

# Multilevel Soil Sensor

## Multilevel Soil sensor for smart irrigation systems

TH-SS-XXXX  
TH-SS-XXXXEC

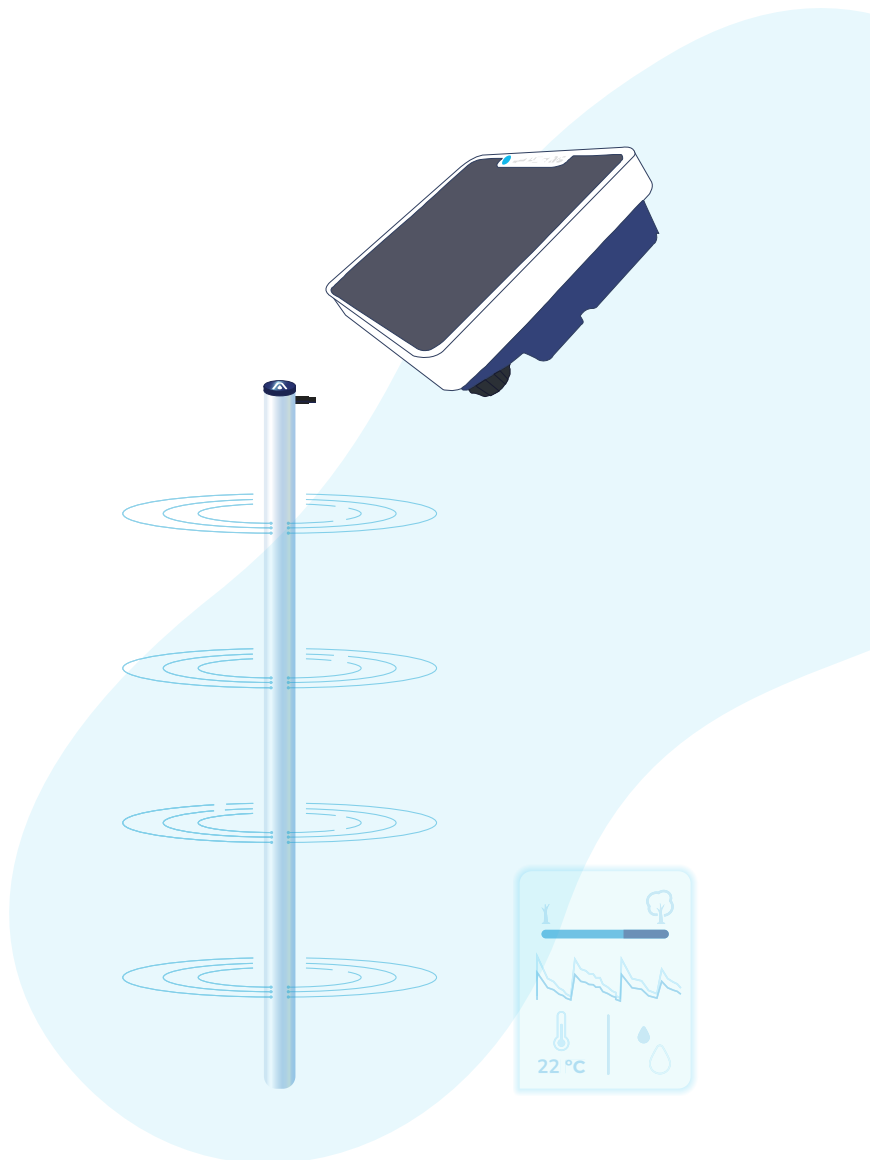
### Overview

The SPHERAG multilevel soil sensor measures temperature and volumetric water content (VWC) with high accuracy at different depths (from 10 to 160 cm).

Parameterizing the soil allows decisions to be made to optimize water use, providing water when needed and in the right quantity.

