

# Tilt Sensor

Featuring LoRaWAN®

## EM310-TILT



EM310-TILT is a LoRaWAN® tilt sensor mainly for angle measurement and asset movement detection. With a compact size and 3-axis accelerometer, EM310-TILT can be installed to the objects easily to measure its X, Y, Z tilt angles. It can also detect the movement based on angle changes and send threshold alarms. Compliant with Milesight LoRaWAN® gateway and Milesight IoT Cloud solution, users can know the angles and tilt threshold alarms in real-time via browser or mobile app remotely.

EM310-TILT can be widely used in tree monitoring, pole lean detection, landslide monitoring, etc.

## ◆ Features

- Built-in MEMS accelerometer sensor to measure the 3-axis angles of any objects
- Flexible threshold condition settings, suitable for different kinds of applications
- Easy to install, suitable for various types of objects as trees, poles, grounds, etc.
- IP67 waterproof enclosure for outdoor applications and easy to clean
- Ultra-wide-distance wireless transmission up to line of sight of 15 km
- Equipped with NFC for one touch configuration, supports card emulation mode
- Function well with standard LoRaWAN® gateways and network servers
- Compliant with Milesight IoT Cloud

## ◆ Specifications

| Wireless Transmission    |   |
|--------------------------|---|
| Technology               | LoRaWAN®  |
| Frequency                | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 |
| Tx Power                 | 16 dBm (868 MHz)/22 dBm (915 MHz)/19 dBm (470 MHz)      |
| Sensitivity              | -137 dBm @300bps  |
| Mode                     | OTAA/ABP Class A  |
| Measurement              |   |
| Axis                     | X, Y, Z   |
| Range                    | - 90° ~ +90°  |
| Accuracy                 | ± 1°  |
| Resolution               | 0.01°   |
| Others                   |   |
| Configuration            | NFC Configuration via Mobile App                        |
| Button                   | 1 × Reset Button (Internal)                             |
| Physical Characteristics |   |
| Power Supply             | 2 × 3500 mAh ER17505 Li-SOCl <sub>2</sub> Batteries     |
| Battery Life*            | Over 5 years (6 triggers per hour)                      |
| Operating Temperature    | -20°C to +60°C  |
| Relative Humidity        | ≤95% (non-condensing)                                   |
| Ingress Protection       | IP67  |
| Dimension                | 111 × 62 × 33 mm (4.37 × 2.44 × 1.30 in)                |
| Material & Color         | ABS, Black  |
| Installation             | On the flat surfaces with screws                        |

\* Tested under laboratory conditions and for guideline purposes only.

