VENTek
Wireless That Makes Perfect Sense

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Wireless Tilt Monitor
Quick Setup Sheet
WP1P/WP2P

Sensor Temperature Range: -20°C to 70°C (-4°F to 158°F)
Environmental Classification: NEMA 4X
Transmission Frequency WP1P = 418 MHz WP2P = 433 MHz
Sensor Transmission Rate: 10 to 17 seconds (random)

Parts List:

Quantity	Part
1	*WPxP Tilt Monitor* with bracket
1	Magnetic Key Fob
2	1" x 2" (25 x 50mm) Dual-Lock Strips
4	#6 x 1" Self-drilling Screw

Description:

The *WP1P/WP2P Wireless Tilt Monitor* is a low-power device that monitors discrete angular position and maintains a count of tilt events. The count is incremented when the sensor is tilted forward from a vertical orientation as shown below. The transmitter sends data at random intervals between 10 and 17 seconds. On state changes, it transmits the updated data within one second. The battery will typically last from 2 to 5 years depending on angular position change frequency.

Mounting:

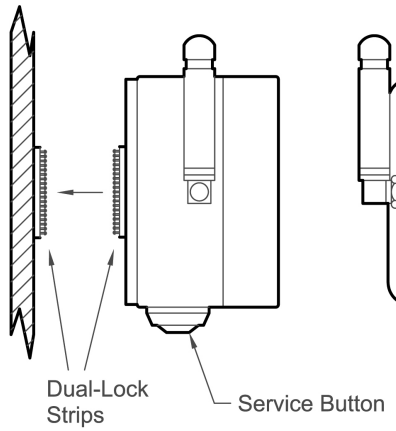
The sensor must be installed as shown below or it may not accurately indicate position. The sensor bottom should be horizontal as shown in the center figure.

Option #1: Attach the *Wireless Tilt Monitor* to the tilting surface using the provided Dual-Lock strips.

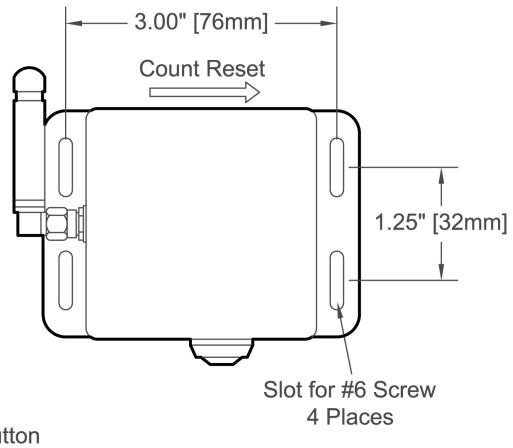
Option #2: Attach the *Wireless Tilt Monitor* to the tilting surface using the provided #6 x 1" self-drilling screws or other suitable screws.

Option #3: Attach the *Wireless Tilt Monitor* to the tilting surface using the **optional** *Mag-Mount Universal Mounting Bracket* (P/N# UMB-S2N - not shown).

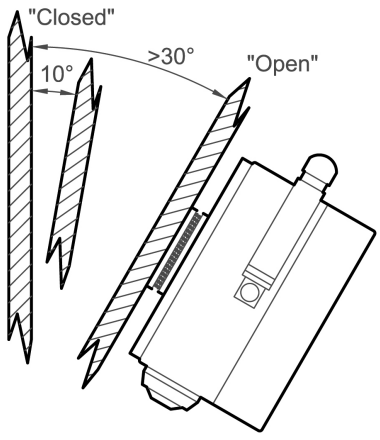
Mounting Option 1: Dual-Lock Strips



Mounting Option 2: Screws



Operation



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Monitor Setup:

1. Loosen the four cover screws to remove cover. Install battery to turn power on (circuit board is labeled to indicate correct polarity).
2. Press the transmitter's service button to configure it to the sensor's specifications.
3. When the monitor system is active, the LED will flash every 10 to 17 seconds. Pressing the service button will immediately flash the LED to indicate the functionality of the monitor.
4. Replace the cover and tighten all four cover screws.

e-Guard OPC Data Manager - Quick Sensor Setup:

1. Start e-Guard OPC Data Manager (consult installation instructions if software is not already installed).
2. Click the ***Server Settings*** menu, then ***Device Registration*** in the upper left corner.
3. Press the transmitter's service button to register the sensor. Its serial number will appear in the ***SN*** column with default values appearing in the other columns (serial numbers are listed sequentially).
4. Modify e-Guard software settings as desired:

Column	Default Value	Permissible Entries
Topic	Sensor serial no.	Alphanumeric characters (25 max; blanks and dashes ok) representing sensor *name*
Active	Yes	Yes = e-Guard OPC Data Manager publishes sensor data No = e-Guard OPC Data Manager does not publish sensor data
Dashboard	Yes	Yes = Sensor data is logged in the database No = Sensor data is not logged in the database
ShowTile	Yes	Yes = Sensor data is displayed on a tile in the e-Guard Dashboard No = Sensor data is not displayed in the e-Guard Dashboard
Baseline	0	Integer value (6 digits max) representing the baseline measurement value for the specific sensor (not used for this sensor type).
TransmitFrequency	12	DO NOT CHANGE – this value is used to calculate sensor efficiency
SaveInterval	1	Integer value between 0 and 32,767 specifying the data logging interval for the VenTek Sensor Database in *minutes*. A zero (0) value will log every data packet.

5. Close the ***Registered Devices*** window when finished. The window will close automatically after 1 minute of inactivity.
6. Leave e-Guard OPC Data Manager running to continue data logging. Close the program to end.

VenTek *eGuard* Software Sensor Configuration:

This sensor is a standard device, so the software should already be programmed with the proper information. If the software does not recognize the sensor, verify that both sensor types below appear in the software by clicking the ***Server Settings*** menu, then ***Type Settings*** in the upper left corner:

Type	LoRaw	HiRaw	LoEng	HiEng	Units	LoRaw2	HiRaw2	LoEng2	HiEng2	Units2	ServiceBit	Legacy
74	0	0	0	0	Counts	0	0	0	0	Units	73	0
03	0	0	0	0	Counts	0	0	0	0	Units	73	0

Resetting the Count:

1. Press and hold the blue service button.
2. Pass the Magnetic Key Fob slowly across the sensor side opposite service button (see central figure on Page 1). The reset switch is internal and magnetically activated.
3. Release the blue service button. The sensor will begin transmitting in approximately one minute.

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Wireless Communication Conditions of Use:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by VenTek, LLC for compliance could void the user's authority to operate the equipment.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 2 dBi. Antennas not included in this list or having a gain greater than 2 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

ANT1N44RM (included with *Tilt Position Monitor*)
ANT1N44SM

FCC Information:

FCC ID: UVS-WP1P
IC: 6886A-WP1P