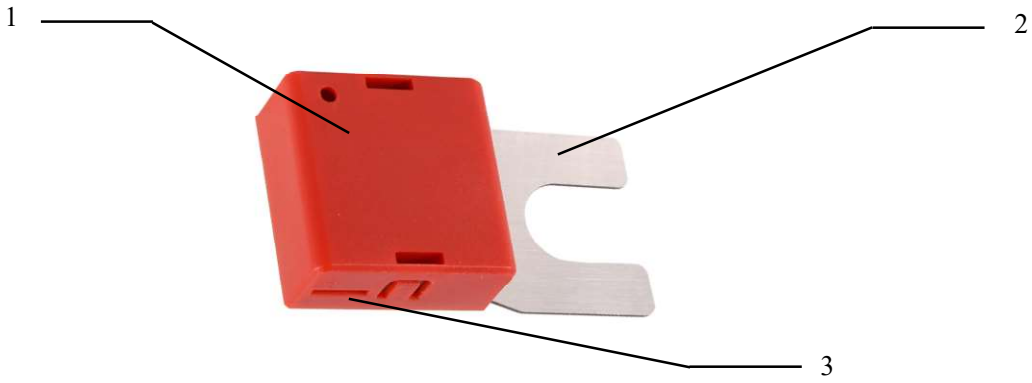
joints between cable and disconnector.

ATE100 structure introduction:

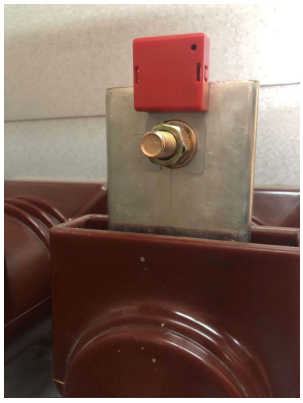
1 —— The core of wireless temperature sensor ATE100

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. The installation examples see images below.



1.4.3.3 ATE200 Installation Method

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

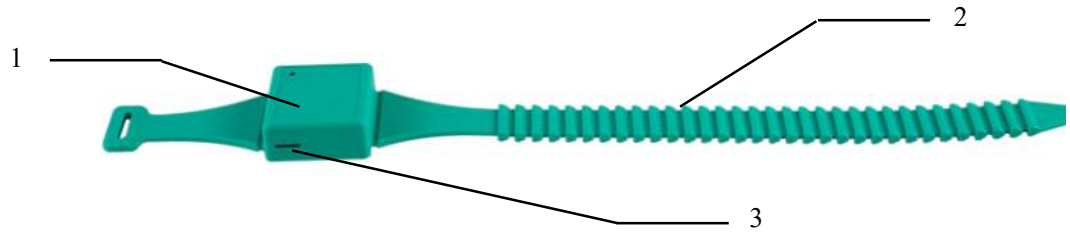
ATE200 structure introduction:

1 —— The core of wireless temperature sensor ATE200, temperature measuring probe is on the other side

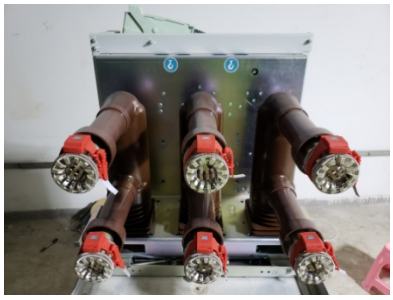
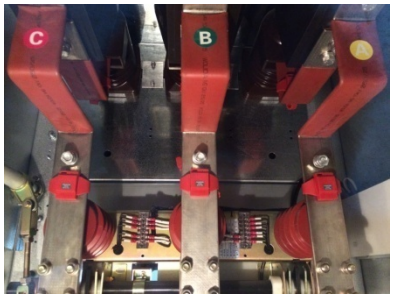
2 —— strap and hasp

3 ——battery switch

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



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.



1.4.3.4 ATE400 Installation Method

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

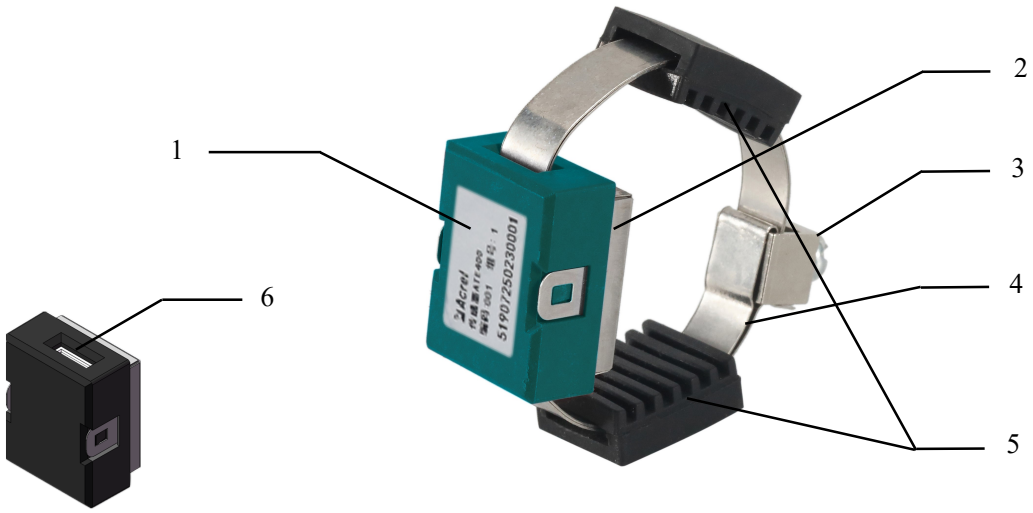
2 —— alloy bottom, touched with temperature probe