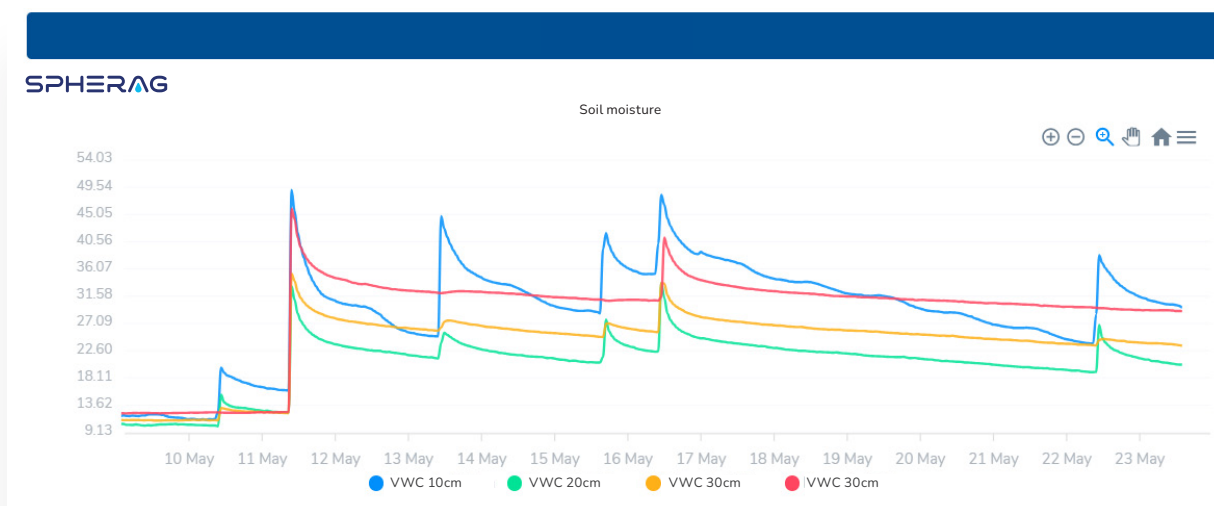
There is also the option to add electroconductivity (EC) measurement.

SPHERAG offers two different models of multilevel sensors that provide the necessary information for each type of crop, offering the possibility to parameterize the soil and monitor the water behavior in real-time, thus adapting the irrigation to optimize its use (see following page).



Sensors at intervals of 10cm suitable for all types of soils.

### Spherag platform display



## MODEL 1: Multilevel Soil Sensor Enviropro

TH-SS-XXXX / TH-SS-XXXXEC

### General specifications

Working temperature -20 ~ 60 °C  
 Supply voltage 12 Vdc  
 Interface SDI-12

### Mechanical specifications

Sensor dimensions Ø33.5 mm +/-0.2mm  
 Cable length 5 m  
 IP rating IP68

### Soil temperature measurement

Range -20 °C to 60°C  
 Accuracy ±1 °C @ 25 °C  
 Resolution 0.01 °C

Model	Moisture	Temp	EC	Sensors	Weight (g)	Length (cm)
TH-SS-0040	●	●		4	500	40
TH-SS-0080	●	●		8	900	80
TH-SS-0120	●	●		12	1200	120
TH-SS-0160	●	●		16	1500	160
TH-SS-0040EC	●	●	●	4	500	40
TH-SS-0080EC	●	●	●	8	900	80
TH-SS-0120EC	●	●	●	12	1200	120
TH-SS-0160EC	●	●	●	16	1500	160

### Volumetric Water Content measurement (VWC)

Range 0 to 100%  
 Accuracy ±2% @ 0% to 50% VWC  
 Resolution 0.01%

### Electrical Conductivity measurement (EC)

Range 0 to 6 dS/m  
 Accuracy ±5% @ 0 to 4 dS/m and 10% to 30% VWC  
 Resolution 0.001 dS/m

## MODEL 2: Multilevel Soil Sensor Sentek

TH-SS-XXXX / TH-SS-XXXXEC

### General specifications

Working temperature -20 ~ 60 °C  
 Supply voltage 12 Vdc  
 Interface SDI-12

### Mechanical specifications

Sensor dimensions Ø30 mm +/-0.2mm  
 Cable length 5 m  
 IP rating IP68

### Soil temperature measurement

Range -20 °C to 60 °C  
 Accuracy ±2 °C @ 25 °C  
 Resolution 0.3 °C

Model	Moisture	Temp	EC	Sensors	Weight (g)	Length (cm)
TH-SS-0010	●	●		1	400	10.5
TH-SS-0030	●	●		3	550	30
TH-SS-0060	●	●		6	750	60
TH-SS-0090	●	●		9	1000	90
TH-SS-0120-S	●	●		12	1200	120
TH-SS-0010EC	●	●		1	400	10.5
TH-SS-0030EC	●	●	●	3	550	30
TH-SS-0060EC	●	●	●	6	750	60
TH-SS-0090EC	●	●	●	9	1000	90
TH-SS-0120-EC-S	●	●	●	12	1200	120

### Volumetric Water Content measurement (VWC)

Range 0 to 100%  
 Accuracy ±0.03%  
 Resolution 0.01%

### Electrical Conductivity measurement (EC)

Range 0 to 17 dS/m  
 Accuracy ±8% @ 0 to 5 dS/m and 4% to 20% VWC  
 Resolution 0.003 dS/m