

# RS485 Soil Moisture & Temperature Sensor (S-Soil MT-02A)



## Features

- High reliability and stability
- Universal protocols: MODBUS RS-485
- Wide range power supply: 3.6V ~ 30V
- IP68 rated, suitable for long-term applications
- Strong Anti-interference: made of flame-retardant epoxy resin
- Anti-corrosion, with excellent performance for long-term use
- Easy to use, integrate and install
- Designed with reverse voltage protection

## Applications

- Agriculture irrigation
- Green house
- Grass farm
- Environment monitoring
- Water conservation
- Soil testing
- Other Sensor Applications

## Introduction

This Soil Moisture & Temperature Sensor MODBUS-RTU RS485 (S-Soil MT-02A) is designed with industry standards. It incorporates two sensors (soil moistures sensor and soil temperature sensor) into one, featuring high precision and high sensitivity. By measuring the dielectric constant of the soil, it can stably measure the soil VWC (volumetric water content) regardless of various soil types. The measurement conforms to current international standards for soil moisture measurement. This soil sensor is IP68 rated, very robust and durable, suitable to be applied at long-term monitoring of soil moisture and temperature at scientific experiments, water-saving irrigation, greenhouses, outdoor farming, gardening, precision agriculture, and other professional environmental monitoring scenarios.

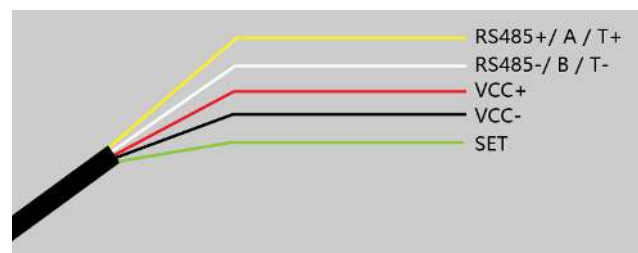
## Specifications

General Parameters	
Product Model	S-Soil MT-02A
Interface	RS-485
Protocol	MODBUS-RTU RS485
Power Supply	3.6 ~ 30V DC
Current Consumption	Max 40mA@24V DC
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Response Time	Less than 1 second
Measuring Area	A cylinder area (with the probe as the center, diameter: 7cm, height: 7cm)
The material of the probe	Food grade stainless steel
Sealing Material	The black flame retardant epoxy resin
IP Rating	IP68
Cable Length	5 meters
Installation	All buried or probe into all of the measured medium
Device Weight	270g

Soil Temperature	
Range	-40 °C to +80 °C
Accuracy	±0.5 °C
Resolution	0.1 °C

Soil Moisture	
Range	From completely dry to fully saturated (from 0% to 100% of saturation)
Accuracy	±3% (0~53%) ±5% (53~100%)
Resolution	1 %

## Wiring Diagram



Refer to the user manual for more details.

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## Probe Dimensions

