



RFID

RMU Cable Joint Temperature Monitoring

Features

- ❖ RFID Passive Temperature Sensing
- ❖ Batteryless sensor
- ❖ Digital Communication with CRC
- ❖ Sensor with unique ID, unlimited expansion
- ❖ MODBUS RTU protocol Interface

Cable Joint Accident Prevention

Cable joint of RMU will have temperature rise due to improper erection, aging, the resulting high temperature will eventually leads to insulation degrading and finally faulty condition. By monitor cable joint temperature in real time, user can recognize the temperature rise at early stage, therefore have enough time to arrange schedule maintenance to fix the connection problem.

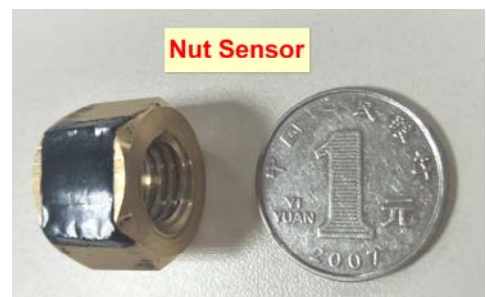
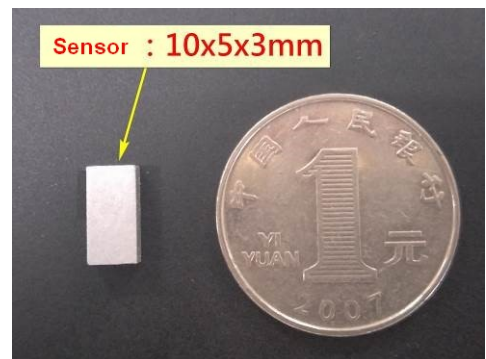


RFID Passive Sensing

Other temperature monitoring technology, such as infrared, battery sensor, etc, all have their limitation that prevent it from been apply to cable joint monitoring, thus leave the cable joint temperature remain unknown to utility user.

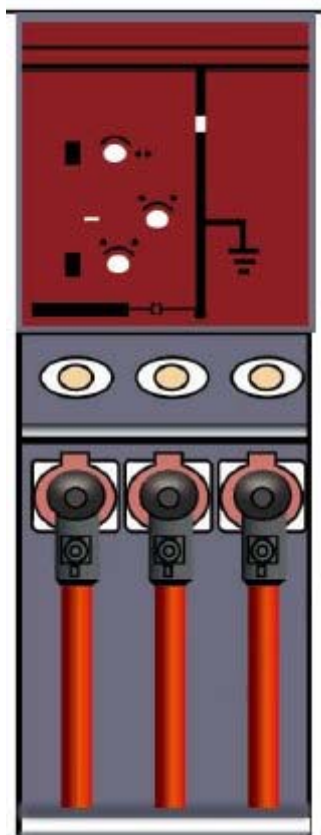
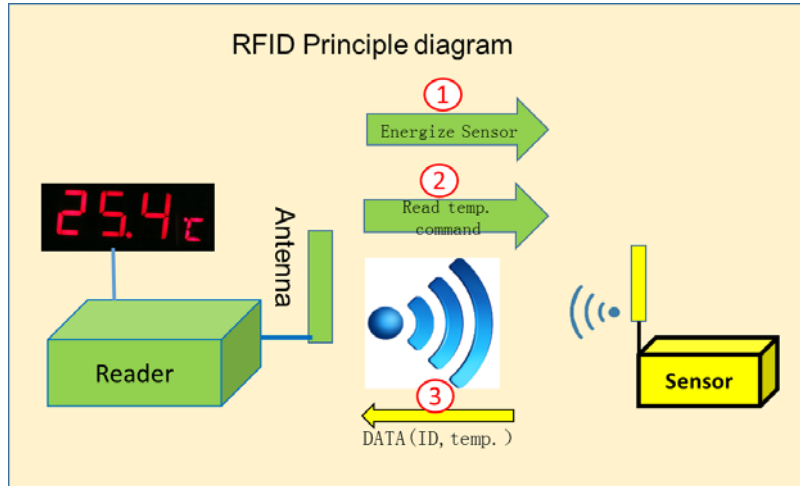
PQSense developpe a unique passive sensing solution that can monitor the cable joint temperature in real time, solution features includes

