TE connectivity

8xxxN Series
Wireless Vibration Sensor

QUICK START GUIDE

FCC ID: XXXXXXXX
IC: XXXXXXXX

2460

8931N-EX-4
P/N: XXXXXXXX-X
S/N: XXXXXXX
SUPPLY: 3.6V, XXX

A, B, C, D, T4;
T4 Ga;
IECEx EPS 21 .0053X
-40°C to +60°C
SAFT LS17330 BATTERY
UNIQUEMENT UNE BATTERIE SAFT LS17330

IS DWG NO.: 200XXXX

915MHzUS MADE IN

TABLE OF CONTENTS

PRODUCTS COVERED BY THIS QUICK START GUIDE

This guide is intended for use with several TE Connectivity wireless vibration sensors. This includes:

Model Number	Single Axis	Three Axes	BLE	LoRaWAN™ America & EMEA	Hazardous Location Certified	Non Hazardous Location
8911N-NX	●		●	●		●
8911N-EX	●		●	●	●	
8931N-NX		●	●	●		●
8931N-EX		●	●	●	●	
8511N-NX	●		●			●
8511N-EX	●		●		●	
8531N-NX		●	●			●
8931N-EX		●	●		●	

Note: Hazardous Location approved devices require specific handling and mounting to conform to regulation. Please refer to additional included documentation. The user manual, with all required RF compliance information, is available online on TE.com.
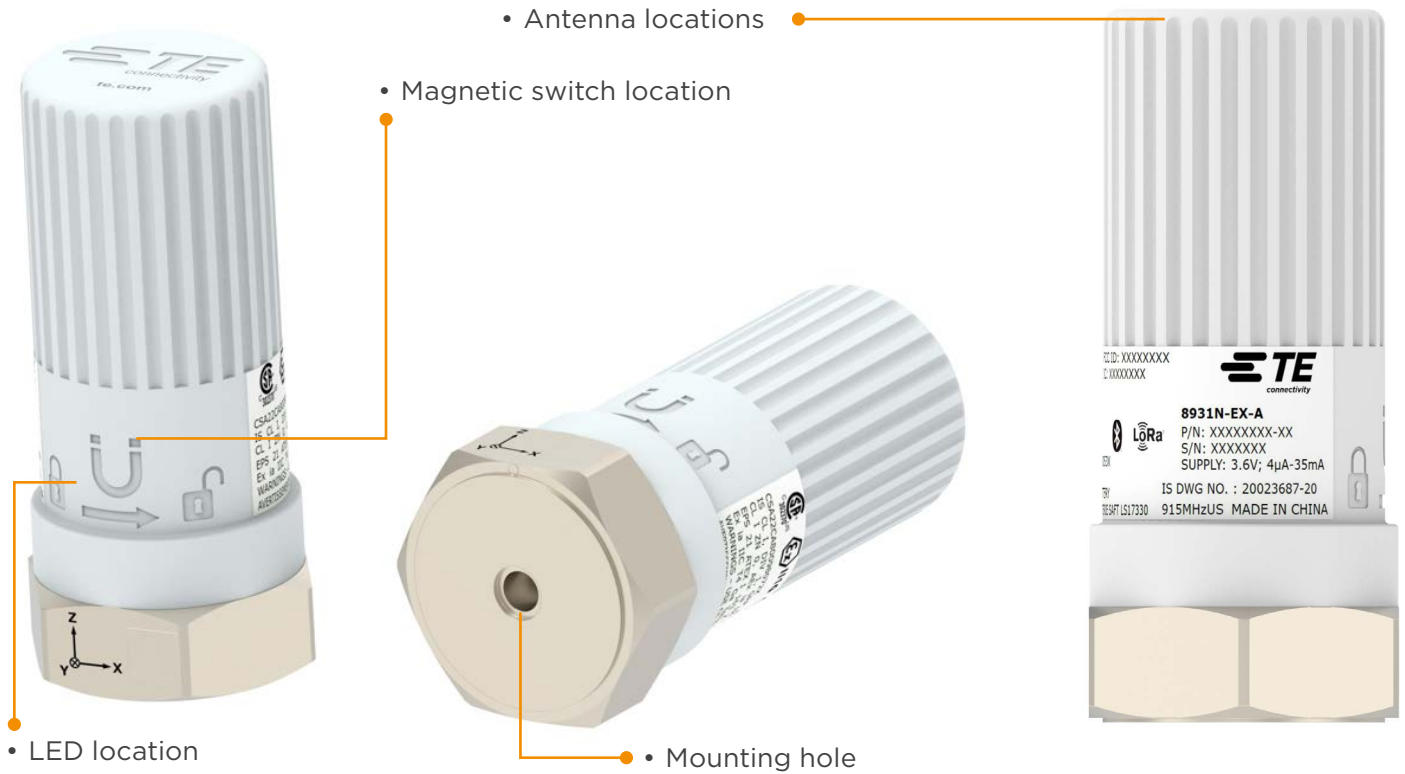
WHAT'S IN THE BOX?

