



Installation Instructions – Wind + Temp Sensor

Overview

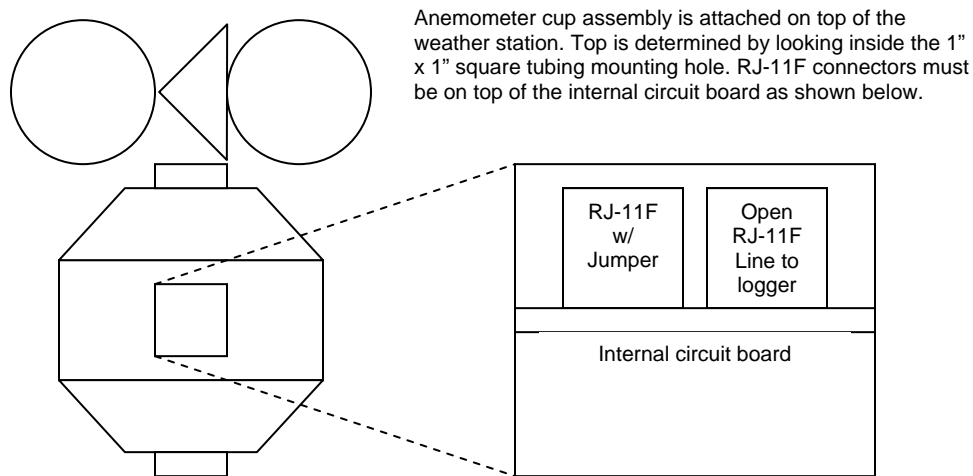
The wind + temp sensor makes use of a protocol called the “1-Wire” network, which enables multiple sensors to share a single communication line. 1-Wire sensor networks can be attached to the SolTrex logger through either of the logger’s two 1-Wire ports. There is no difference in function between the logger’s two 1-Wire ports – the two ports are offered for convenience in laying out certain 1-Wire sensor networks.

Assembly

The wind + temp sensor assembly process consists of the following steps:

1. Open the plastic housing, apply silicone sealer to the joints, and then close the housing.
2. Ensure the RJ-11 male jumper is in place. An RJ11 male with a conductor between pin 1 and pin 4 is included in the left-hand RJ11 receptacle.
3. Mount the anemometer cups to the top of the weather station body. The top can be determined by looking into the square opening where the communication line is connected. The female RJ receptacles should be above the green circuit board and in the same direction as the anemometer cups (see figure 1).

Figure 1. Mounting the Anemometer Cup Assembly to the Weather Station



Bottom of weather station assembly is not used. Wind direction sensor is not currently supported, and the wind direction vane should not be installed.

Mounting

The wind + temp sensor is provided with a short length of 1" x 1" square tubing. The plastic housing can be affixed to this housing with the provided 1 ½" bolt and lock nut.



Wiring

A 4-conductor telephone wire is recommended. It should be UV-rated and shielded. Both ends should be terminated with an RJ-11 male terminal and are wired in exactly the same way. Use a single twisted pair in positions 2 and 3 (the center 2 positions), and the other twisted pair in positions 1 and 4. At the logger end, insert the RJ-11 M terminal into either of the sockets marked (1-WIRE). At the weather station end, insert the RJ-11 M terminal into the open RJ-11 F receptacle visible through the 1" x 1" mounting hole.

Starting Up

The logger checks for new sensors attached only upon startup, so the logger will need to be rebooted in order for it to recognize the new sensors are present. If the logger has already been operating without the sensors, it will need to be rebooted to initiate a search on the 1-Wire network for attached sensors. If this is a new installation, you should complete the wiring of all sensors prior to applying power to the logger.

If you have an installer's LCD or are connected to the logger with a laptop, you can see a message during the logger's boot process that displays the number of attached sensors. By default, loggers have 12 embedded sensors, and the message shown is "#SIDs = 12". With the 1-Wire wind + temp sensor attached, the number of sensors increases by 7, and the message changes to "#SIDs = 19".