1. Tiny passive sensor, size only 10x5x3mm ◦
2. Can embedded in existing component, such as nuts
3. Apply to both new and existing installation, easy to install, real time temperature measuring



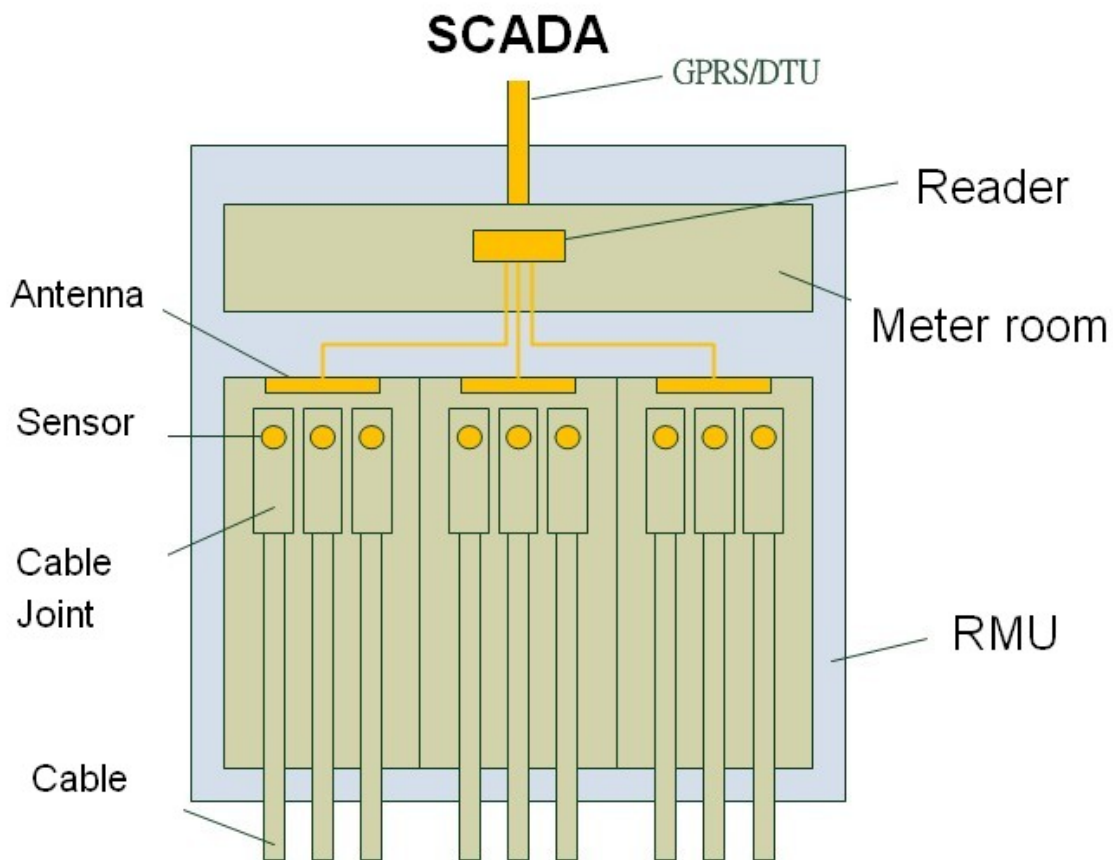
RFID Passive Sensing Principle

Temperature Reader sending out RF signal to sensors, RF signal energized and wakes up sensor to perform temperature sensing, after measure the temperature, the sensors return the measured temperature to reader. The whole process is carry out under digital communication manner, with CRC error correction mechanism.

