

Tilt Sensor

Featuring LoRaWAN®



NI310-TILT



NI310-TILT is a LoRaWAN® tilt sensor mainly for angle measurement and asset movement detection. With a compact size and 3-axis accelerometer, NI310-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 NI65-NI67 LoRaWAN® gateway and IoT Cloud solution, users can know the angles and tilt threshold alarms in real-time via browser or mobile app remotely.

NI310-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 IoT Cloud



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◆ 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 ₂ 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.



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