# LoRaWAN Heavy-duty Tilt Sensor
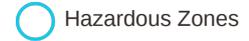
Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Farm, Smart Factory

SKU: WSLRWAL-AG

**daviteq**

✓ Safe Zone          ◯ Hazardous Zones

**HEAVY-DUTY LoRaWAN TILT SENSOR WSLRWAL-AG**



WSLRWEX-AG-H1.JPG

WSLRWAL-AG is a LoRaWAN Tilt Sensor for Heavy-duty applications and comes with inclinometer which can be used to measure tilt angles X, and Y of any object such as a Tower, Building, Tree, Electricity Tower, Telecom Tower, Bridges... With Ultra-low Power design and smart firmware allow the sensor can last up to 10 years with 01 x C-type battery (depends on configuration). The sensor will transmit data in kilo-meters distance to the LoRaWAN gateway, any brand on the market. For LoRaWAN connectivity, it supports global frequency bands EU868, IN865, RU864, KR920, AS923, AS923-2, AU915, US915.

## Applications

Facility Monitoring, Flood Monitoring, Infrastructure Monitoring, Level Monitoring, Machine Health Monitoring, Safety Monitoring, Tilt Monitoring

## Notes For Applications

- This AG tilt sensor measures the static tilt angle of the static object vs. the Gravity direction. Please do not use it for other angle measurements.
- It measures the static tilt angle of stationary objects or slow-moving objects such as Tree, Bridge, Pole, Tower, Crane, and Building...
- It does not measure the tilt angle of a quick-moving object like construction equipment...

✓ **LoRaWAN Communication**
LoRaWAN communication standard to allow sensor to connect to any LoRaWAN Gateway on the market.
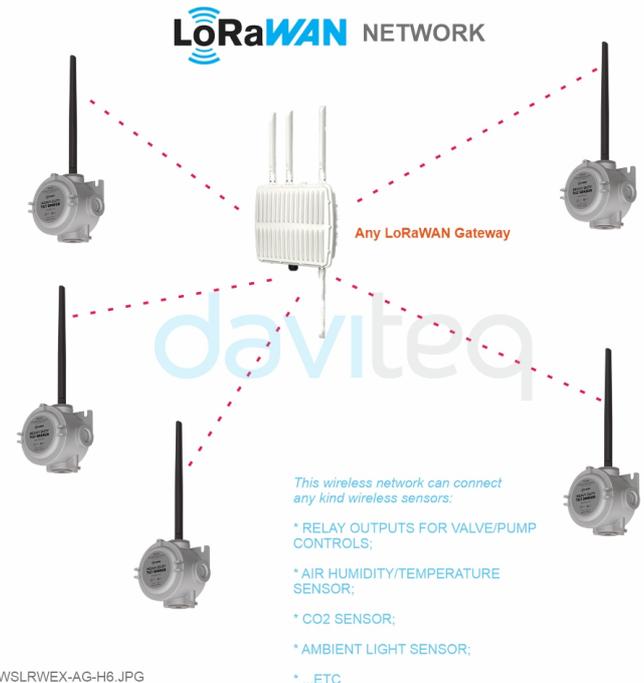
✓ **10-Year battery**
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can last up to 10 years with 01 x Type C battery.

✓ **High Precision Tilt Measurment**
Advanced Accelerometer to deliver high accuracy and stable measurement of Tilt angles.

✓ **Heavy-duty design**
Cast aluminum, IP66 housing for heavy-duty applications.