3 —— metal hasp, for fixing alloy chip

4 —— alloy chip, for CT-powered

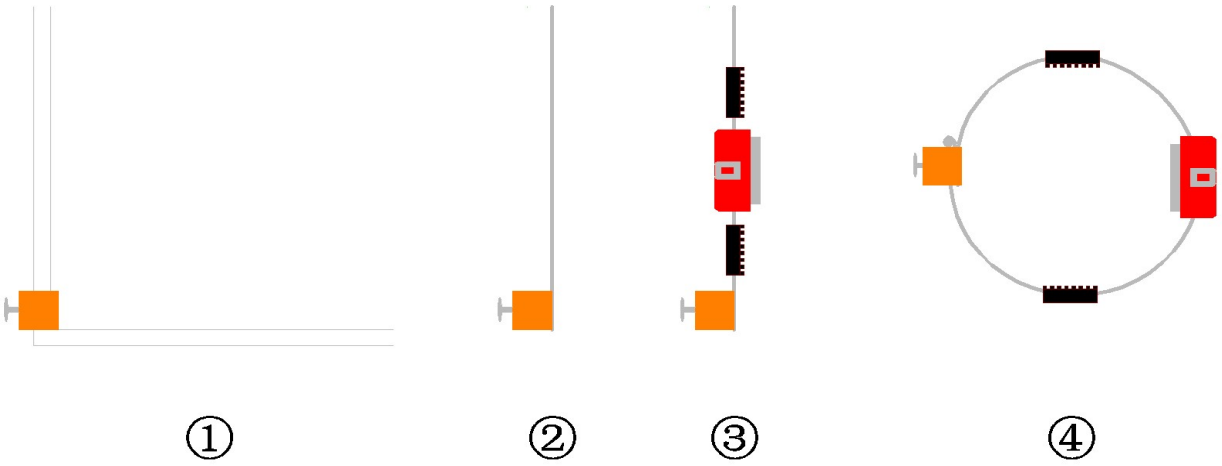
5 ——silicone gasket, used to support the alloy chip

6 ——alloy chip hole, used to install the alloy chip

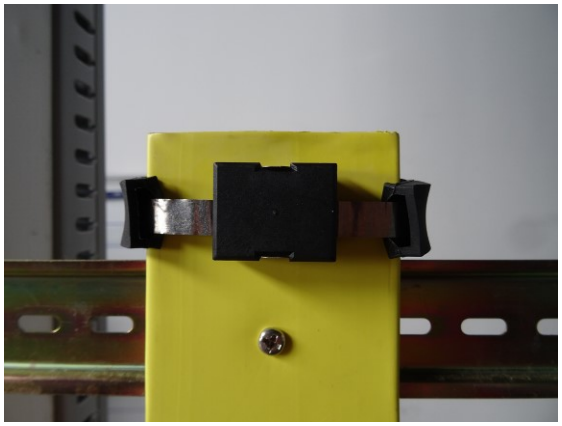


Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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.



The wireless temperature sensor called ATE400 installation examples, see images below.

