

TROUBLESHOOTING SENSOR CONNECTIVITY

REMOVE SPRUCE SENSOR FROM THE NETWORK

Start by un-joining the sensor on the hardware itself. Unpair the Sensor by holding the magnet to the magnet pad for 5 seconds. You will hear 5 beeps when this is successful.

If the sensor was joined to SmartThings, it will need to be removed from the SmartThings app as well.

After the sensor has un-joined, retry the join process as outlined on the back side of these instructions.

FOR THE HEARING IMPAIRED

If you are having trouble hearing the sensor beeps, try opening the sensor lid when actuating the magnet to increase volume.

Still need help, or don't have the magnet handy?

Visit our support page at
support.spruceirrigation.com

spruceirrigation.com/terms

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FCC Spruce™ Wireless Soil Moisture Sensor
Model Number: PS-SPRZMS-SLP1
Contains FCC ID: XFF-Z357PA20

FCC Compliance Statement

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.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

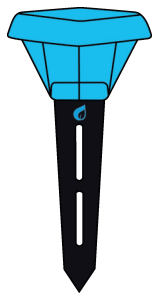
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult an experienced radio/TV technician for help.

Changes or modifications to this product not authorized by Plaid Systems could void the electromagnetic compatibility and wireless compliance and negate your authority to operate the product.

Canada Statement
This Class B digital apparatus complies with Canadian ICES-003. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

IN THE BOX

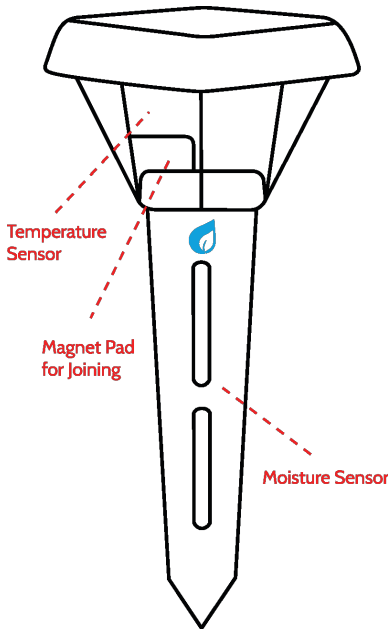
Spruce Sensor



Sensor
Joining Magnet



CR2477 Battery
(pre-installed)



BEEP CODES

Touch the magnet to the magnet pad
for sensor status.

AFTER ONE TAP

- 1 beep:** Sensor is not joined to a network
- 2 beeps:** Sensor is joined but connection is not active (for example, if sensor is out of range)
- 3 beeps:** Sensor is joined and connection is active

AFTER TOUCH AND HOLD FOR FIVE SECONDS

- 1 beep:** Sensor is not joined to a network
- 5 beeps:** Sensor has been removed from a network

Can't connect to the network?

Need more information? Visit
support.spruceirrigation.com

Operating Range
Spruce Sensors can be safely operated
between 0°F and 120°F. Moisture
readings will only be valid above freezing
temperatures (32°F).

YOUR PLANTS WILL THANK YOU FOR THIS

Your Spruce Sensor will make
your life easier by telling you
how wet or dry your soil really is.
Pair Spruce Sensors with your
Spruce Controller for in-ground
irrigation systems and let the
system control itself.

The Spruce Sensor measures
soil moisture content between 3
inches to 5 inches below the soil
surface. The Spruce Sensor can
be used indoors or outdoors.

Keep up to date with your soil
levels via the Spruce WebApp,
accessible on your phone or
desktop.

A Spruce Controller or a SmartThings
Hub is required for operation.



spruce

Soil Moisture Sensor
Quick Start Guide

SPRUCE SENSOR INSTALLATION

① START LOOKING FOR DEVICES

Your Spruce Sensor can connect to either your Spruce Controller or your SmartThings Hub. Perform the following steps near either your Spruce Controller or the SmartThings Hub.

CONNECTING TO SPRUCE CONTROLLER

The Spruce Controller must already be connected to your Spruce account. Login to app.spruceirrigation.com, navigate to the Devices page, and click on the add devices button.

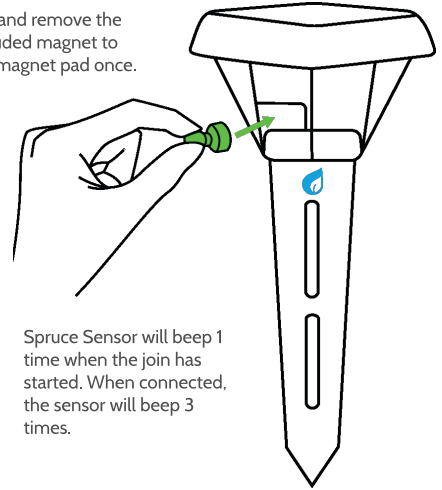


CONNECTING TO SMARTTHINGS

Open the SmartThings App and Add a Thing. Refer to the SmartThings documentation for more details.

② JOIN THE SENSOR TO THE NETWORK

Tap and remove the included magnet to the magnet pad once.



Spruce Sensor will beep 1 time when the join has started. When connected, the sensor will beep 3 times.

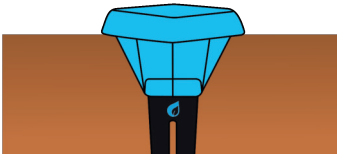
SELECTING SENSOR PLACEMENT FOR CONTROLLER FEEDBACK + AUTOMATIC SCHEDULING

Place the sensor in a location where it will be exposed to watering from the zone of your choice; ideally, in the middle of the watering area. Find a spot that is representative of the zone. Once installed, Spruce Sensors are low enough that lawn mower blades can pass over without contact.

WARNING: Impact from a riding mower tire or any other large machinery at appreciable speed can damage the Spruce Sensor. Use caution to avoid impact with Spruce Sensors if using such equipment, or locate the sensors outside of the operating area of large equipment.

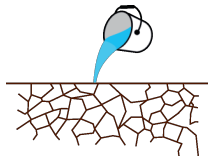
SENSOR INSTALLATION

Push the Sensor into the ground until the bottom of the Spruce Sensor is flush with the soil surface.



WARNING: Attempting to insert the sensor into hard, dense soil may cause the sensor to break.

If the Spruce Sensor is difficult to insert because the soil is packed and dry, soak the soil with water until the soil is soft enough for insertion.



SENSOR RANGE

Spruce Sensors work best up to 150 ft from either your Spruce Controller or your SmartThings Hub. However obstructions such as walls or other radio devices can drastically reduce range. Similarly, an open line of sight will increase the range significantly. Any Zigbee wall-powered device connected to the same Zigbee network will also act as range extenders for Spruce Sensors. No additional setup is required for range extension to occur.

BATTERY

Spruce Sensors use a CR2477 coin cell battery which should last one year. If a battery change is needed, open the Spruce Sensor lid to expose the battery. To remove the battery, tap the open end of the sensor against the palm of your hand until the battery is exposed enough to be extracted manually.

READING MOISTURE DATA

Moisture data can be viewed in the Dashboard or the Sensor Data section of the Spruce WebApp. It should typically read in from 15%-45% and the range will vary based on soil type. The sensor will poll for moisture data every 15 minutes.

If there is no change in the moisture value, no activity will be reported.

Because of this, it may take several hours for a moisture reading to report.