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 3 seconds. You will see a green flash, indicating that the sensor is currently joined, then two red flashes, indicating that the sensor was successfully un-joined.

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

Still need help?

Visit our support page at
support.spruceirrigation.com

SPRUCE IRRIGATION APP

Search for "Spruce Irrigation" in the Google Play or iTunes App Store.

GET IT ON Google Play   Download on the App Store

You can also access the app from any browser at:
app.spruceirrigation.com

Web App

spruceirrigation.com/terms

IN THE BOX

Spruce Sensor

Sensor Joining Magnet

CR123A Battery
(pre-installed)

Temperature Sensor

Moisture Sensor

Magnet Pad

LED Indicator
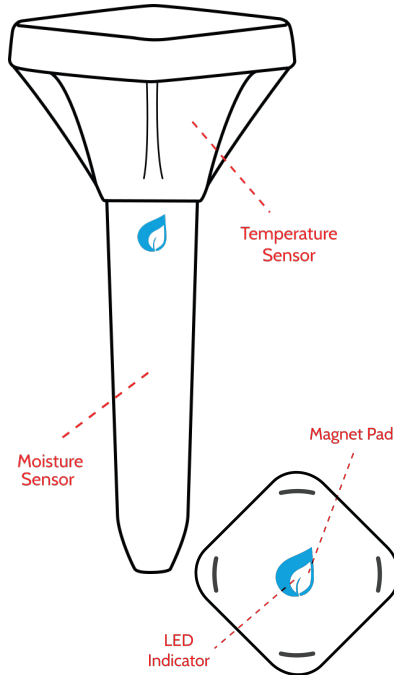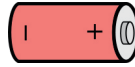
LED CODES

Touch the magnet to the magnet pad for sensor status and various actions.

AFTER ONE TAP

2 green blinks: Sensor is joined to a network. This also initiates a manual report.

2 red blinks: Sensor is not joined to a network. The join is also started at this time.

1 green blink, then 2 red blinks: Sensor is joined to a network but cannot find its parent.

AFTER TOUCH AND HOLD FOR THREE SECONDS

2 green blinks, then 2 red blinks beep: Sensor has been removed from a 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 App, available on Google Play, the Apple App store, or in your browser.

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 online and connected to your Spruce account. Login to the Spruce App, tap on the add devices button, then follow the on-screen instructions..

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.

The Spruce Sensor LED will blink red 2x (indicating that the sensor is currently not connected), then alternate between red and green, indicating that the sensor is looking for a network.
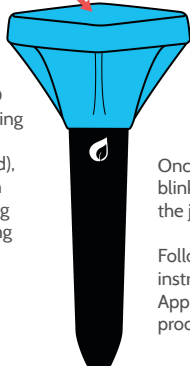
Once joined, the LED will blink once, indicating that the join was successful.

Follow the on-screen instructions in the Spruce App to complete the join process in the app.

③ READING DATA

Moisture data is expressed as volumetric water content, and can be viewed in the Sensor section of the Spruce App. It typically reads 15%-45%. The range varies based on soil type.

AUTOMATIC POLLING

The sensor will poll for moisture and temperature every 1 minute, and will report if there is a change. The sensor will always report after 1 hour, even if there is no change in value.

MANUAL TRIGGER

If the sensor is currently joined to a network, a data poll can be manually triggered by tapping the magnet to the magnet pad once. The sensor will blink green 2 times, indicating that the sensor is currently joined, and that the sensor has checked for data.

④ SELECTING 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, or locate the sensors outside of the operating area of large equipment.

⑤ PHYSICAL 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 sensor is difficult to insert, soak the soil with water until the soil is soft enough for insertion.
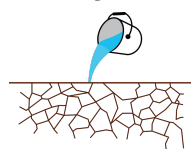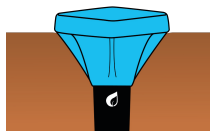
SENSOR CALIBRATION

Spruce Sensors are calibrated at the time of manufacture, and shouldn't need to be calibrated after joining. If minor differences in moisture data are observed between different sensors, the sensor may be calibrated again.

Refer to the Spruce Support site for further instructions on the calibration procedure.

SENSOR RANGE

Spruce Sensors work best up to 100 feet from your Spruce Controller. Obstructions such as walls or other radio devices can drastically reduce range. Similarly, an open line of sight increases the range significantly. Any Zigbee wall-powered device in the same Zigbee network will also act as a range extender for Spruce Sensors. No additional setup is required for range extension to occur.

BATTERY

Spruce Sensors use a CR123A battery which lasts for more than one season. If a battery change is needed, open the Spruce Sensor lid by twisting the lid counter clockwise.

Rechargeable CR123A batteries are also suitable for use in the Spruce Sensor. Please be aware that most rechargeable batteries typically have a lower capacity, resulting in shorter battery lifetime.