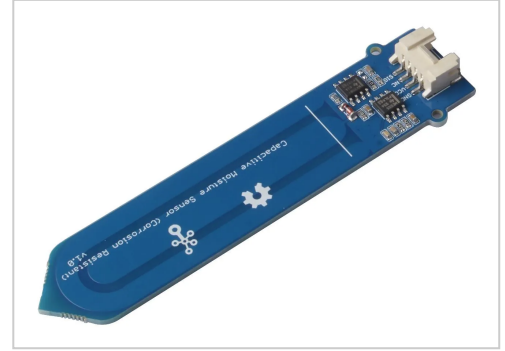


seeed Grove - Capacitive soil moisture sensor (corrosion-resistant)

The Grove - Capacitive Soil Moisture Sensor (Corrosion Resistant) is a soil moisture sensor based on capacitance changes. Compared with resistive sensors, capacitive sensors do not require direct exposure of the metal electrodes, which can significantly r



Product number SE-101020614

Weight 0.01kg

Product description

Seeed Grove - Capacitive Soil Moisture Sensor (Corrosion Resistant)

The Grove - Capacitive Soil Moisture Sensor (Corrosion Resistant) is a capacitive soil moisture sensor that utilises changes in capacitance to measure moisture. In contrast to resistive sensors, this variant does not require direct contact between the electrodes and the soil, which significantly reduces corrosion of the metal parts. This allows the sensor to be used for a longer period of time.

The integrated NE555DR IC from Texas Instruments serves as a precise timing circuit and works in combination with an integrated amplifier to support the capacitive measurement. Data is transmitted via the Grove-compatible interface. The sensor is equipped with a long, straight probe that serves as a probe for recording moisture data.

It is a sensor module that recognises qualitative soil moisture. This means that if the soil moisture increases, the output value decreases; if the moisture decreases, the output value increases. A quantitative measurement (e.g. in per cent) is not carried out. The module is particularly suitable for horticultural, botanical and environmental monitoring projects.

For beginners, Seeed offers comprehensive tutorials, resources and a community as well as instructions in the wiki. The Grove sensor series comprises over 400 modules. The sensor is compatible with extensions such as the SenseCAP system, which enables conversion to an industrial LoRaWAN-capable sensor with robust IP66 housing technology, Bluetooth configuration, 19 Ah battery and app integration.

The product is used for the qualitative measurement of soil moisture and is suitable for use in DIY projects, botanical applications or environmental monitoring. The capacitive technology eliminates the need for direct metal contact with the soil, which improves the service life. It can be used in automated irrigation systems, for plant monitoring or in educational institutions for environmental and electronic projects.

The data can be evaluated via an analogue output and the power supply can be either 3.3 V or 5 V. In conjunction with Grove-compatible hardware, further sensor values can be processed or automated processes realised. The sensor can be combined with microcontrollers such as the Arduino or the Raspberry Pi.

The sensor is designed for simple environmental monitoring or DIY applications. It does not measure exact percentage values, but merely recognises whether the soil is moist or dry. Integration into Grove systems is ready to plug in via the standardised connection.

Features at a glance

- Corrosion-resistant, capacitive soil moisture sensor
- Integrated NE555DR timer with amplifier circuit
- Grove-compatible plug-and-play interface
- Qualitative measurement of soil moisture
- Suitable for starters thanks to comprehensive resources and community

Compatibility

- Arduino
- Raspberry Pi
- Seeed Grove System
- SenseCAP Controller S2110 & S2100 Data Logger (LoRaWAN)

Technical Data

- Operating voltage: 3.3 V / 5 V
- Output interface: Analogue
- Sensor length: 92.1 mm
- Sensor width: 23.5 mm
- Sensor height: 6.5 mm
- Measuring range (physical probe): 40 × 20 × 13 mm
- Weight: 10.6 g
- Packaging size: 150 × 100 × 15 mm
- Gross weight: 19 g

Other data

- Not suitable for quantitative moisture measurement
- Robust design due to capacitive measuring method

Scope of delivery

- 1x Grove Capacitive Soil Moisture Sensor (Corrosion Resistant)
- 1x Grove connection cable

Links to

- [Product wiki and start guide](#)
- [Technical data sheet NE555DR](#)
- [Download resource pack](#)

Product properties

Gross Weight (kg)	0.01
Zolltarifnummer	84733020
Country of Origin	China
Brand	seeed
Product ID	SE-101020614
Manufacturer ID	101020614
EAN	841454121954

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