

# LoRaWAN Soil Moisture & EC Sensor

**LSE01**

## OVERVIEW:

The Dragino LSE01 is a LoRaWAN Soil Moisture & EC Sensor for IoT of Agriculture. It detects **Soil Moisture**, **Soil Temperature** and **Soil Conductivity**, and upload the value via wireless to LoRaWAN IoT Server.

The LoRa wireless technology used in LSE01 allows device to send data and reach extremely long ranges at low data-rates. It provides ultra-long range spread spectrum communication and high interference immunity whilst minimising current consumption.

LSE01 is powered by **4000mA Li-SOCI2 battery**, It is designed for long term use up to 10 years.

Each LSE01 is pre-load with a set of unique keys for LoRaWAN registration, register these keys to local LoRaWAN server and it will auto connect after power on.

### Features:

- LoRaWAN v1.0.3 Class A
- Ultra low power consumption
- Monitor Soil Moisture
- Monitor Soil Temperature
- Monitor Soil Conductivity
- Temperature Compensation for measurements
- Bands: CN470/EU433/KR920/US915
- EU868/AS923/AU915/IN865
- AT Commands to change parameters
- Uplink on periodically
- Downlink to change configure

### Specifications:

#### Soil Moisture:

- Range: 0-100.00%
- Resolution: 0.01%
- Accuracy:  $\pm 3\%$  (0-53%);  $\pm 5\%$  (>53%)

#### Soil Conductivity:

- Range: 0-20000uS/cm
- Resolution: 1uS
- Accuracy: 2%FS

#### Soil Temperature:

- Range:  $-40.00^{\circ}\text{C} \sim 85.00^{\circ}\text{C}$
- Resolution: 0.01  $^{\circ}\text{C}$
- Accuracy:  $-10^{\circ}\text{C} \sim 50^{\circ}\text{C}$ :  $<0.3^{\circ}\text{C}$   
All other:  $<0.6^{\circ}\text{C}$

### Order Info: LSE01-XX

#### XX:

- XX: Frequency Bands, options:  
EU433,CN470,EU868,IN865,KR920  
AS923,AU915,US915