

**RS485 Soil Moisture & Temperature Sensor
S-Soil MT-02A**





PRODUCT DESCRIPTION

This Soil Moisture & Temperature Sensor MODBUS-RTU RS485 (S-Soil MT-02A) is designed with industry standards. 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. 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.

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

APPLICATION

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

SPECIFICATIONS

PRODUCT MODEL

Model

S-Soil MT-02A

GENERAL PARAMETER

| | |
|---------------------------|--|
| Interface | RS485; 0 -2V voltage |
| Protocol | MODBUS-RTU RS485 |
| Power Supply | 3.6 ~ 30V DC to 3.9 ~ 30V DC |
| Current Consumption | 6mA to 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 |

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 | $\pm 3\%$ (0~53%) $\pm 5\%$ (53~100%) |
| Resolution | 1% |