For kits 20023687-26, 20023687-30, 20025127-20, 20025127-30, 20026937-20, 20026943-20	Contents	Accessories (to be purchased separately)
	Sensor	1/4-28 Male Adhesive Mount
	Device Keys (LoRaWAN™ models only)	Battery - SAFT LS 17330
	Battery Installation tab	
	1/4-28: 1/4-28 male stud	
	1/4-28: M6 male stud	
	1/4-28: M5 male stud	
	Magnetic mounting stud	

For kits 20023689-20, 20023689-30, 20025129-20, 20025129-30, 20026938-20 20026944-20	Contents	Accessories (to be purchased separately)
	Sensor	1/4-28 Male Adhesive Mount
	Device Keys (LoRaWAN™ models only)	Battery - SAFT LS 17330
	Battery Installation tab	
	1/4-28; 1/4-28 male stud	
	1/4-28; M6 male stud	
	1/4-28; M5 male stud	
	Magnetic mounting stud	
	Rotating mount stud (Triaxial Models only)	

For kits 20023687-80, 20023687-90, 20023689-80, 20023689-90, 20025127-80, 20025127-90, 20025129-80, 20025129-90, 20026937-80, 20026943-80, 20026938-80, 20026944-80	Contents	Accessories (to be purchased separately)
	Sensor	1/4-28; M6 male stud
	Device Keys (LoRaWAN™ models only)	1/4-28; M5 male stud
	Battery Installation tab	Magnetic mounting stud
	Battery - SAFT LS 17330	1/4-28 Male Adhesive Mount
	1/4-28; 1/4-28 male stud	Rotating mount stud ()/Triaxial models only

8931N-EX-A
P/N: XXXXXXXX-XX
S/N: XXXXXXX
SUPPLY: 3.6V; 4µA-35mA
IS DWG NO. : 20023687-20
915MHzUS MADE IN CHINA

• Antenna locations

• Magnetic switch location

• LED location

• Mounting hole

8931N-EX-A
P/N: XXXXXXXX-XX
S/N: XXXXXXX
SUPPLY: 3.6V; 4μA-35mA
IS DWG NO. : 20023687-20
915MHzUS MADE IN CHINA
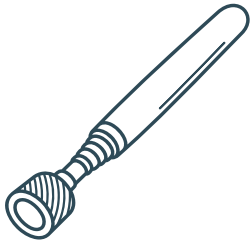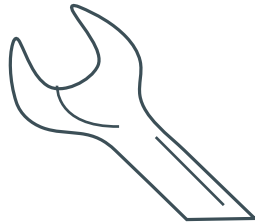
RECOMMENDED TOOLS (NOT INCLUDED)

- Open end or adjustable wrench
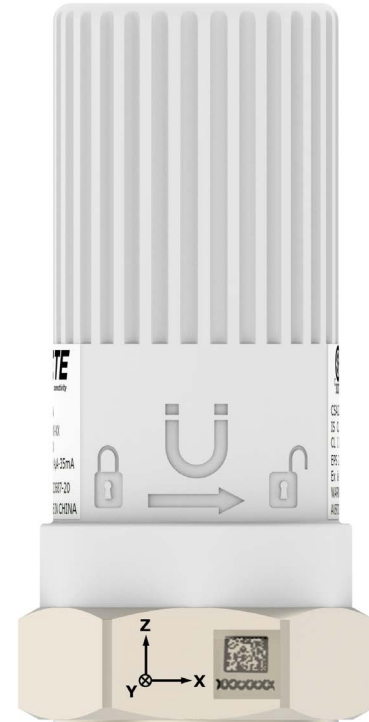- Magnet, such as a magnetic pick up tool

TE Connectivity (TE) recommends a magnet of sufficient flux density that it can create a magnetic field strength of 20 mT at the switch location shown on the housing.

Magnetic pick up tool   Open end wrench

INSTALLING THE APP

TE provides a quick and simple way to connect to your sensor. Using our TE SensorConnect App, available from the Apple App Store or the Google Play Store, you can do any of the following,

- Initial setup and configuration of the sensor
- Monitor live measurements from the sensor
- Check current software version of the sensor
- Upgrade to new sensor software versions when available. In addition, as new features come available make sure you are always on the latest version of TE SensorConnect

Scan the QR code to download the app on your mobile phone or tablet.

Apple App Store

Google Play Store

Installing the battery

The TE sensor requires a battery for operation. A Saft model LS 17330, 2/3 A size is required for compliance to safety standards including ATEX and IECEx. TE does not recommend use of other battery manufacturers or models. Performance is not guaranteed without the proper battery.

