LoRaWAN Microwave Radar Distance Sensor

MDS200-LB

OVERVIEW:

The Dragino MDS200-LB is a LoRaWAN Microwave Radar distance sensor. It uses use Microwave Radar to detect the distance between sensor and different objects. Different from ultrosonic or Lidar measurement. Microwave Radar is more reliable for condensation / dusty environment. It can sense correct distance even there is water or think dust on top of the sensor.

The MDS200-LB can be applied to scenarios such as horizontal distance measurement, parking management system, object proximity and presence detection, intelligent trash can management system, robot obstacle avoidance, automatic control, sewer, etc.

MDS200-LB can measure two distances: the closest object and next object behind the closest one.

MDS200-LB supports Alarm Feature, user can set the MDS200-LB to uplink data in a short interval when the distance is out of configured range.

The LoRa wireless technology used in MDS200-LB 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 minimizing current consumption.

MDS200-LB supports BLE configure and wireless OTA update which make user easy to use.

MDS200-LB is powered by 8500mAh Li-SOCI2 battery, it is designed for long term use up to 5 years.

Each MDS200-LB is pre-load with a set of unique keys for LoRaWAN registrations, register these keys to local LoRaWAN server and it will auto connect after power on.

Features:

- LoRaWAN 1.0.3 Class A
- Bands: CN470/EU433/KR920/US915/ EU868/AS923/AU915/IN865
- Ultra-low power consumption
- Microwave Radar for distance detection
- Short uplink interval for Distance Alarm
- Monitor Battery Level
- Measure Range : 0.5 ~ 20m
- Accuracy: ±0.1m

- Resolution: 0.01m
- Measurement Angle : 78 degrees horizontal and 23 degrees vertical
- Support Bluetooth v5.1 and LoRaWAN remote configure
- Support wireless OTA update firmware
- AT Commands to change parameters
- Downlink to change configure
- 8500mAh Battery for long term use

Specifications:

Common DC Characteristics:
- Supply Voltage: 2.5v ~ 3.6v
- Operating Temperature: -20 ~ 85°C

LoRa Spec:
- Frequency Range, Band 1 (HF): 862 ~ 1020 Mhz, Band 2 (LF): 410 ~ 528 Mhz
- Max +22 dBm constant RF output vs.
- RX sensitivity: down to -139 dBm.
- Excellent blocking immunity.

Battery:
- Li/SOCI2 un-chargeable battery
- Capacity: 8500mAh
- Self-Discharge: <1% / Year @ 25°C
- Max continuously current: 130mA
- Max boost current: 2A, 1 second

Power Consumption:
- Sleep Mode: 5uA @ 3.3v
- LoRa Transmit Mode: 125mA @ 20dBm, 82mA @ 14dBm

Order Info: MDS200-LB-XX

XX: The default frequency band
- XX: Frequency Bands, options: EU433,CN470,EU868,IN865, KR920,AS923,AU915,US915