



Delta-T Devices



Soil Moisture Products

Irrigation, Horticulture and Agriculture

Research grade sensors and systems for growers

- Monitor soil moisture
- Improve yields and quality
- Demonstrate water-use efficiency

Precise measurement of growing conditions is key to effective irrigation. Delta-T Devices provides soil/substrate sensors that accurately measure water content, temperature and pore water conductivity. The sensors can be used with a hand-held meter for instant spot readings. Alternatively they can be buried and connected to a control system, or to one of our reliable (cloud-linked) data logger controllers.



WS-GP Weather Stations

- Powerful, rugged weather stations
- WS-GP2 for advanced control applications
- WS-GP1 for compact, highly portable system

HH2 Moisture Meter

- Hand-held meter for instantaneous readings and data storage
- Intuitive range of set up options
- Easy one handed operation

The HH2 is a versatile readout unit for use with Delta-T soil moisture sensors (it does not provide temperature readout from ML3 or SM150T sensors).

Connect: ML3, SM150T, PR2, WET

SM150 Kit

- Affordable, portable kit for easy soil moisture measurements
- Comprises SM150T Sensor, HH150 Meter and carry case

WET150 Kit

- Affordable, portable kit for easy measurements of moisture, temperature, and EC
- Comprises WET150 Sensor, WET150 Meter and carry case



SM150T

- Cost effective soil moisture and temperature sensor
- Stable and accurate ($\pm 3\%$ VWC)
- Ideal for substrate monitoring

The SM150T is the perfect sensor for a wide range of applications in horticulture and agriculture. It can be used in both soils and substrates - and is buriable. The SM150T is a reliable and cost-effective solution for system integrators, who appreciate its ease of installation and simple interface (0 – 1 V DC output).

Connect: HH2, GP1, DL6, GP2

WET150

- Measures Water Content, Electrical conductivity (EC) and Temperature
- Digital SDI-12 interface
- Research-grade quality at lower cost

The Digital SDI-12 enabled WET150 Sensor brings true research grade performance down to a price level not previously possible. In addition to moisture and temperature it also measures EC - a strong indicator of the general nutrient level. A key strength of SDI-12 is that it supports the connection of multiple networked sensors to a single input on a SDI-12 enabled master device.

Connect: GP2, WET150 Meter

WET Sensor

- Measures Water Content, Electrical conductivity (EC) and Temperature
- Temperature sensor in metal rods for near instantaneous measurement
- Rapid monitoring for consistent growing conditions

In just 5 seconds the WET Sensor checks 3 crucial variables that influence plant growth.

Connect: HH2, GP2, GP1

Moisture sensors and controllers for effective water management

GP1 Data Logger

- Low cost data logger with monitoring and control options
- 2 analogue channels, plus temperature and counter inputs

The GP1 is a compact, weatherproof data logger. It can be used to enhance time based irrigation systems to include moisture control.

Connect: ML3, SM150T, WET



GP2 Advanced Logger & Controller

- Powerful and rugged field data logger
- 12 differential channels
- Simple connection to Profile Probes (x2)
- Free use of DeltaLINK-Cloud data sharing service
- Huge additional capacity for SDI-12 Sensors

The GP2 is an advanced SDI-12 enabled data logger that is easy to use, rugged and reliable. It is compatible and with most sensor types - and is ideal for demanding research and monitoring projects / irrigation control, and advanced control applications.

Connect: ML3, SM150T, PR2, WET



DL6 Data Logger

- Reliable data logger with monitoring and control options
- Simple connection to Profile Probe (x1)
- 6 analogue channels, plus temperature and counter inputs

The DL6 is optimised for use with Profile Probes, but its versatility enables it to store readings from other moisture sensors, a rain gauge, and/or temperature input.

Connect: ML3, SM150T, PR2



ML3 ThetaProbe

- Outstandingly accurate soil moisture sensor
- Built-in temperature sensor

The ThetaProbe is respected worldwide for its accuracy, reliability and ease of use. It is exceptionally tough and can be used in all soil types - and substrates, including sand, clay, peat and saline soils.

