

**RS485 Soil Moisture & Temperature Sensor
with waterproof aviation connector
S-Soil MT-02B**





PRODUCT DESCRIPTION

Soil moisture is the water stored in the soil. Too much moisture in the soil is not only bad for the plants but also wastes water and adds extra burdens to our planet earth. Soil temperature is the warmth of the soil. Plants grow best at their preferred temperature ranges. With access to soil moisture and temperature data, we can take actions to make sure the right amount of water is irrigated at the appropriate time, and the plants are in optimal environments which are good for their growth.

This Soil Moisture & Temperature Sensor MODBUS-RTU RS485 (S-Soil MT-02B) is designed with industry standards and comes with a waterproof aviation connector. It incorporates two sensors (soil moisture 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.

FEATURES

- High Performance: high accuracy, reliability, and stability
- Universal Protocol: MODBUS-RTU RS485
- Wide range power supply: 3.6V ~ 30V
- Industrial-grade Robustness: IP68 rated, suitable for long-term applications
- Strong Anti-interference: made of flame-retardant epoxy resin
- High Durability: anti-corrosion, with excellent performance for long-term use
- User-friendly: easy to use, install and integrate
- Safety: designed with reverse voltage protection

APPLICATION

- Water-saving irrigation
- Scientific Experiments
- Greenhouse Management
- Horticulture and Gardening
- Golf turf Management
- Smart Agriculture
- Other Environmental Monitoring Scenarios



SPECIFICATIONS

PRODUCT MODEL

Model	S-Soil MT-02B
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GENERAL PARAMETER

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

Range	-40 °C to +80 °C
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SOIL TEMPERATURE

Accuracy	± 0.5 °C
Resolution	0.1 °C

SOIL MOISTURE

Range	From completely dry to fully saturated (from 0% to 100% of saturation)
Accuracy	$\pm 3\%$ (0~53%) $\pm 5\%$ (53~100%)
Resolution	1 °C