

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

☒ Safe Zone

☐ Hazardous Zones

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, ...

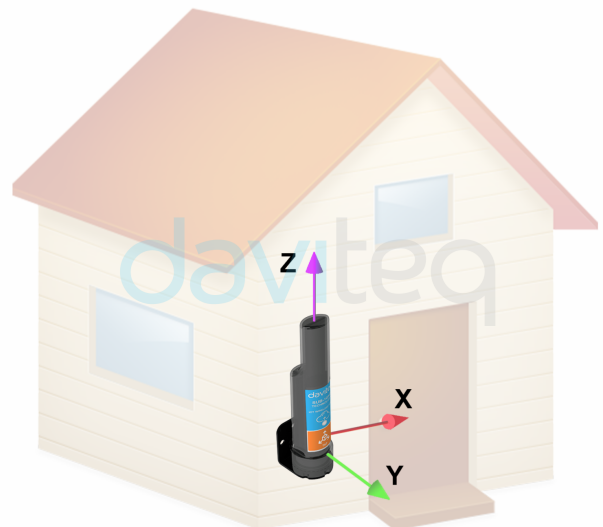
Applications

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

Notes For Applications

- 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...

TILT SENSOR INSTALLED ON THE WALL



WS433-AG-H2.PNG

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Created date: Dec-21-2022

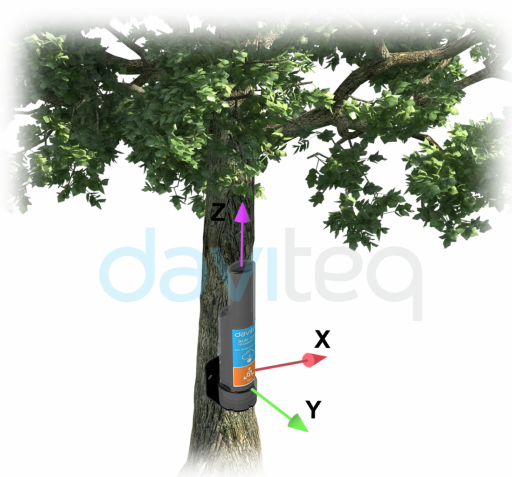
Updated date: Aug-28-2024

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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

TILT SENSOR INSTALLED ON THE TREE



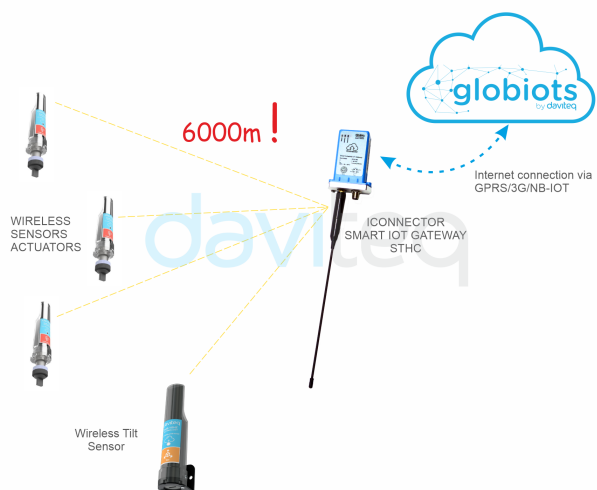
WS433-AG-H3.PNG

TILT SENSOR FOR CRANE MONITORING



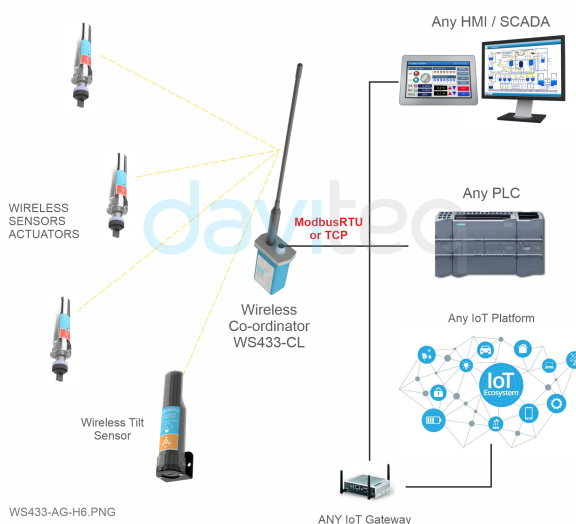
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CONNECT WIRELESS SENSORS TO GLOBIOTS Platform