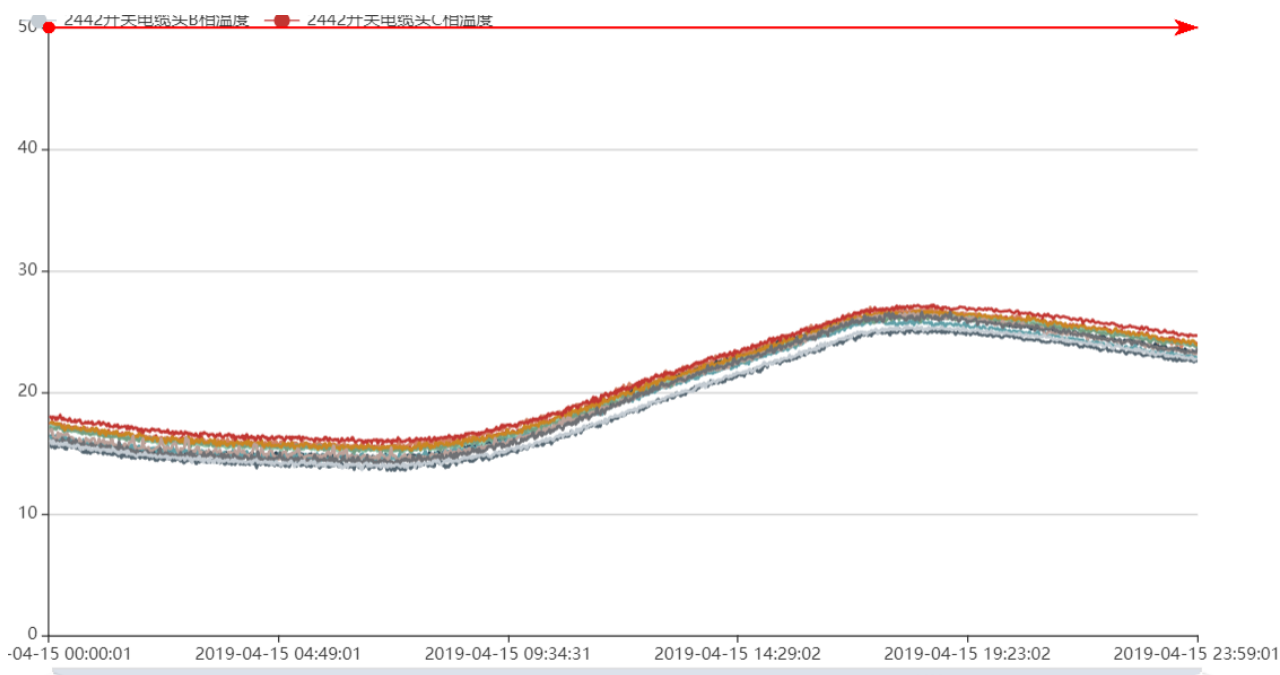


Nut Sensor	
	Sensor embeds in nuts, applicable in new and existing installation
	Field installation example

System Structure



Trend Curve



Technical Spec.

Reader			
Part Number	PQS-RD-01	PQS-RD-11/4	PQS-RD-11/8
Operating	-20°C to +70°C		
Frequency Range	902MHZ - 927MHZ (Selectable)		
Antenna Ports	4	4	8
Read Range	~250 cm		
Dimension	80x 45 x 115 mm	190 x 101 x 41mm	
Communication	1 Set RS485 / MODBUS	2 Sets RS485/MODBUS	
Power Supply	AC/DC 85-265V		
Antenna			
Part Number	PQS-AN-11		
Dimension	142 x 106 x 15 mm		
Sensor			
Part Number	PQS-SR-11		
Measuring Range	-40°C to +125°C		
Accuracy	+/- 2°C		
Dimension	10x 5 x 3 mm		

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