

Wireless 3-Axis Tilt Sensor



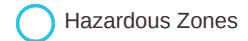
Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Farm, Smart Factory

SKU: WS433-AG

WIRELESS 3-AXIS TILT SENSOR WS433-AG



WS433-AG-H1.PNG



WS433-AG is a wireless Tilt Sensor, can be used to measure 3 tilt angles X, Y, Z of any object as Tower, Building, Tree, Electricity Tower, Telecom Tower, Bridges... The Tilt sensor utilizes the combination of advanced Accelerometer and Gyro meter to deliver high accuracy and stable measurement of Tilt angle of 03 axis X,Y,Z. It will connect 2-way wirelessly to the wireless co-ordinator WS433-CL to send data and receiving the configuration. It can be configured the operation parameters like data sending interval, health check cycle...remotely from Globiots platform or via ModbusRTU software (thru the WS433-CL). Its default data rate is 50kbps, can be switched to 625bps to increase the communication range. The sensor can last up to 10 years with 1 x AA battery.

Typical Applications: Telecommunication Tower, Electricity Tower, Building, ...

Applications

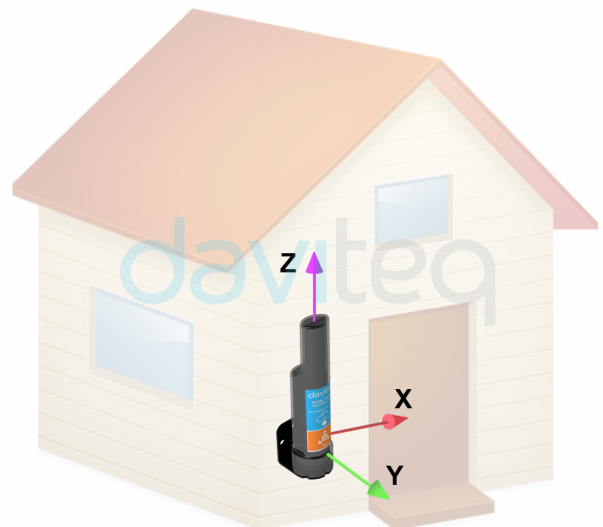
Facility Monitoring, Flood Monitoring, Infrastructure Monitoring, Level Monitoring, Machine Health Monitoring, Safety Monitoring, Tilt Monitoring

Notes For Applications

Tilt Range: Match the angle range to your needs (e.g., $\pm 45^\circ$, $\pm 90^\circ$). Accuracy & Resolution: Higher values for precise applications. Axes: Single or multi-axis depending on complexity. Sensor Type: Mechanical (simple) vs. MEMS (advanced). Environment: Check temperature, waterproofing, and shock resistance. Power: Ensure voltage/current match your system. Size & Mounting: Fit your design and installation needs.

- Reliable & Secured Wireless Connection**
Sub-Ghz technology from Texas Instruments allows reliable wireless connection and secured data by AES-128
- Ultra-low power with 5 years battery**
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology from Texas Instruments allow the sensor can last up to 5 years
- High Accuracy & Stable**
Advanced Accelerometer with Gyro meter to deliver high accuracy and stable measurement of Tilt angle of 03 axis X,Y,Z;
- IP67**
For both indoor and outdoor applications

TILT SENSOR INSTALLED ON THE WALL



WS433-AG-H2.PNG

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Created date: Dec-21-2022


Updated date: Nov-08-2025


Specification

SENSOR SPECIFICATION	
Tilt Sensor	Built-in advanced accelerometer and gyro meter to deliver tilt angle measurement of X, Y, Z
Measurement range	±90° of XYZ
Repeatability	±0.25°
Sensor sampling rate	1Hz max
WIRELESS SPECIFICATION	
Data speed	Up to 50kbps
Transmission distance, LOS	LOS 500m
Antenna	Internal Antenna, 3 dbi
Battery	01 x AA 1.5-3.6VDC, up to 10 years operation, depends on the configuration
Frequency Band	ISM 433MHz, Sub-GHz technology from Texas Instrument, USA
International Compliance	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval Certification	QCVN 73:2013/BTTTT, QCVN 96:2015/BTTTT (DAVITEQ B00122019)
Security Standard	AES-128
Operating temperature of PCB	-40~60°C (with AA L91 Energizer®)
Housing/ Protection	Poly-carbonate, IP67
Mounting method	Mounting bracket for wall mount
Dimension	125x30x30mm
Net weight	60g