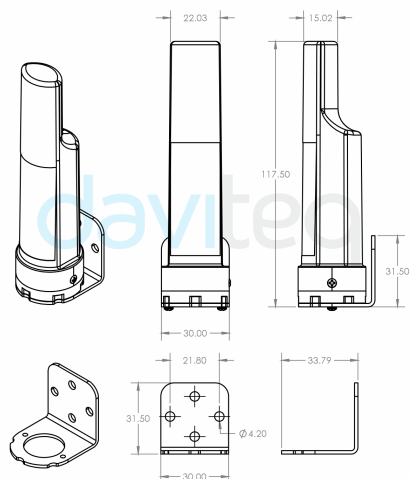


WS433-AG-H5.PNG

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 °C working temperature
10-year shelf life
3000 mAh Capacity
Price: 1X

L91 AA Lithium battery



-40 .. + 60 °C working temperature
20-year shelf life
3500 mAh Capacity
Price: 3.5X

WS433-AG-H8.PNG

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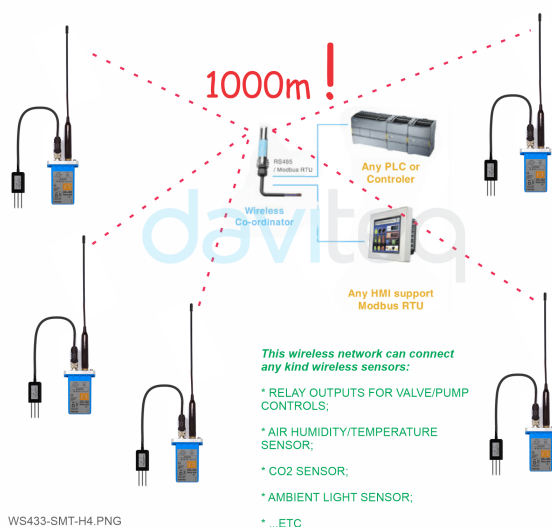
SOIL MOISTURE SENSOR INSTALLATION



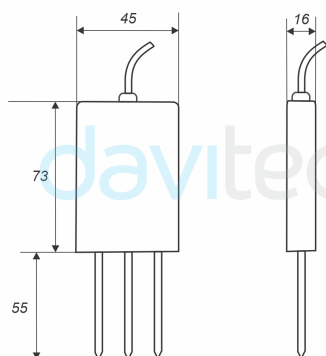
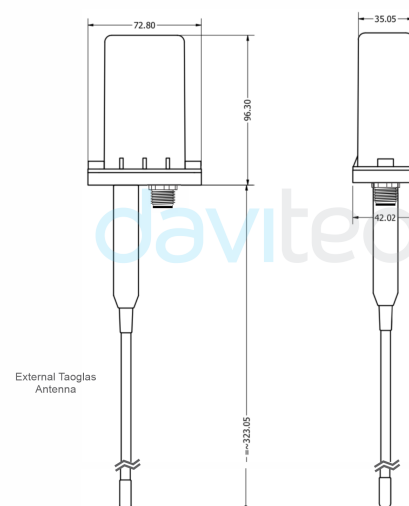
INSTALLATION FOR MULTI-LAYER MEASUREMENT



40 WIRELESS SENSORS CONNECT TO ONE CO-ORDINATOR



CONNECT WIRELESS SENSORS TO GLOBIOTS Platform

DIMENSION DRAWINGS OF SENSOR
(Unit: mm)DIMENSION DRAWINGS OF WIRELESS SENSOR
(Unit: mm)

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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