

Sensor Installation

Field Guide

Task

Install the data logger and sensors at your atmosphere study site.

What You Need

- Meter stick
- Digging tools
- 120 cm x 2.5 cm PVC tube
- Data logger assembly and cables
- Drill with 12 mm spade bit
- Wire or brackets to secure PVC tube to post
- String or wire tie
- Desiccant

In the Field

1. Plan the installation. Make sure that the distance between your box and deepest sensor is less than 5.5 meters and that it is safe to dig a 50 cm deep hole.
2. Drill a 12 mm hole, if needed, through the bottom of your shelter, near the back.
3. Place the Data logger box inside the instrument shelter.
4. Use string or a wire tie to secure the air temperature sensor (#1) inside the instrument shelter.
5. Feed your 3 long cables through the 12 mm hole and pull them through the PVC tube (which protects the cables from excessive UV and animal bites). Plan on keeping any excess wire inside the shelter.
6. Secure the PVC tube to the shelter post.
7. Dig a hole 50 cm deep on the sunny (equatorward) side of the shelter post.
8. Push sensors horizontally into the side of the hole at 50 cm (#4), 10 cm (#3), and 5 cm (#2) depths, respectively. Use a nail or steel pin with a slightly smaller diameter to pilot these holes if the soil is hard.
9. Pour desiccant into a bag made of breathable fabric (e.g., cheese cloth or a cotton sock) and place it inside the watertight box so the air inside the box will be kept dry.
10. Seal the water tight box containing the data logger.

