# RTD Precision Temperature Sensor
## Model PRGEN-RTD

SMARTREK Datasheet RTD

### Why use the RTD Precision Temperature A-Link

The PRGEN-RTD is a precision temperature sensor with a stainless steel shield capable of withstanding up to 500°C. It offers high accuracy and stability compared to thermocouples, and its usable temperature range extends from -215 to 500°C (-355°F to +932°F). The sensor can be used with various PT100 probes, such as high-quality Class A accuracy and a 316 stainless steel protected probe for harsh sensing applications. By combining the PRGEN-RTD with the ATRAX monitoring system, you can:

- Get real-time insights into your equipment, easily send alarms, and create reports.
- Improve efficiency and management by controlling, automating, and monitoring your equipment remotely, regardless of location.
- Get the assurance that the equipment is running within normal parameters and prevent system failure.
- Be quickly and remotely notified of any issues in your system.

Figure 1: RTD A-Link

### Applications

- Industrial Monitoring
- High Reproducibility Applications
- Power and Utilities
- Crop Freeze Prevention
- Pipe Fluid Monitoring
- Temperature Monitoring in Food and Beverage Production Manufacturing
- Water and Wastewater

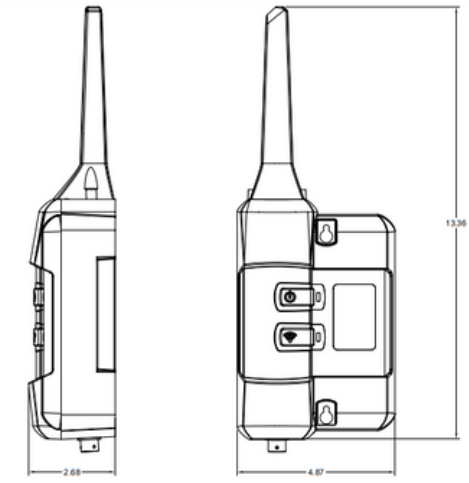
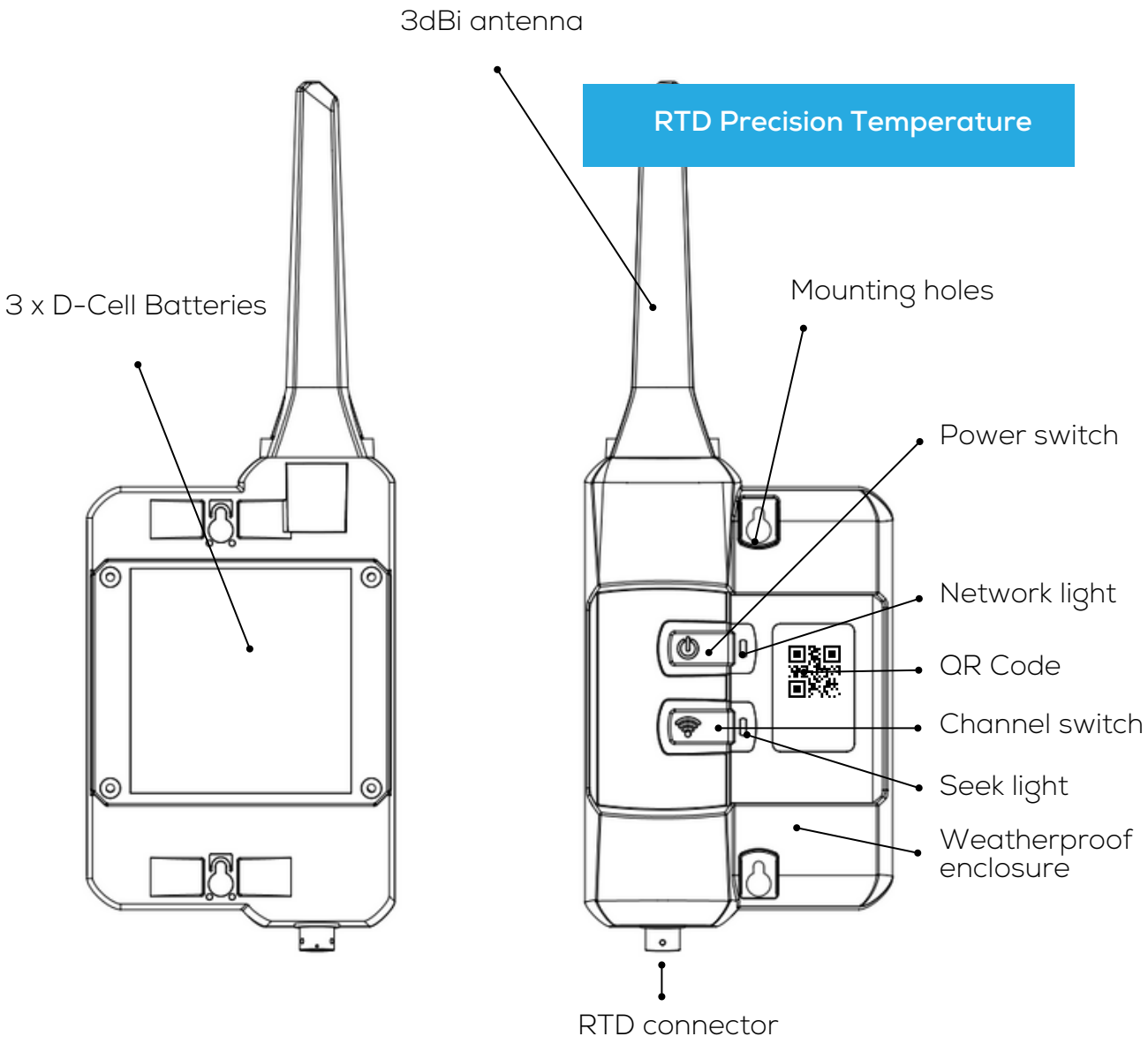


