

Product descriptions

1. Analog microtensiometer probe + install materials

A microtensiometer probe that comes with the materials needed for installation. You need to provide a drill and mallet to install the sensor and installation takes 15 to 30 minutes. To read the sensor, you will need a datalogger with 1-10 V output (preferably 1V) for power and reading mV-level electrical output with microvolt resolution. Each probe has unique factory calibration coefficients that are needed to interpret the voltage output. You can provide your own datalogger, or purchase a FloraPulse datalogger and data plan.

The current FloraPulse probes are semi-reusable. They can be removed and re-installed in a different tree, but this capability is untested and we cannot guarantee good results with re-used probes. We recommend installing and leaving each sensor in the same tree for the life of the sensor. Each sensor is guaranteed to work for one growing season, with an expected life of 1-2 years depending on the crop and environment.

2. Analog SDI12 converter box for 1 probe

This electronic box allows you to read one analog microtensiometer probe with an SDI12 datalogger. Each SDI12 converter box comes pre-configured with the calibration for one microtensiometer probe, but can be re-programmed to work with a different probe. The box electronics are potted in urethane and should last many years in the field. They have a 3-year warranty.

The SDI12 converter box requires an SDI12 compliant datalogger for reading and storing the information. You can provide your own datalogger, or purchase a FloraPulse datalogger and data plan.

3. Datalogger system

The FloraPulse datalogger is configured to work right out of the box with minimal set up. The logger includes a pre-attached solar panel and internal lithium battery for continuous operation. Each logger can read two FloraPulse analog microtensiometers and an irrigation pressure switch.

This pressure switch plugs into your drip line and measures when the drip line is pressurized (ON) or depressurized (OFF). Coupled with the FloraPulse system, this data is useful to know when your irrigation system is on and tracking the number of hours for each irrigation.

The data is read every 20 minutes and uploaded once an hour to the FloraPulse dashboard for viewing. Each logger has an internal SD-card that backs up the data in case of outage in cellular coverage. The loggers come with a universal SIM card that connects to most cellular carriers worldwide. Keep in mind that you need to have adequate cellular service in your field to use this logger (if you can browse the internet from your cellphone in the field, you're probably good). You can purchase an external cellular antenna (\$200) to increase the reception.

To access the data, each datalogger requires a \$500/year cellular data, visualization and service. We guarantee each logger to last for 3 years. The internal logger battery is a 5,000 mAh 26650 lithium-ion cell and will need replacement every 3-5 years, but is widely available and inexpensive. Newer logger versions can be used in “SD card mode” for local-only access to the data.

4. Cellular data, visualization and service

If you decide to outright purchase a FloraPulse datalogger, you will want to get our cellular data, visualization and service package. This package is necessary for your logger to upload the information to the internet and to view the data on the Florapulse.com dashboard. It also includes technical support for issues with sensor data, cellular connectivity and general support and questions. The price tag for this service is purposely high to allow us to afford and offer great customer service.

5. All-inclusive service

We recommend that growers, or scientists that want something that ‘just works’ and don’t want to spend time setting up systems, use our all-inclusive yearly service. This service is less expensive up-front and includes everything needed to start getting FloraPulse data after only 30 minutes of installation time. The service includes a cellular datalogger with two microtensiometer probes (for increased reliability), a pressure switch (to measure irrigation timing and quantity), cellular data and visualization, and replacement probes when needed. With this service, you lease the hardware from FloraPulse for a yearly fee. FloraPulse in turn guarantees that you will get good results and will send you replacement probes or loggers if anything goes down or breaks. As equipment improves each year, you will receive upgrades so your system will be up-to-date. **If you decide to terminate service, you will need to ship the dataloggers back to FloraPulse (we will pay for shipping).**

Payment terms: ACH, credit cards, or net 30 with credit approval. There is a 1.5% late fee per month for unpaid invoices.