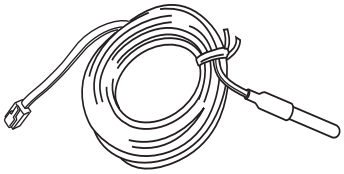
External Temperature Sensor with 25-Foot Cable
Installation Manual

The external temperature sensor may be used with the wireless Davis Weather Envoy (product no. 6316), Envoy8X (product no. 6318), Wireless Temperature Station (product no. 6372), or the Anemometer/Sensor Transmitter Kit (product no. 6330). The sensor may be used to measure air, soil, or water temperatures. It comes with a 25' (7.6 m) cable.



Tools and Materials Needed

You may need some of the following tools and materials to complete your installation. Please be sure you have everything you need before beginning.

- Shovel or spade to dig hole for sensor if using as a soil temp sensor
- Metal or plastic conduit to protect cable from rodents
- Cable clips or weather-resistant cable ties with screw holes or other means for mounting to secure cable

Testing the Sensor

Test the sensor before installing it.

1. Attach the sensor cable to the appropriate connector on the Envoy or Temperature Station. Consult your Envoy or station manual for more information.
2. Press the appropriate key on your console as necessary to make sure you are getting an outside temperature reading on the console. Or, if not using a console, check the Envoy via software. The sensor will report as “inside temperature.”

Choosing a Location for the Sensor

Use the suggestions below to find a suitable location in which to mount the sensor. Care taken in choosing a location improves the accuracy, reliability, and durability of the sensor. The ideal location would be on the NORTH SIDE of the building (south side in the Southern Hemisphere).

Note: When choosing a location for the sensor you should take into consideration the objects nearby. Objects which heat up in direct sunlight or produce radiative cooling effects may affect temperature readings by changing the surrounding air temperature.

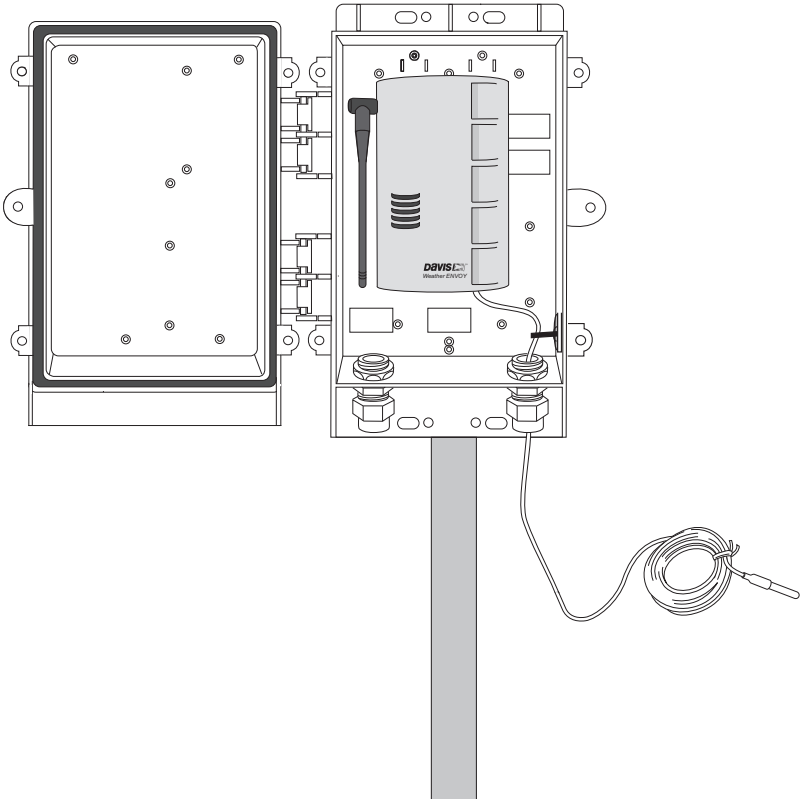
Look for a location which satisfies the following requirements:

- Place the sensor in a location where it will not be in direct sunlight and where it will have limited exposure to reflected sunlight.
- Limit the exposure of the sensor to the open night sky.
- Place the sensor at least 5 feet from man-made sources of heat.
- Keep the sensor away from AC power lines.
- If possible, place the sensor at least 5 feet from any surface which is exposed to direct sunlight because the heat from this surface may affect air temperature readings in the vicinity.

- Place the sensor in a location at least 10 feet away from lights or lamps.
- If you are unsure about a location's exposure to the night sky, check for dew at that location on a light dewy morning. If the area is dry, the location should work well.
- Keep the sensor and most of the cable at least 10 feet from 110 Vac, 60Hz utility power. Do not run the sensor cable parallel to house wiring. Mount the sensor at least 30 feet from high-voltage power lines and transformers.

Installing the Sensor

The illustration below shows a typical installation for the Envoy in a Davis Multi-Purpose Shelter (product no. 7728) mounted on a pole.



Typical Installation with Envoy in Multi-Purpose Shelter

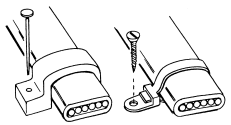
Mounting the Sensor

Depending on your use for this sensor, you may install it following the suggestions below:

- For air temperature, use a cable tie, cable clip, or electrical tape to attach the cable to a building, post, antenna mast, or other surface (make sure the sensor itself is not in contact with the building's surface). Consult the Radiation Shield manual for instructions on installing the sensor in the Radiation Shield.
- For soil temperature, bury the sensor at a depth suitable for your purposes. Where the cable runs along the ground, use metal or plastic conduits to protect the cable from rodents.
- For water temperature, drop the sensor into the water at a depth suitable for your purposes. If the cable runs along the ground at any point, use metal or plastic conduits to protect the cable from rodents.

In any case, to prevent fraying or cutting of the sensor cable where it is exposed to weather, it is important that you secure it so it doesn't whip about in the wind.

For example, you might want to use cable clips or weather resistant cable ties to secure the cable. Place clips or ties approximately every 3 to 5 feet (1 to 1.6 m). 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.



Note: When running the sensor cable, try not to tug on the cable in such a way as to loosen the connections. Also, make sure the sensor cable is not so taut that the connection may loosen or pull free due to the strain. Many sensor problems occur because cable connections come loose.

Sensor Output Specifications

Outside Temperature (Air)

Resolution and Units	1°F or 1°C (user-selectable)
Range	-40° to +150°F (-40° to +65° C)
Sensor Accuracy	±1°F (±0.5°C) under 110°F (43°C), ±2°F (±1°C) over 110°F (43°C)
Update Interval	10 seconds
Data	Instant Reading
Alarms	High and Low Thresholds from Instant Reading

Contacting Davis Technical Support

If you are experiencing problems installing the sensor, first check all cable connections. Connections should be firmly seated in the jacks and plugged in straight. If you think a connection may be faulty, try jiggling the cable while looking at the display. If a reading appears intermittently on the display, the connection is faulty. If you are unable to solve the problem, please call Davis Technical Support. We'll be glad to help. Most questions can be answered over the phone. You can also e-mail us for support or visit our web site. Sorry, we are unable to accept collect calls.

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

(510) 732-7814 — Monday - Friday, 7:00 a.m. - 5:30 p.m. Pacific Time. We are unable to accept collect calls.

(510) 670-0589 — Technical Support Fax.

support@davisnet.com — E-mail to Technical Support.

info@davisnet.com — General e-mail.

www.davisnet.com — Davis Instruments web site. See the Weather Support section for copies of user manuals, product specifications, application notes, and information on software updates. Watch for FAQs and other updates.

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