**LoRaWAN NETWORK**



Any LoRaWAN Gateway

This wireless network can connect any kind wireless sensors:

* RELAY OUTPUTS FOR VALVE/PUMP CONTROLS;

* AIR HUMIDITY/TEMPERATURE SENSOR;

* CO2 SENSOR;

* AMBIENT LIGHT SENSOR;

* ...ETC

WSLRWEX-AG-H6.JPG

## Specification

| | |
|---|---|
| Tilt Sensor | Built-in advanced accelerometer to deliver tilt angle measurement of XYZ for AG-01 version, XY for AG-03 version |
| Tilt Measurement range | ±90° for AG-01 version \| ±30° for AG-03 version |
| Tilt Resolution | ±0.01° for AG-01 version \| ±0.001° for AG-03 version |
| Tilt Repeatability | ±0.075° for AG-01 version \| ±0.010° for AG-03 version |
| Tilt Temperature Drift | ±0.2° per 10℃ for AG-01 version (when installation X~0° and Y~0°) |
| Sensor sampling rate | 1Hz max (recommend for Solar powered version) |
| COMMUNICATION | |
| SF Factors | SF7~SF12 |
| Antenna | External antenna |
| Power Supply | Primary batteries 01 x C size 3.6VDC (battery not included) or Solar Panel with Rechargeable batteries 1 x C size (not included) |
| RF Frequency and Power | 860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915 |
| Protocol | LoRaWAN Class A V1.0.3 |
| Data sending modes | interval time, alarm and manually triggering by magnetic key |
| Alarm function | for X-axis and Y-axis only |
| Housing | Cast aluminum, IP66 |
| Ambient working temperature | -40~85℃ (use with SAFT LS26500) |
| Size \| Net weight | H106xW100xD75 (not including antenna)/ ≈600g |
| Mounting type | Wall mount |

## DIMENSION DRAWING OF SENSOR NODE
(Unit: mm)



312.00
78.00
106.00
2xR4.00
100.00
75.00
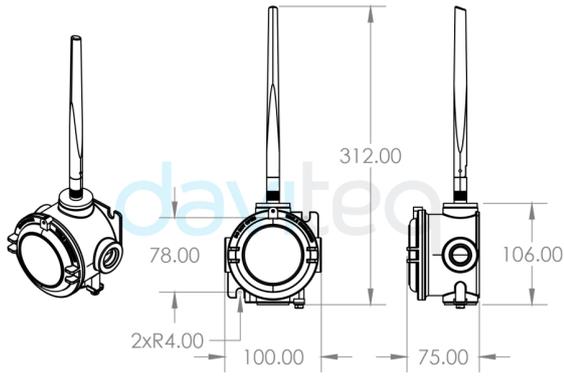
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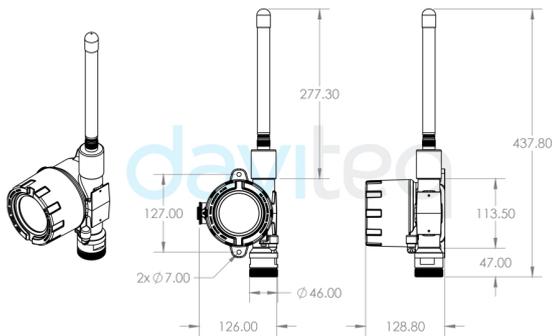## RECOMMENDED BATTERIES FOR LoRaWAN SENSOR

### LS 26500 Lithium battery



-60°C..+85°C working temperature

Low self-discharge rate

7.7 Ah Capacity

WSLRWEX-AG-H8.JPG

## DIMENSION DRAWING OF SENSOR NODE
(Unit: mm)



277.30
437.80
127.00
113.50
47.00
2x Ø 7.00
Ø 46.00
126.00
128.80

WSLRWEX-GHC-H5.JPG

## Ordering Information

| ITEM CODE | DESCRIPTIONS |
|---|---|
| WSLRWAL-AG-01 | LoRaWAN Heavy-duty Tilt sensor, External antenna, XYZ tilt measurement, 0.075° Repeatability, 3.6V Battery, -90°~90°, IP66 |
| WSLRWAL-AG-03 | LoRaWAN Heavy-duty Precision Tilt sensor, External antenna, XY tilt measurement, 0.01° Repeatability, 3.6V Battery, -30°~30°, IP66 |