

EXTENDED BATTERY TEMPERATURE SENSOR



ORDER CODE: TP-102
PRODUCT CATEGORY: SENSORS

Smart Vibration Sensing – Longer Life, Lasting Protection.

PRODUCT OVERVIEW

General Description

E4A's TP-102 is a versatile wireless sensor built for a wide range of temperature monitoring applications. Like the TP-101-TH, it features a detachable connector that allows customers to use their preferred off-the-shelf temperature probes, offering maximum adaptability. In addition to temperature, the TP-102 monitors relative humidity, vibration, and ambient light, transmitting real-time data via Bluetooth® 5 for seamless integration with E4A's advanced IoT monitoring platform. Powered by two CR123A batteries, the TP-102 offers significantly extended battery life compared to the TP-101-TH—an ideal option for applications where longer battery life is essential.

MEASURED PARAMETERS

VIBRATION



Monitors 6-axis vibration of equipment and structures.

TEMPERATURE



Measures precise temperature utilizing RTD probes.

HUMIDITY



Monitors humidity levels to prevent asset corrosion.

AMBIENT LIGHT



Measures light levels to detect environmental changes.

Connect any
off-the-shelf RTD
probe for your
application!



TECHNICAL SPECIFICATIONS

Power Supply

Main Power	Internal Battery CR123A (Li/MnO ₂) cells
Nominal Voltage	3VDC
Maximum Capacity	3000mAh
Current Consumption	24µA (avg.)

Operating Specifications

Operating Temperature	-20°C to +60°C
Storage Temperature	-20°C to +70°C (with battery) -20°C to +70°C (without battery)
Permissible Humidity	20-85% (operating and storage)
Ingress Protection Rating	IP30
Pollution Degree	2
Altitude	2000m

Measurement Characteristics

Accelerometer	6-axis, ±16g FSR
Light Exposure	0 to 100% relative light Up to 220 lux
Temperature	-200°C to +360°C ±0.5°C accuracy
Humidity	0 to 100% relative humidity ±3.5 accuracy

Physical Characteristics

Housing Material	Flame Retardant Polycarbonate/ABS
Physical Dimensions	Height: 36.5mm / 1.4inch Width: 100mm / 3.9inch Depth: 60mm / 2.4inch
Weight	90g
Mounting	Screw mount Magnetic mount Double sided adhesive

Communications

Wireless Module	2.4GHz Bluetooth® 5 transceiver
Communication Range	125m line of sight
Reporting Interval	User programmable in 30s increments

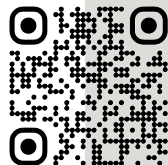
Security

Encryption	AES 128-bit crypto accelerator ECC and RSA public key accelerator (PKA) SHA2 accelerator (full suite to SHA-512) True Random Number Generator (TRNG)
------------	---

User Interface

Pushbuttons	1 pushbutton (device reset and device pairing)
Status LED	2 status LED's (red, green)

SCAN HERE!



CONTACT US

Headquarters

250 Herzberg Road
Kanata, Ontario, Canada K2K 2A1

Lab Testing Facility

1292 Rosedale Road North
Smiths Falls, Ontario, Canada K7A 4S6

Phone: +1 (613) 595-0303

E-mail: sales@electronics4all.ca

Website: www.electronics4all.ca

OUR PARTNERS

