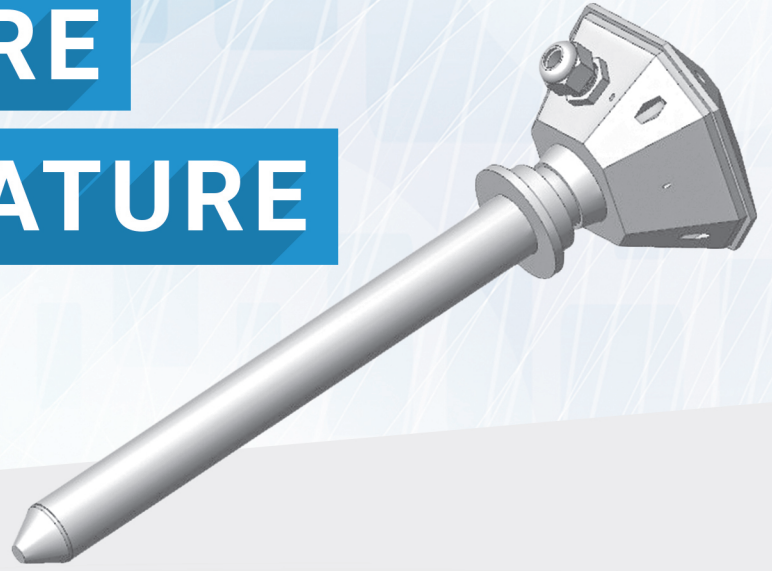


SOIL MOISTURE AND TEMPERATURE SENSOR



■ MAIN PURPOSE

REACOM's RSMT6L Sensor is a moisture and temperature sensor developed for agriculture, that able to measure:

- soil moisture at six depth level
- soil temperature at six depth level
- air temperature

The RSMT6L Sensor can be easily installed by simple burying in any field or garden by non-professional personal.

■ PRINCIPLE OF OPERATION

The RSMT6L Sensor use capacitive measurement method for a moisture, and RTD measurement method for a temperature. The device is a wireless communication tool that detects air temperature, soil temperature and moisture, and transmits the detected data to software applications through a LoRaWAN network. This sensor do not have a direct electrical contact with a soil, that means disruption of electrodes excluded, and long life cycle usage is guaranteed. The RSMT6L Sensor can be schedule preconfigured for sending data payload to the dashboards or any third party software customer may need.

MAIN FEATURES

1. Air temperature
2. 6 depth level soil temperature 5/15/25/35/45/55 cm, measurement accuracy $\pm 0.5^{\circ}\text{C}$
3. 6 depth level soil moisture 5/15/25/35/45/55 cm
4. Ability to change the depth of measurement within -2.5 cm/+5 cm
5. Battery voltage status
6. Wireless range - up to 10 km*
7. LoRaWAN™ Class A compatible
8. Improved interference immunity
9. Improved power management for longer battery life
10. Encrypt-RF™ Security (Diffie-Hellman Key Exchange+ AES-128 CBC for sensor data messages)
11. Battery Life – up 2 years**

EXAMPLE OF APPLICATIONS

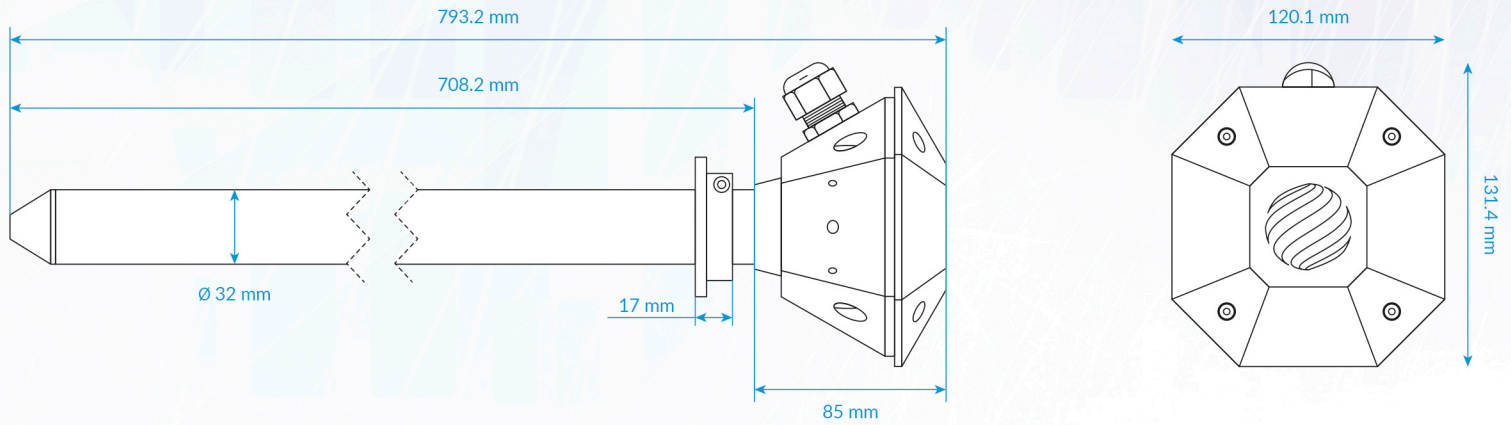
1. Field state monitoring and analytics
2. Soil irrigation
3. Greenhouses, Farming
4. Plant nurseries

*Conditions: no obstacles, direct line-of-sight

**Conditions: temperature 20 °C, 96 meas/day, txpower = 14 dBm, LoRa spreading factor SF = 7

The RSMT6L Sensor can be produced and preconfigured with loaded by Reacom's software, that is user friendly, and can be easily integrated to any Third-Party online monitoring and notification System to view data, set alerts, etc.***

Main Body



TECHNICAL SPECIFICATIONS

ELECTRIC

Input Power.....	1 x 3.6V 19000mAh Li-SOCl 2 battery
Working Voltage.....	DC 2.4V ~ 3.6V
Standby Current.....	3uA / 3.3V
Transmitting Current (max)....	39mA / 3.3V
Receiving Current (max).....	14mA / 3.3V
Low Voltage Threshold	2.4V
Battery Voltage	
Measurement Accuracy.....	±10mV

FREQUENCY

TX Power.....	2dBm - 14dBm
Rx Sensitivity.....	-136dBm (LoRa, Spreading Factor=7-12 Bit Rate=5470-293bps)
Antenna Type.....	Build-in or external antenna
Data Transfer Rate.....	0.3 kbps~50 kbps

PHYSICAL

Main Body Dimension.....	793.2x131.4x120.1 mm
Weight.....	1365 g
Operating Temperature.....	-20 °C ~ 55 °C
Environment Humidity Range....	0-100% RH
Storage Temperature.....	-40 °C ~ 85 °C

Communication Range.....	10 km (line-of-sight, the actual transmission distance depends on the environment)
Spread Technique.....	LoRa
Available Frequency.....	EU863-870 Other regional bands can be configured before shipment

***Optional