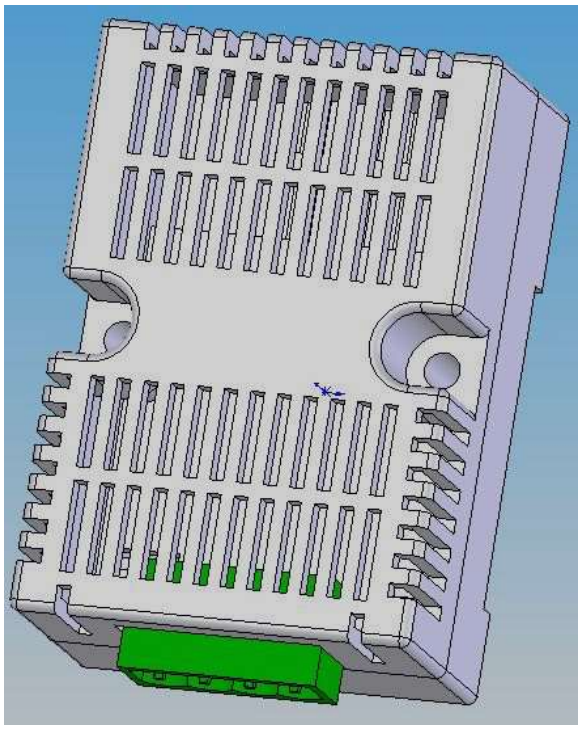


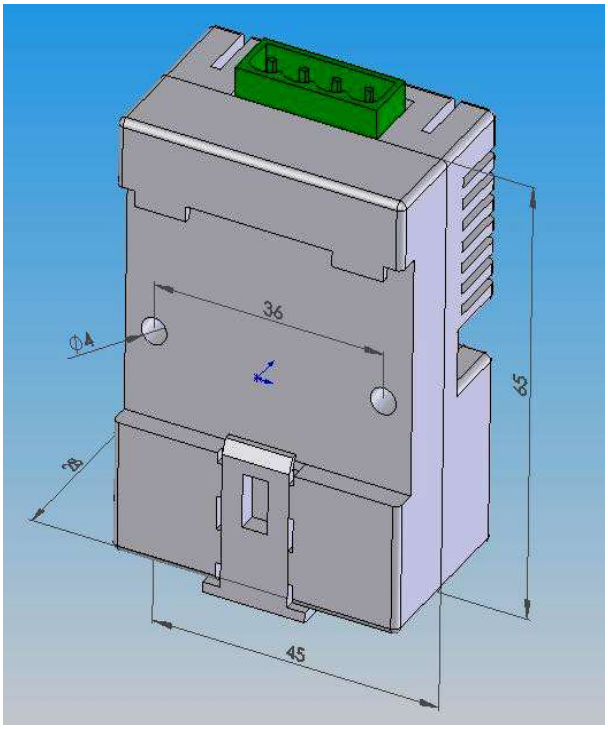


1.4.4 Wireless Temperature Coordinator

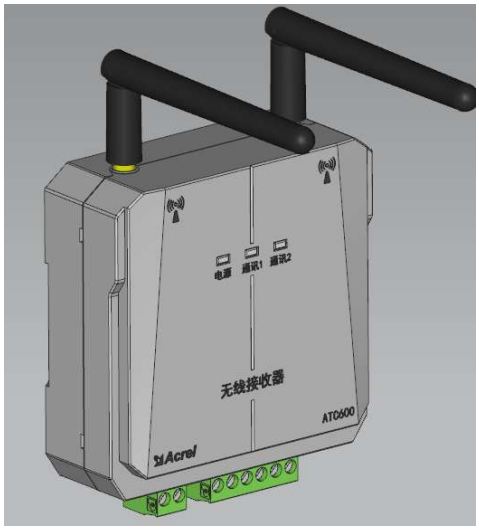
The wireless temperature coordinator connected with ATE series wireless temperature sensor ATC450-C which can be mounted on rail (DIN35mm) or bolted directly.

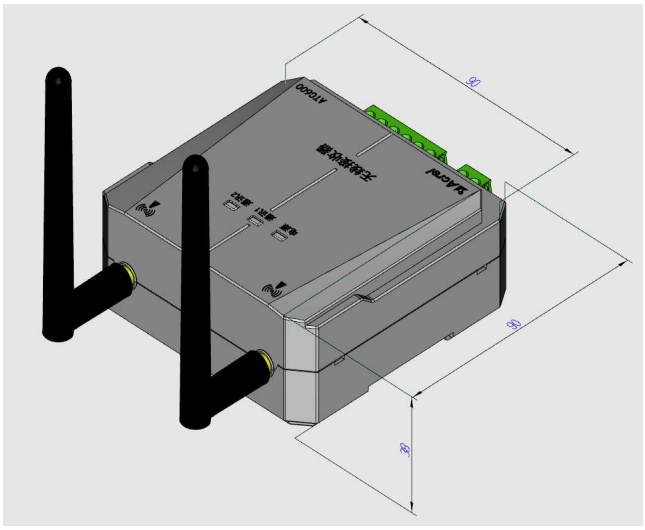
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000





The wireless temperature coordinator connected with ATE series wireless temperature sensor ATC600 which can be mounted on rail (DIN35mm).





Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Appendix

Precautions

1） Please select the most suitable wireless temperature measurement product according to the installation location and requirements.

2）For the installation of all sensors, please strictly follow the instructions in the manual. If there is insufficient accessories due to installation errors, the customer shall bear the responsibility.

3） Before placing an order for wireless temperature measurement products, you need to have a detailed configuration plan, and fill in the **Acrel Wireless Temperature Measurement Confirmation Form** ! Then submit the plan and form to the back office.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000