Unlock direction (CCW)

1

- Hold the sensor firmly by the hex area at the bottom.
- Rotate the top cover counter-clockwise from the locked index mark on the cover to the unlocked mark.
- Carefully lift the cover off in a straight direction to avoid damage to internal components.
- Avoid touching any portion of the PC boards or electronic components.

Positive (+)

Battery Compartment

Negative (-)

Battery installation tab

2

- Push the battery removal strip into the battery compartment so the new battery will sit on top of it.
- Hold the battery installation tab so the narrow end covers the negative (-) battery contact electrode (nearer to the hex end of the device).
- Insert the battery (negative end first) so it traps the battery installation tab between the negative battery contact and the negative electrode on the battery.
- Slowly push the positive electrode end of the battery into the battery compartment until it's fully seated.

Always use a new battery to ensure proper sensor operation and battery monitoring.

INSTALLING THE BATTERY

3

- Holding the battery in place, slowly extract the battery installation tab from the negative electrode.
- A one second flash from the LED will indicate that the battery has been inserted properly.

Lock direction (CW)

4

- Install the top cover and tighten it
- Follow the Locking direction

Always use a new battery to ensure proper sensor operation and battery monitoring.

MOUNTING YOUR SENSOR

The vibration sensor should be stud mounted on a clean, flat surface. The correct mounting torque for the sensor is 2.2 to 2.9 lb-ft (3 to 4 N-m). It is recommended to put a small amount of silicon grease on the bottom of the vibration sensor before mounting. This provides better coupling of vibration signals into the sensor.

Sensor Hex Base

[34.9]
1.38 HEX

Open end wrench size: 1-7/16in or 36mm
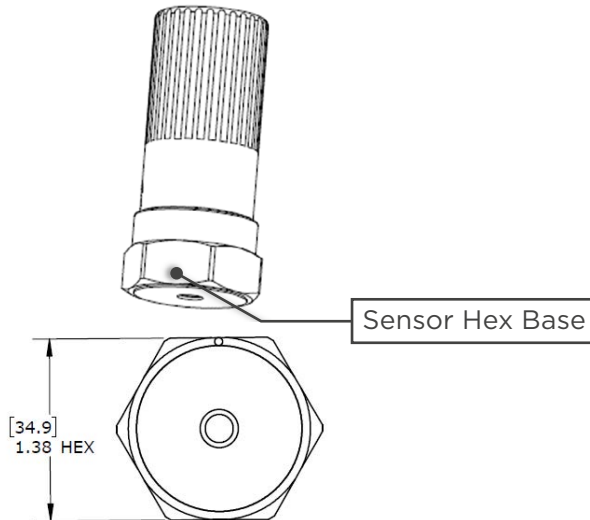
WARNING – Do NOT tighten the sensor by twisting on the housing. Damage to the sensor WILL occur. Tighten to the correct torque using a wrench on the hex base.

TROUBLESHOOTING AND FAQ

1) Unable to see sensor when scanning for devices using BLE?

- Check to make sure battery is properly inserted, paying attention to the battery polarity
- The sensor BLE radio may be in a sleep condition, use a magnet and touch it near the magnet icon on the white housing for a period of 1-2s and look for the Yellow LED to start flashing briefly. The BLE radio will now be active for 1 hour.

2) Unable to connect my LoRaWAN™ sensor to my LoRaWAN™ gateway

- Check to make sure battery is properly inserted, paying attention to the battery polarity
- The sensor radio may be in a sleep condition, use a magnet and touch it near the magnet icon on the white housing for a period of 1-2s and look for the Yellow LED to start flashing briefly. The sensor will now be active for 1 hour.
- Ensure you use the LoRaWAN™ devices keys found inside when connecting your gateway and LoRaWAN™ Network server, if you have lost these keys please contact TE customer care for support.
- Follow the user manual and install guides found on TE.com.

3) How do I determine battery level?

- You can use the TE SensorConnect app to connect and find sensor information such as battery level, live data, settings, etc.

TROUBLESHOOTING AND FAQ

4) Where do I find a new battery when I need to replace it

- TE recommends only to use the SAFT LS17330 model battery and only purchase them from their authorized distributors, see their website for this information.

5) Why is the battery level still low after replacing the battery?

- After replacing the old battery with a new battery, you need to reset the battery level which can be done using the TE SensorConnect app or sending the reset command over BLE via your application.

6) How do I know the alignment of the Tri-axis sensor when I mount it to the equipment?

- The Tri-axis sensor base, the metal housing, as a machined dot or circle that will always tighten or twist to the same location when using the mounts.

7) How can I take an immediate measurement?

- Place a magnet near the magnetic switch location for <2seconds, this will trigger a measurement and it will be sent over the network. It will also turn on the BLE radio for device connection.