Figure 2: Technical drawing

### Features

- Precision temperature sensing with a resistance temperature detector (RTD)
- Used with PT100 probes (Platinum with resistance of 100 ohm at 0°C )
- Up to 10km range
- Single connector installation
- Up to 7 years on 3x D-Cell primary batteries
- Sensing range from -215 to 500°C


3dBi antenna
RTD Precision Temperature
3 x D-Cell Batteries
Mounting holes
Power switch
Network light
QR Code
Channel switch
Seek light
Weatherproof enclosure
RTD connector

## General specifications

| Specifications | Performance |
|---|---|
| Frequency Band | North America: 902-928MHz<br>Europe, Australia/ NZ: 860MHz<br>Japan: 925MHz |
| Wireless technology | SpiderMesh |
| Encryption | AES-128 |
| Range | Up to 10km/7Miles (LOS*)<br>500m average (NOLS**)<br>300m (decidious forest) |
| Max hop count | 30 (total range is 30x node-to-node range) |
| Max number of A-Link on network | Unlimited |

*LOS: line of sight **NLOS: near line of sight

## Technical specifications

| Specifications | Unit | Description |
|---|---|---|
| Sensor type | - | Resistance temperature detector (RTD) |
| Operating temperature | °C | -215 to +500 |
| Accuracy | °C | ±°0.5 |

## Power consumption

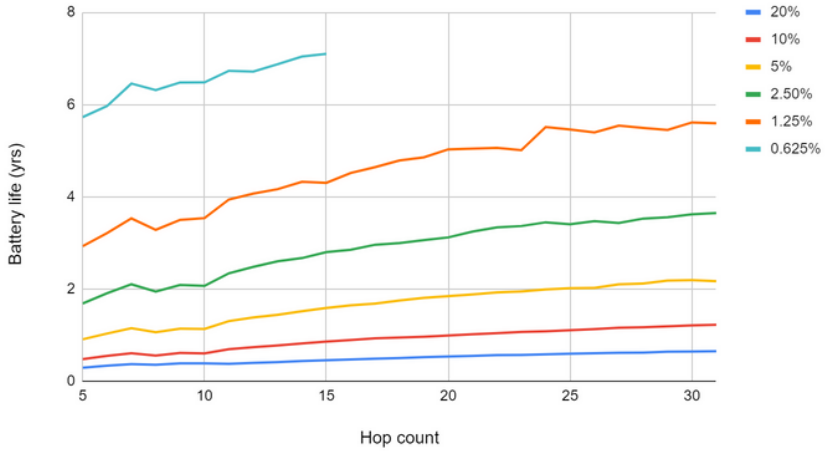



Figure 3: Battery life vs. hop count

## Connecting the RTD Node

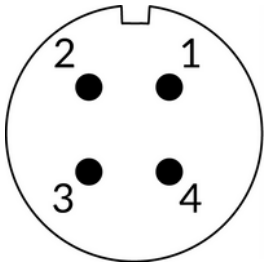



Figure 4: RTD connector pinout

## Description de la broche

| Pin | Two wire | Three wire | Four wire |
|---|---|---|---|
| 1 | NC | F+ | F+ |
| 2 | RTD+ | RTD+ | RTD+ |
| 3 | RTD- | RTD- | RTD- |
| 4 | NC | NC | F+ |

## Ordering information