# Leaf Wetness Sensor (#6420) User Guide

The leaf wetness sensor is used to detect the presence of surface moisture on foliage and calculate the duration of wetness. When moisture is present, the sensor detects an electrical resistance change between the gold-plated elements of the grid. When used with a Vantage Pro2™ (with Wireless Leaf & Soil Moisture / Temperature Station, #6345) or the EnviroMonitor system (with EnviroMonitor Node, #6810), this is reported as a value between 0 (dry) and 15 (wet).

Components

The leaf wetness sensor includes the following components. Please make sure you have all listed components before continuing.
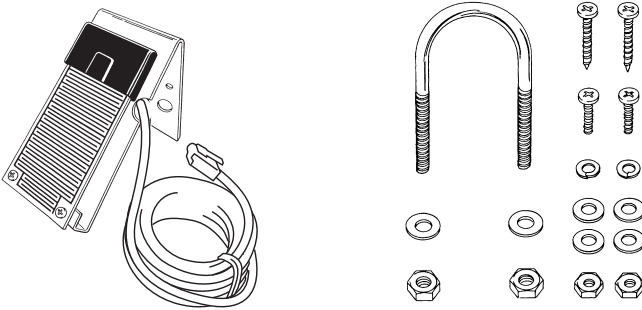
- Leaf Wetness Sensor with attached mounting bracket
- Includes an attached 40' (12 m) cable.

   Installation Hardware Kit

   • One 1-1/2" U-Bolt   • Two 1/4" Flat Washers

   • Two 1/4" Hex Nuts   • Two #8 Wood Screws

   • Two #8 x 3/4" Machine Screws   • Four # 8 Flat Washers

   • Two # 8 Lock Washers   • Two # 8 Hex Nuts
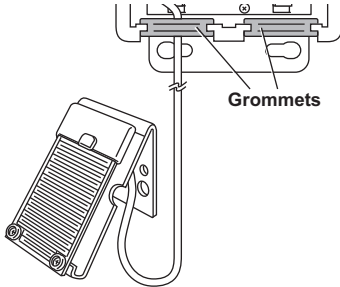
## Tools and Materials Needed

- Medium Phillips Screwdriver
- Wrench

Installing the Sensor in a Wireless Leaf & Soil Moisture/Temperature Station

1. Run the sensor cable up through the grommets on the bottom of the station housing.

2. Insert the sensor cable modular plug into the Leaf 1 or Leaf 2 modular connector.

Grommets

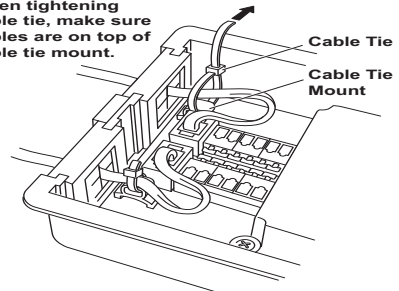*Leaf Wetness Sensor Cables Run Through Grommets*
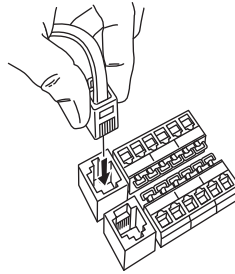
Connecting Leaf Wetness Sensors

Finish the Sensor Connections

1. Secure sensor cables to the cable tie mounts located next to the grommets.

When tightening cable tie, make sure cables are on top of cable tie mount.

Cable Tie

Cable Tie Mount

Securing Sensor Cables in the Station

Installing the Sensor in an EnviroMonitor Node

Use the EnviroMonitor app to see detailed instructions on how to connect the Leaf Wetness sensor to the Node.

1. On your smart-phone, open the EnviroMonitor app and select the Node to which you are connecting the sensor. Tap Add Sensor. From the menu, first select the sensor type (Leaf Wetness), then select Davis Instruments.

2. For simplified wiring, use a Davis RJ Adapter, product number 6860. Or, you can remove the plug and strip the wires, then follow the wiring diagram to correctly wire the sensor into one of the 6-wire sensor connectors.

3. Insert the 6-wire sensor connector into the sensor junction indicated by the app.

4. Run the sensor cable down and our of the Node through the bottom. Make sure it will be enclosed by foam when the Node door is closed.

Mount the Sensor

Mounting the Sensor On a Wooden Surface

Use the #8 wood screws to mount the sensor on a wooden surface as shown.

 # 8 Wood Screws
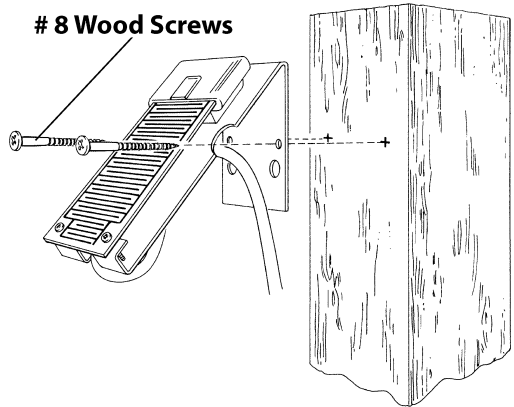
Mounting the Sensor on a Pole

To mount the sensor on a pole, stake, or pipe with outside diameter between 1" and 1-1/4" (25 mm and 31 mm), secure the sensor to the pipe using the 1-1/2" U-bolts, 1/4" flat washers, and 1/4" hex nuts as shown below. Use a 7/16" wrench or adjustable wrench to tighten the hex nuts.

Solar Panel

U-Bolt

1/4" Hex Nut

1/4" Flat Washer
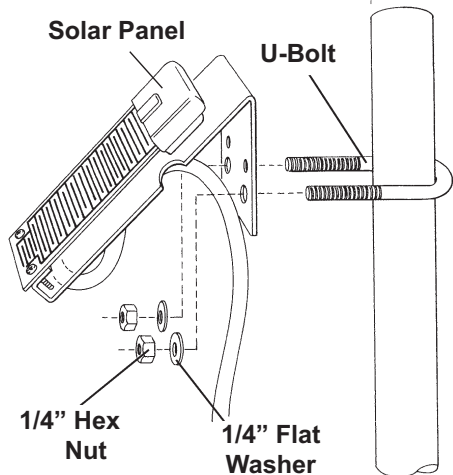
Secure the cables

To prevent fraying or cutting of cables, secure them so they will not whip about in the wind. Secure cables to a metal pole by wrapping electrical tape around them both. Make sure cables are secure by placing clips or ties approximately every 3 – 5' (1 – 1.6 m)

Cable Clip

Cable Tie
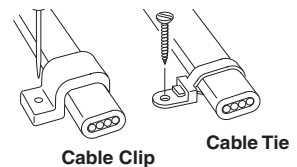
Note: Do not use metal staples or a staple gun to secure cables. Metal staples — especially when installed with a staple gun — have a tendency to cut the cables.

Contacting Technical Support

For questions about installing or operating your Leaf Wetness Sensor, please contact Davis Technical Support. We'll be glad to help.

Note: Please do not return items to the factory for repair without prior authorization.

Online   **www.davisnet.com**

See the Weather Support section for copies of user manuals, product specifications, application notes, software updates, and more.

E-mail   **support@davisnet.com**

Telephone   (510) 732-7814
Monday - Friday, 7:00 a.m. - 5:30 p.m. Pacific Time.