



TES-21

Temperature Sensor

○ INTRODUCTION

EpiSensor's TES-21 Outdoor Temperature sensor is a fully wireless device which can monitor outdoor ambient temperature and make this data available on the web using EpiSensor's SiCA Platform.

It uses secure & reliable Zigbee communications to send data to a central location through a SiCA Gateway.

The TES-21 has a range of up to 300m outdoors and has a battery life of up to 10 years under normal operating conditions. The enclosure is designed for use in harsh environments and is fully sealed to IP67 waterproof standards.

○ APPLICATIONS

The TES-21 can be used in temperature tracking, environmental monitoring and building management applications to deliver accurate temperature data to a central location in real-time.

Schedules and events can be driven by data readings collected by this device which allows operators to have maximum freedom and flexibility when designing temperature monitoring systems.

The reporting interval of the device can easily be modified using EpiSensor's SiCA Studio software.

○ FEATURES

Fully wireless communications

Easy to install and configure

Waterproof enclosure (IP67)

Wireless range of up to 300m outdoors

Battery lasts up to 10 years

Secure & reliable Zigbee communications

Track temperature in real-time via the web

Variable reporting interval

Range of probes and heat sinks available

Fully SiCA Platform Compatible

○ SPECIFICATION

Wireless: IEEE 802.15.4 (ZigBee PRO)

Radio Frequency: 2.4 Ghz ISM Band

Security/Encryption: 128bit AES Encryption

Dimensions: 144 x 112 x 35 mm

Temperature Range: -40°C to +85°C

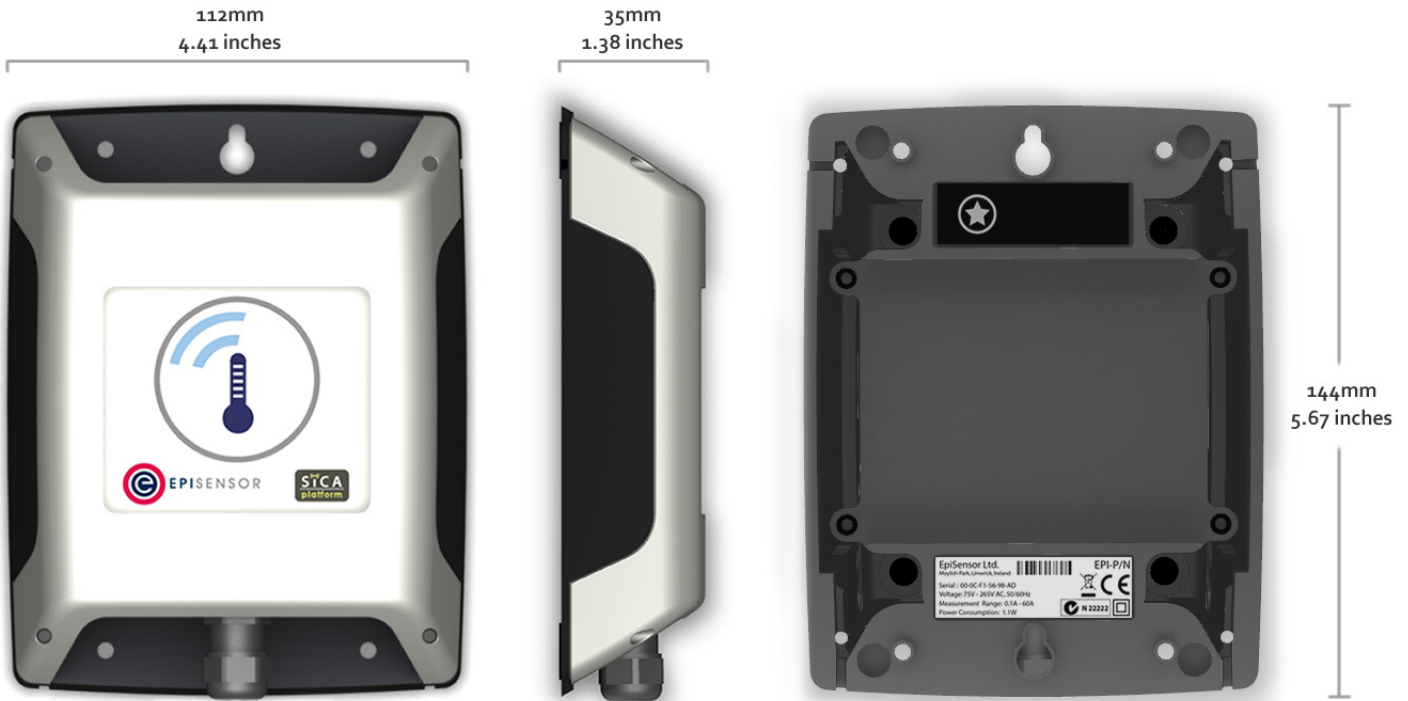
Accuracy: +/- 0.2 °C (normal range)

Resolution: 0.1 °C



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○ TEMPERATURE SENSOR

Parameter	Value
Probe Type	Steel Heat Sink (contact us for more)
Temperature Range	Normal: -20°C - +60°C, Full: -40°C - +85°C
Temperature Accuracy	+/- 0.2°C (Normal), +/- 0.4°C (Full)
Battery Type	Lithium Thionyl Chloride (permanent)
Battery Life	Up to 10 Years (10min reporting interval)
Certification	CE

○ WIRELESS

Parameter	Value
Max Tx Power	+3dBm (+5dBm in Boost Mode)
Rx Sensitivity	-98dBm @ 1% Packet Error Rate
Radio Frequency	2.4 Ghz ISM Band
Channels	16 Channels (11 - 26)
Data Rate	up to 250 kbits/sec
Encryption	128bit AES Encryption
Indoor Range	up to 50m
Outdoor Range	up to 300m (direct line of sight)

○ PHYSICAL

Parameter	Value
Dimensions	144 x 112 x 35 mm
Weight	360g
Mounting	Wall Mounting Flanges
Enclosure	Polycarbonate Plastic, IP67 rated
Operating Temperature	-40°C to +85°C
Operating Humidity	up to 80% (non-condensing)

○ APPLICATIONS

- Asset & Inventory Management
- Building Temperature Monitoring
- Cold Storage Monitoring
- Refrigeration Performance Monitoring
- Advanced Manufacturing
- Data Centre Monitoring
- Environmental Temperature Monitoring

○ APPLICATION AREAS

- Commercial & Industrial Building Monitoring
- Healthcare
- Logistics & Manufacturing Industry
- Retail, Hospitality, Education