

Datasheet

Rev. 0.2

NETVOX TECHNOLOGY CO., LTD.

Add: No. 21-1 Sec. 1 Chung Hua West Road, Tainan, Taiwan

Tel: +886-6-2617641, 2654878

Fax: +886-6-2656120

<http://www.netvox.com.tw>

Wireless Soil Moisture Sensor

History

Version	Date	Note
0.1	2017-12-23	Initial release
0.2	2018-01-19	Increase support LoRa bands, modify antenna distance, update pictures

Notes:

Hardware Version:

61Z7266801V0.4

61Z7266802V0.3

61Z7266803V0.2

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Wireless Soil Moisture Sensor

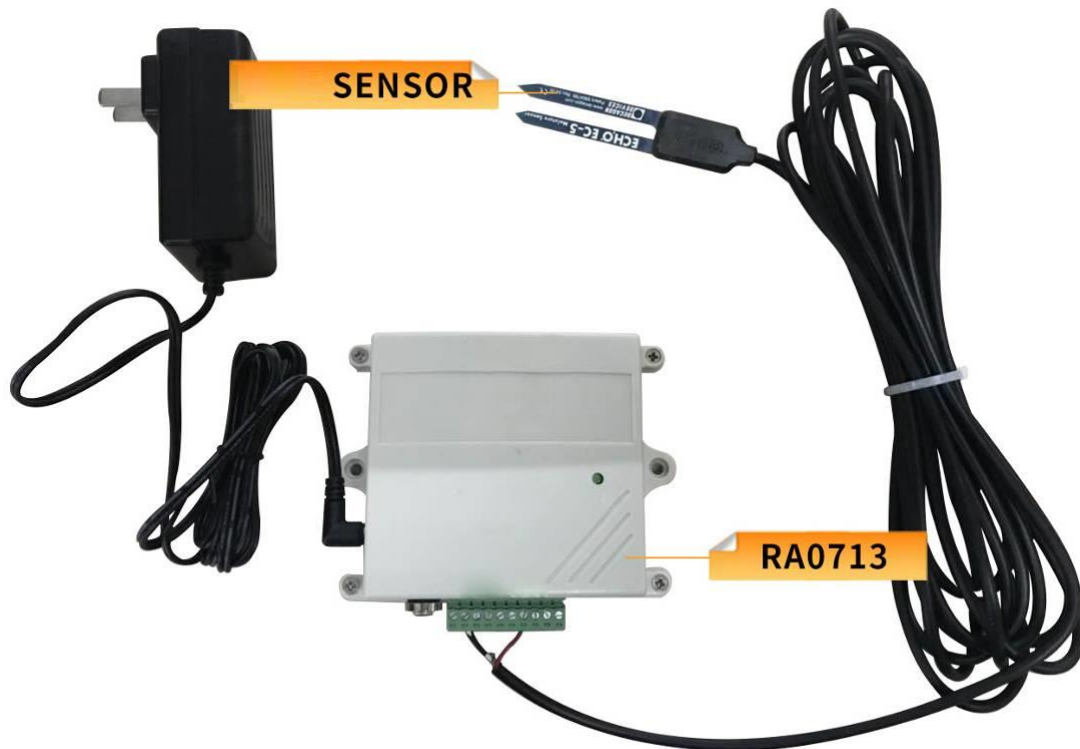


Fig.1 RA0713 Appearance

Introduction

RA0713 can be used to detect the amount of water in the soil, transmit the detected data to other devices through the wireless network. Fully compatible with LoRaWAN™ protocol.

Main Features

- Compatible with LoRaWAN™ protocol
- Detect the amount of water in the soil

Wireless Soil Moisture Sensor

Electric

Power supply	Adapter DC powered (12V/1A)
Working power (max)	70mA(detect), 110mA(transmit)
Sensor resolution	0.1% vwc in mineral soil 0.25% vwc in growth medium
Sensor accuracy	+/-3%
Sensor detect range	0-100% VWC

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX power	19dBm ± 1dBm
Rx sensitivity	-121dBm (Frequency deviation=5kHz, Bit Rate=1.2kb/s)
Build-in antenna	Build-in antenna
Communication range	4km (Typical output power)
Data transfer rate	0.3kbps ~ 50kbps
Spread technique	LoRa/FSK/OOK
Support LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923

Physical

Dimension	111mm*86mm*42mm
Working Temp	-20°C ~ +55°C
Storage Temp	-40°C ~ +85°C
Humidity Detecting Range	<90%RH