Connect: HH2, GP1, DL6, GP2

PR2 Profile Probe

- Portable, simple and accurate soil moisture profiles
- Dual purpose - installed and portable
- PR2/4 - 4 readings, down to 0.4 m
- PR2/6 - 6 readings, down to 1 m
- Digital SDI-12 version available






With the Profile Probe you can easily record soil moisture changes over time, then create a water balance or optimise irrigation scheduling. Readings are taken in robust GRP access tubes.

Connect: HH2, DL6, GP2

ML3 and SM150T Installation

The ML3 and SM150T Sensors can be buried at depth by augering or trenching.

Water content sensors

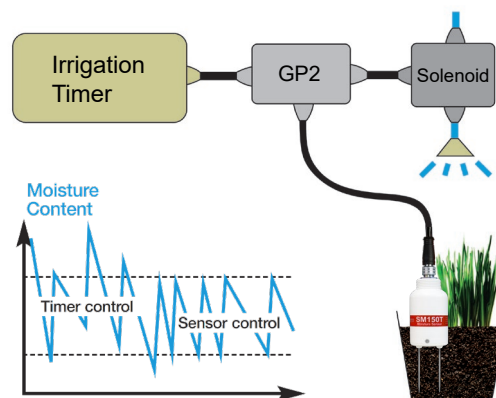
	ML3	WET150	SM150T	WET Sensor	PR2
					
Measurement	Soil water content Temperature ^[2]	Soil water content, EC, Temperature	Soil water content Temperature ^[2]	Soil water content, EC, Temperature	Soil water profile (4 or 6 depths)
Accuracy ^[1]	± 1%	± 3%	± 3%	± 3%	± 4%
Moisture range	0 to 50%	5 to 100%	0 to 70%	0 to 100%	0 to 40%
Temperature range	± 0.5°C, 0 to +40°C ± 0.75°C, -20 to +60°C	-20°C to +60°C	± 0.5°C, 0 to +40°C ± 0.75°C, -20 to +60°C	-5 to 50°C	0 to 40°C
Output	0-1 V	SDI-12 protocol 1.3	0-1 V	Serial TTL Data	0-1 V or SDI-12
Typical applications	Soil moisture research and temperature monitoring	Installed monitoring of soil moisture, temperature & EC for crops (SDI-12)	Soil moisture and temperature monitoring and irrigation control	Portable monitoring of soil moisture, temperature & EC for protected crops	Monitoring soil moisture profiles for field crops to 1 m
1) % volumetric water content 2) ML3, SM150T and WET150 must be fully buried to accurately measure soil temperature					

Data loggers and meters

	HH150 Meter	WET150 Meter	HH2 Meter	GP2	GP1	DL6
Input connections	1 water content sensor (SM150T Sensor only)	1 water content, temp, and EC sensor (WET150 Sensor only)	1 water content sensor (HH2 does not provide temperature indication from the SM150T or ML3) <small>Not compatible with WET150 Sensor</small>	12 diff analogue inputs 4 digital inputs 1 WET Sensor SDI-12	2 analogue channels 2 temperature 2 counters	6 analogue channels 1 temperature 1 counter
Readings stored	Readout-only device	Readout-only devices	1,500	2.5 million (approx)	600,000	16,000
Recording rate	-	-	-	1 second to 24 hours	1 second to 24 hours	1 second to 24 hours
Control options	-	-	-	2 relay outputs- expandable to 6	1 relay output	1 relay output
Typical applications	Readout only device for SM150T Sensor (no PC connectivity)	Readout only device for WET150T Sensor (no PC connectivity)	Instantaneous reading of soil moisture / profiles / WET Sensor	Demanding research and monitoring projects, irrigation control, advanced control applications	Monitoring soil moisture and controlling irrigation	Monitoring soil moisture and controlling irrigation

Irrigation Control

The GP2 can be used to integrate soil moisture sensors into existing irrigation control systems



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Representative:

WET KIT

For portable applications the WET Sensor is used with an HH2 Moisture Meter and is normally supplied as a complete kit