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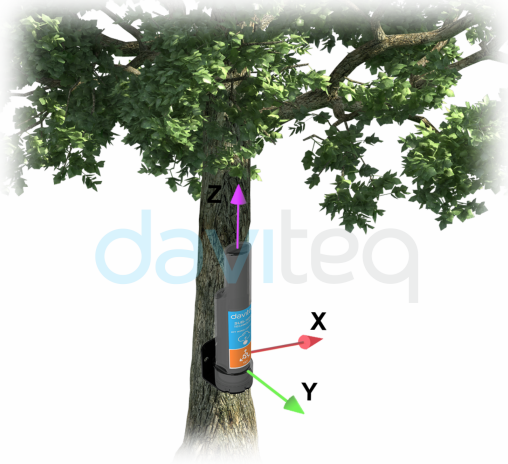
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TILT SENSOR INSTALLED ON THE TREE



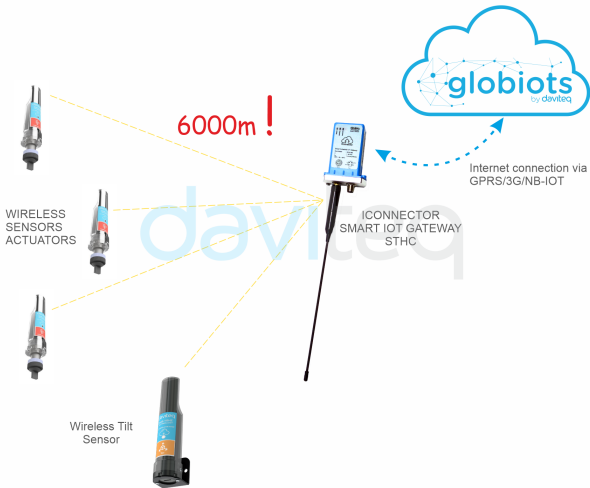
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TILT SENSOR FOR CRANE MONITORING



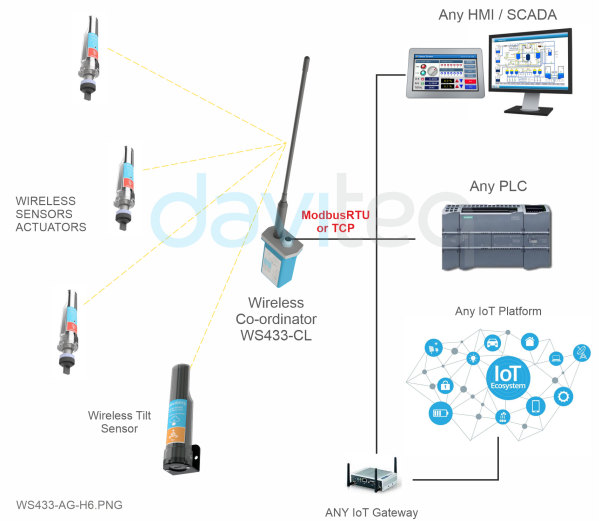
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CONNECT WIRELESS SENSORS TO GLOBIOTS Platform



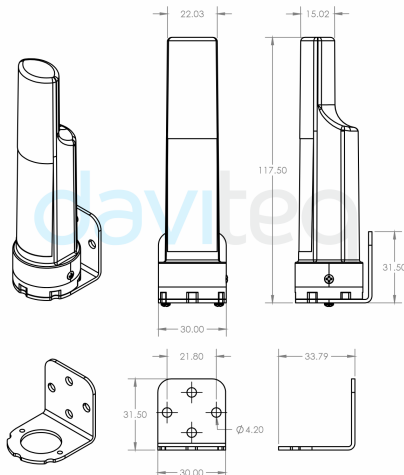
WS433-AG-H5.PNG

CONNECT WIRELESS SENSORS TO any PLC, HMI, SCADA or IoT Platform



WS433-AG-H6.PNG

DIMENSION DRAWING OF WIRELESS SENSOR (Unit: mm)



WS433-AG-H7.PNG

RECOMMENDED BATTERIES

E91 AA Alkaline battery



-18 .. + 60 oC working temperature
10-year shelf life
3000 mAH Capacity
Price: 1X

L91 AA Lithium battery



-40 .. + 60 oC working temperature
20-year shelf life
3500 mAH Capacity
Price: 3.5X

WS433-AG-H8.PNG

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Ordering Information

ITEM CODE	DESCRIPTIONS
WS433-AG-01	WIRELESS 3-AXIS TILT SENSOR 433MHZ, AA 1.5-3.6VDC BATTERY, IP67

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