

Sigfox Soil Moisture Sensor WSSFC-CAPSM

SKU: WSSFC-CAPSM

Doc No: WSSFC-CAPSM-DS-EN-10

Introduction

WSSFC-CAPSM is a Sigfox sensor with built-in cost effective capacitive soil sensor to detect the soil moisture. It can be used for moisture monitoring in Green house, net house, plastic house, horticulture, agriculture... With Ultra-low power design and smart firmware allow the complete Wireless and Sensor package run on 1 x AA battery 3.6V up to 10 years. It can support all regions of Sigfox network in over the World, RC1, RC2, RC3, RC4, RC5, RC6, RC7.

- Good stability measurement;
- Sigfox Ready;
- 10-year battery;
- Plug & Play.

Typical Applications

- Soil Moisture monitoring for green house, net house...
- Soil Moisture monitoring for open field, garden...
- Soil Moisture monitoring for horticulture...

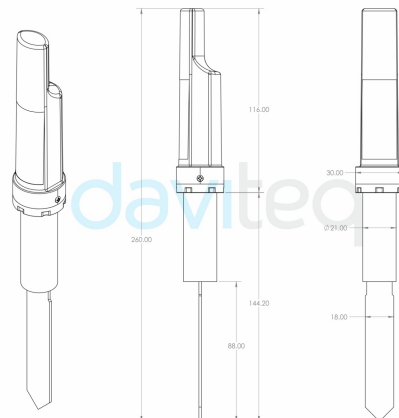
SIGFOX SOIL MOISTURE SENSOR
WSSFC-CAPSM



WSSFC-CAPSM-H1.PNG



DIMENSION DRAWINGS OF WIRELESS SENSOR
(Unit: mm)



WSSFC-CAPSM-H2.PNG



Specification

SENSOR SPECIFICATION	
Sensor connection	Integrated or 1m cable via PG9 cable gland
Moisture Measuring range	0..100% moisture
Moisture Accuracy	+/- 5% of moisture
Moisture Repeatability	< 1%
Moisture Resolution	0.1%
Ambient Temperature Measurement	-40 .. + 60 oC
Temperature accuracy	+/- 0.5 oC
Temperature resolution	0.1 oC
Working temperature	-40 .. + 60 oC
Working humidity	0 .. 100% RH
SIGFOX SPECIFICATION	
Sigfox zones	select RC2-RC3-RC4-RC5 or RC1-RC6-RC7
Functions	Sending data in interval or when alarms occur
Antenna	Internal Antenna 2 dbi
Configuration	via offline USB cable (PC software is supplied at free)
Battery	01 x AA Type 3.6VDC, working time up to 10 years (depends on configuration)

RF Module complies to	CE, FCC, ARIB
Working temperature	-40oC..+60oC (with LiSOCI2 AA battery)
Dimensions	H250xD30
Net-weight	< 150 grams
Housing	Polycarbonate, IP67
Mounting	Direct seating on soil surface

Payload Data

The following is the format of payload data will be sent to Sigfox server. Length is 10 bytes.

Sensor type (1 byte)	Status (1 byte)	1 st - Parameter (4 bytes)	2nd - Parameter (4 bytes)
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Meaning of Data in the Payload

Data	Size (byte)	Bit	Format	Meaning
Sensor type	1	all	Uint8	Sensor type = 0x... means Simple Soil Moisture Sensor Sensor type = 0xFF means no sensor
Status: battery level	1	Bit 7 and 6	Uint8	Battery capacity in 04 levels <ul style="list-style-type: none"> 11: battery level 4 (99%) 10: battery level 3 (60%) 01: battery level 2 (30%) 00: battery level 1 (10%)
Status: error		Bit 5 and 4		Node status <ul style="list-style-type: none"> 01: error 00: no error
Status: alarm 1		Bit 3 and 2		Alarm status of 1st - Parameter (Y1 value)11 : Hi alarm <ul style="list-style-type: none"> 01 : Lo alarm 00 : No alarm
Status: alarm 2		Bit 1 and 0		Alarm status of 2nd - Parameter (Y2 value)11 : Hi alarm <ul style="list-style-type: none"> 01 : Lo alarm 00 : No alarm
1st - Parameter	4	all	Float	Y1 value: Soil moisture in %RH
2nd - parameter	4	all	Float	Y2 value: Ambient temperature in oC

Ordering Code

Item code	Descriptions
WSSFC-CAPSM-9-01	SIGFOX CAPACITIVE SOIL MOISTURE AND TEMPERATURE SENSOR, PLASTIC LINING SENSOR, INTEGRATED SENSOR, INTERNAL ANTENNA, TYPE AA BATTERY 3.6VDC, IP68, RC2-RC3-RC4-RC5 ZONES
WSSFC-CAPSM-9-02	SIGFOX CAPACITIVE SOIL MOISTURE AND TEMPERATURE SENSOR, PLASTIC LINING SENSOR, 1M CABLE, INTERNAL ANTENNA, TYPE AA BATTERY 3.6VDC, IP68, RC2-RC3-RC4-RC5 ZONES

WSSFC-CAPSM-8-01	SIGFOX CAPACITIVE SOIL MOISTURE AND TEMPERATURE SENSOR, PLASTIC LINING SENSOR, INTEGRATED SENSOR, INTERNAL ANTENNA, TYPE AA BATTERY 3.6VDC, IP68, RC1-RC6-RC7 ZONES
WSSFC-CAPSM-8-02	SIGFOX CAPACITIVE SOIL MOISTURE AND TEMPERATURE SENSOR, PLASTIC LINING SENSOR, 1M CABLE, INTERNAL ANTENNA, TYPE AA BATTERY 3.6VDC, IP68, RC1-RC6-RC7 ZONES

 [Link for full datasheet:](#)

 [Link for manual:](#)



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