

LORAWAN SOIL MOISTURE SENSOR



SKU: WSLRW-SMT

LoRaWAN SOIL MOISTURE SENSOR WSLRW-SMT



WSLRW-SMT-H1.PNG

WSLRW-SMT is LoRaWAN Soil Moisture Sensor, can be used to measure the Soil Moisture, Fertilizer and Soil Erosion, too. It is powered by 02 x AA-type batteries and can last up to 10 years. The Moisture sensor utilize the Frequency Domain measuring technique to deliver high accuracy and stable measurement of Soil moisture. The Moisture value is not affected by fertilizer content and temperature like other simple Capacitance Moisture Sensor on the market. The sensor will transmit data in kilometers distance to LoRaWAN gateway, any brand on the market. The typical applications are Smart farm, Smart Agriculture, Automatic Irrigation System, Soil Quality Measurement, Soil Erosion Monitoring...



LORAWAN COMMUNICATION

LoRaWAN communication standard to allow sensor connect to any LoRaWAN Gateway on the market



10 YEAR BATTERY

Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can last up to 10 years with 02 x type AA batteries



PRE-CALIBRATED

Sensors are pre-calibrated at factory to deliver high accuracy and quick installation



HIGH ACCURACY

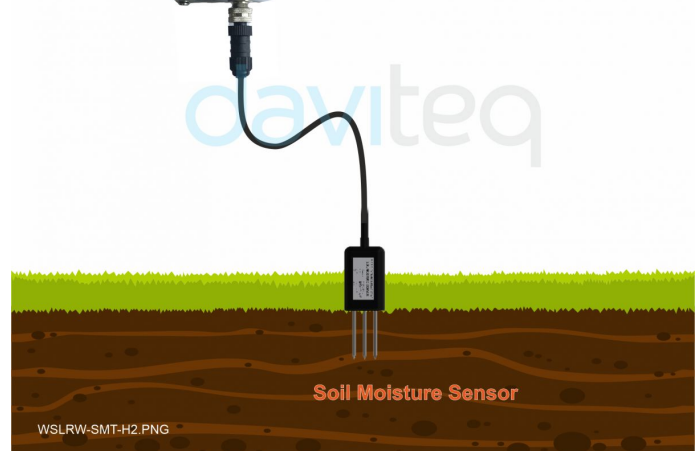
Utilize advanced technology, Frequency Domain Reflectometry to deliver high accuracy and stable measurement of Soil Moisture, not affected by Fertilizer contents and Temperature like the simple Capacitance Moisture Sensor on the marker



IP68

Ingress Protection IP68 allow sensor can be burried in the soil in long time

SOIL MOISTURE SENSOR INSTALLATION



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SPECIFICATION

SENSORS SPECIFICATION :	
Moisture & EC Sensors	Advanced technology - Frequency Domain Reflectometry with response time
Moisture range / accuracy / resolution	0 .. 100 %, acc +/- 3.0% , res 0.01%
Temperature range / accuracy / resolution	-30 .. + 70°C, acc +/- 0.3°C, res 0.1°C
EC range / accuracy / resolution	0 .. 20 mS/cm, acc +/- 2.0% span, res 0.1 mS/cm
N-P-K range/accuracy/resolution	0-1999mg/kg, acc +/-2% span, res 1.0mg/kg
Measurement Volume	Dia. 70mm x Height 70mm
Wetted materials	316L SS & thermoplastic
Sensor Dimensions	71x45x16mm with probes 70mm and signal cable 2m
Optional Soil Erosion Sensor	Clinometer type
Soil Erosion Probe	Dia. 10mm x Length 300mm with signal cable 2m, SS304 material
LoRaWAN SPECIFICATION :	
Data rate	250bps .. 5470bps
Antenna	External Antenna 0 dbi
Battery	02 x AA size 1.5VDC, battery not included
RF Frequency and Power	860..930Mhz, +14 .. +20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval	
Working temperature	-40oC..+60oC (with AA L91 Energizer)
Dimensions/Netweight	H106xW73xD42, 190 grams (Wireless part only)
Housing	Aluminum + Polycarbonate plastic, IP67.

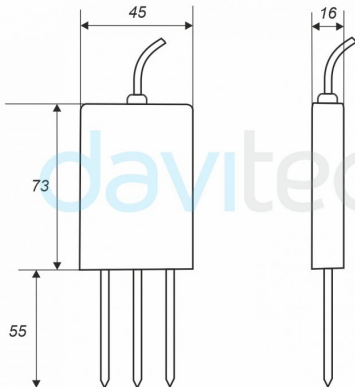
INSTALLATION FOR MULTI-LAYER MEASUREMENT



LoRaWAN NETWORK

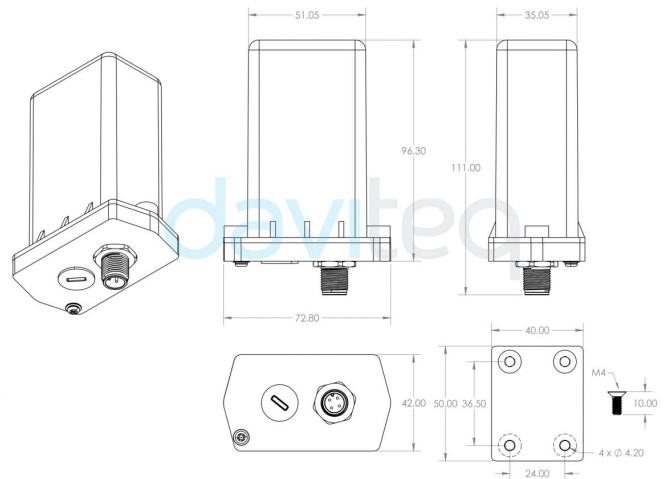


DIMENSION DRAWINGS OF SENSOR (Unit: mm)



WSLRW-SMT-H5.PNG

DIMENSION DRAWING OF WIRELESS SENSOR (Unit: mm)



WSLRW-SMT-H6.PNG

RECOMMENDED BATTERIES

E91 AA Alkaline battery



-18 .. + 60 oC working temperature
10-year shelf life
3000 mAH Capacity
Price: 1X

L91 AA Lithium battery



-40 .. + 60 oC working temperature
20-year shelf life
3500 mAH Capacity
Price: 3.5X

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ORDERING INFORMATION

ITEM CODES	DESCRIPTIONS
WSLRW-SMT-01	LORAWAN SOIL MOISTURE AND TEMPERATURE SENSOR, PRE-CALIBARTED, AA 1.5VDC BATTERY, IP67/IP68, SENSOR CABLE 2M, 860-930MHZ
WSLRW-SMT-02	LORAWAN SOIL MOISTURE, TEMPERATURE AND EC SENSOR, PRE-CALIBARTED, AA 1.5VDC BATTERY, IP67/IP68, SENSOR CABLE 2M, 860-930MHZ
WSLRW-SMT-07	LORAWAN SOIL 7-IN-1 SENSOR, MOISTURE, TEMPERATURE, EC, SALINITY AND N/P/K, PRE-CALIBRATED, AA 1.5VDC BATTERY, IP67/IP68, SENSOR CABLE 2M, 860-930MHZ

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