

biSensor™ Soil Moisture Sensors

Baseline biSensors measure soil moisture with patented TDT (Time Domain Transmission) technology. biSensors are self-calibrating for all soil types and conditions and are unaffected by salty soil conditions or soils with a high pH. biSensors can be connected to a two-wire path or conventional wire and provide automatic or user-requested measurements so the controller can make smart irrigation decisions specific to the landscape the biSensor is installed in.

Baseline offers two different biSensors to meet your watering needs. The 15" original biSensor is ideal for in-ground applications, and water feature monitoring; and the 3" compact biSensor is ideal for greenroofs, greenwalls, and containers.

The two biSensors differ only in dimensions; otherwise, they both have the same operating features and operating specifications. You can use either biSensor in any application.

Features

- Accurately measures soil moisture using patented modified TDT technology
- Self-calibrates to all soil types and conditions
- Soil moisture readings are within $\pm 3\%$ of the actual volumetric soil moisture content
- Measurement ranges from 5% moisture to fully saturated soil
- Capable of measuring changes of less than 0.1%
- Measures soil temperature
- Moisture readings are consistent in salty conditions
- Sensor is completely sealed – no electrical contact with soil eliminates any electrostatic degradation or Galvanic corrosion of the sensing element
- Power surge resistant
- Shock resistant
- Not affected by salts or fertilizers
- Provides automatic and user-requested measurements of soil moisture and soil temperature
- Has true two-way communication using a 9-byte packet for commands and replies
- Capable of self-identifying to the two-wire controller and will report pre-configured unique serial numbers
- Has one pre-assigned serial number
- Has standard error collision detections and will resend messages on the two-wire

Specifications

- Sensor blade is constructed of a multi-layer fiberglass stick
- No electrical contact with soil
- Has a built-in temperature sensor used while calibrating the soil moisture readings
- Can only be connected to Baseline controllers
- Requires 3M™ DBR/Y-6 or equivalent wire connections on the two-wire side
- Requires all connections to be installed according to manufacturer's instructions
- Comes with 50 feet of 18-gauge (UL) direct burial, dual conductor irrigation cable to connect to the two-wire (voltage rating: 300V, temp rating: 167°F (75°C))
- Has a standard warranty of 5 years from the date of installation
- Freeze/heat resistant -4°F to 140°F (-20°C to 60°C)
- Sensor logic module measures 2" x 3" x 1"
- BL-5311 Compact biSensor
 - Sensor blade measures 3.2" x 3.25" x .075"
 - Measured volume is 4.5 in³, or 0.25" on either side of the sensor
- BL-5315B Original biSensor
 - Sensor blade measures 14.95" x 2.25" x .075"
 - Measured volume is 12.96 in³, or 0.25" on either side of the sensor



Baseline biSensors are
available in two sizes.



Installation Specifications

- Keep the maximum wire run between soil moisture sensor and the controller the same as stated in the two-wire specifications.
- Connect the soil moisture sensor to the two-wire per manufacturer's specifications.
- Install the soil moisture sensor in a location representative of the zones that the sensor is controlling.
- Bury the soil moisture sensor in an area of average water distribution between two sprinkler heads and place it on the centerline between sprinklers.
- Install the soil moisture sensor 2-3 inches below surface of the soil or in the top 1/3 of the root zone.
- Bury the soil moisture sensor so there are no air pockets or rocks in contact with the sensor.
- Mark the location of the soil moisture sensor decoder so you can find it in the future and avoid damaging it when aerating.
- Make all splices inside a valve box with a 3M™ DBR/Y-6 or an equivalent direct-burial moisture-resistant connector.

How to Specify

- BL-5311** Compact biSensor Soil Moisture Sensor
- BL-5315B** Original biSensor Soil Moisture Sensor