

Product Specification



edgeRX Sensor

Sensor Node
for Condition Based Monitoring
Version 1.0

1. Overview

TDK CN2202 all-in-one sensor node has powerful environmental detection and perception functions. It can monitor the temperature and humidity, light intensity, air pressure, and sound of the surrounding environment, it can also sense the vibration of objects. After the sensor node collects the data, it will upload the data through Bluetooth Low Energy. The data can help you analyze for predictive maintenance and condition monitoring.



Figure 1 CBM edgeRX Sensor overview

2. Features

- Multi-sensing, including temperature and humidity, air pressure, sound and vibration.
- Long life cycle (up to 3 years)
- BLE 5.0 communication supported
- Vibration bandwidth up to 8 kHz
- Temperature measurement range -40~125°C
- Small dimensions of $\Phi 27.5 \times 63\text{mm}$
- Base is designed for easy adjustment of sensor orientation and flexible installation by epoxy glue

3. Applications

- Motor condition monitoring and tracking

4. Technical Specification

Item	Specification
MCU	Nordic nRF5340
Accelerometer	IIM42652
Temperature sensor	SHTC3
communication	• BLE 5.0 supported
Flash	• 64Mbit QSPI flash for local data storage
LED	Triple color LED, indicate: • Red LED: Machine in alarm • Blue LED: Blink during BLE pairing • Green LED: Blink during BLE connection
Button	• Long press more than 5 seconds for factory reset • Short press for BLE pairing • Internal battery power on/off switch
Power supply	• 1000mAh Li battery (replaceable) • Battery life: 3 years (with conditions)
Certification	• FCC • CE • TELEC • SRRC
IP rating	• IP67
Mounting	• Screw mounting • Glue mounting
Operating temperature	• -40~85°C
Dimension / Weight	• 63.0mm(Height) x 27.5mm(Diameter) / 52g

SRRC



5. Mechanical Specification

All measurements are listed in millimeters unless noted otherwise.

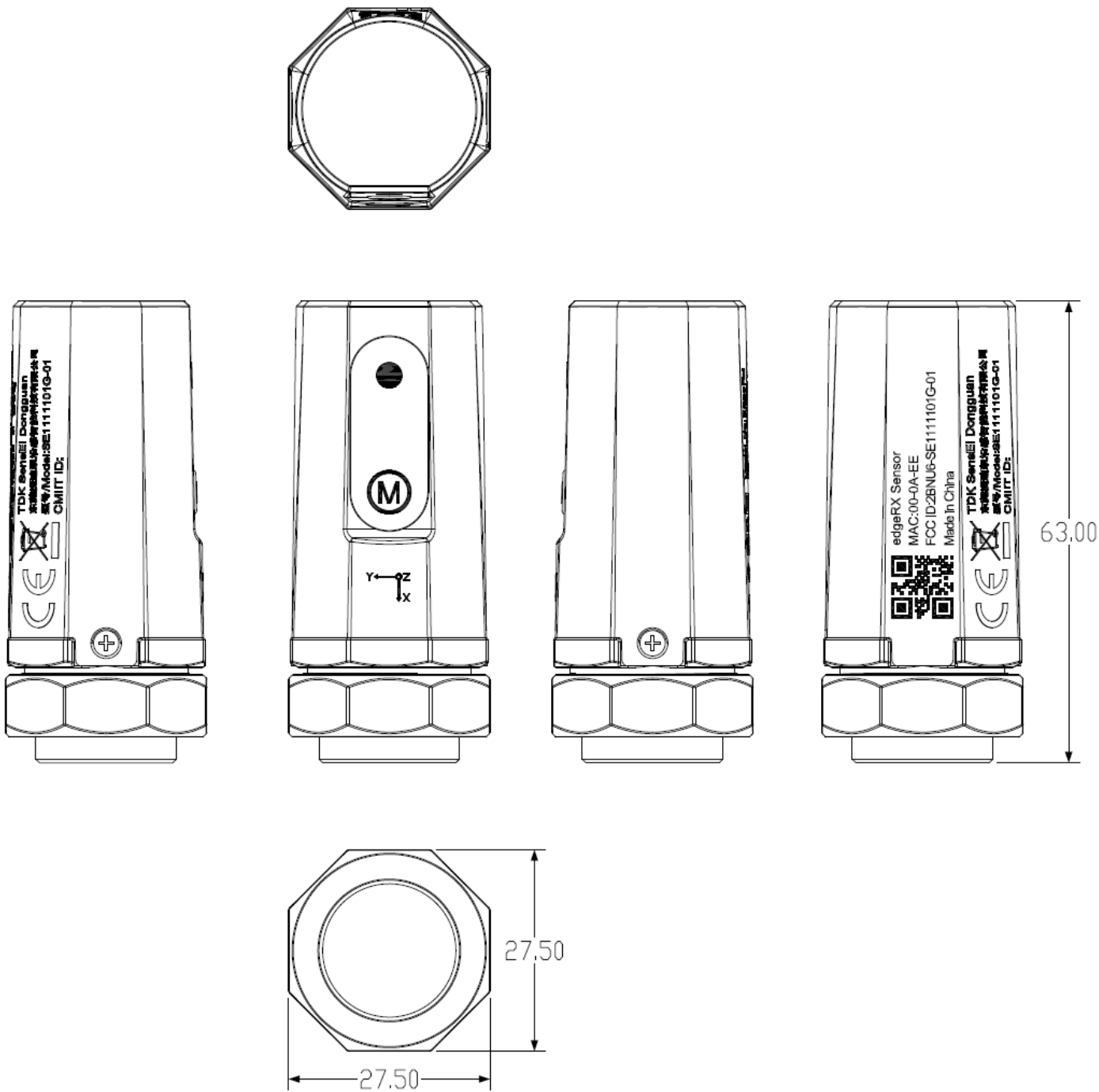


Figure 2 Dimension of CBM edgeRX Sensor

6. FCC Statement

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

7. Warning

Do not disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion; Do not leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas
Do not expose the battery to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas

8. Accessory Requirements

Only accessories approved by the equipment manufacturer and compatible with this model may be used. Using other types of accessories may violate the warranty terms of this equipment and the relevant regulations of the country where the equipment is located, and could result in safety incidents. To obtain approved accessories, please contact an authorized service center.

9. Environmental Protection

Do not dispose of this equipment and its accessories as ordinary household waste. Please comply with local regulations regarding the disposal of this equipment and its accessories, and support recycling efforts.