1FIIT IoT NETWORKS

LoRaWAN Distance Detection Sensor

LDDS45

The Dragino LDDS45 is a LoRaWAN Distance Detection Sensor for Internet of Things solution. It is used to measure the distance between the sensor & a flat object. The distance detection sensor is a module that uses ultrasonic sensing technology for distance measurement, & emperature compensation is performed internally to improve the reliability of data. The LDDS45 can be applied to scenarios such as horizontal distance measurement, liquid level measurement, parking management system, object proximity and presence detection, intelligent trash can management system, robot obstacle avoidance, automatic control, sewer, bottom water level monitoring, etc.

It detects the distance between the measured object & the sensor, & uploads the value via wireless to LoRaWAN IoT Server. The LoRa wireless technology used in LDDS45 allows device to send data & reach extremely long ranges at low data-rates. It provides ultra-long range spread spectrum communication & high interference immunity whilst minimizing current consumption.

LDDS45 is powered by 8500 mA Li-SOCI2 battery; It is designed for long term use up to 10 years*.

Each LDDS45 pre-loads with a set of unique keys for LoRaWAN registrations, register these keys to local LoRaWAN server and it will auto connect if there is network coverage, after power on.

*Actually lifetime depends on network coverage & uplink interval & other factors.

STANDARD FEATURES

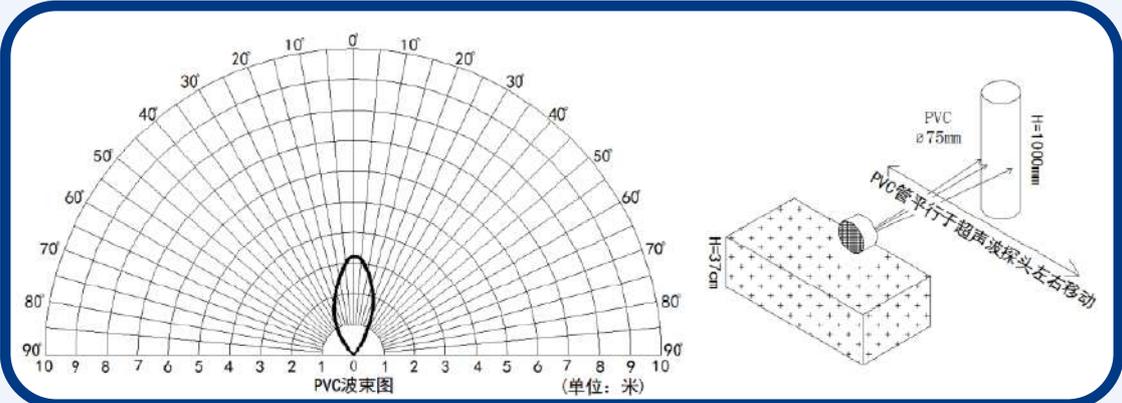|	
LoRaWAN 1.0.3 Class A	Temperature Compensation
Ultro low power consumption	Bands: CN470/EU433/KR920/US915/EU868/AS923/AU915/IN865
Distance Detection by Ultrasonic technology	AT Commands to change parameters
Flat object range 30mm - 4500mm	Uplink on periodically
Accuracy: ±(1cm+S*0.3%) (S: Distance)	Downlink to change configure
Measure Angle: 60°	IP66 Waterproof Enclosure
Cable Length : 25cm	8500mAh Battery for long term use

PACKAGE INCLUDES

1 x LDDS45

DIMENSIONS AND WEIGHT

Package Dimension: 150*120*55mm
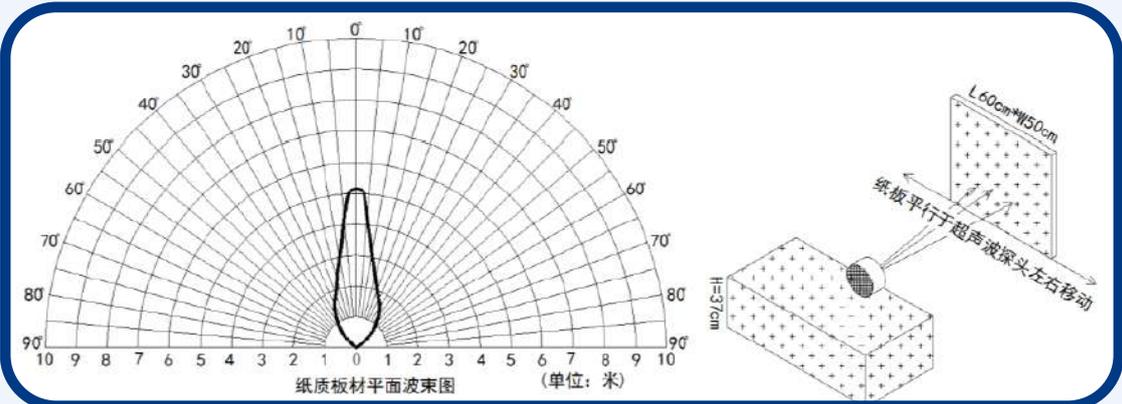Weight : 220g

APPLICATIONS

Horizontal distance measurement	Intelligent trash can management system
Liquid level measurement	Robot obstacle avoidance
Parking management system	Automatic control, sewer
Object proximity and presence detection	Bottom water level monitoring

EFFECTIVE MEASUREMENT RANGE REFERENCE BEAM PATTERN

The tested object is a white cylindrical tube made of PVC, with a height of 100cm and a diameter of 7.5cm

The object to be tested is a "corrugated cardboard box" perpendicular to the central axis of 0 °, and the length * width is 60cm * 50cm

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ORDER INFO

LDDS45-XXX

XXX: the default frequency band

EU433: Default frequency band EU433
CN470: Default frequency band CN470
EU868: Default frequency band EU868
IN865: Default frequency band IN865
KR920: Default frequency band KR920
AS923: Default frequency band AS923
AU915: Default frequency band AU915
US915: Default frequency band US915

SPECIFICATIONS

RATED ENVIRONMENTAL CONDITIONS

ITEM	MINIMUM VALUE	TYPICAL VALUE	MAXIMUM VALUE	UNIT	REMARKS
STORAGE TEMPERATURE	-25	25	80	℃	
STORAGE HUMIDITY		65%	90%	RH	(1)
OPERATING TEMPERATURE	-15	25	60	℃	
WORKING HUMIDITY		65%	80%	RH	(1)

REMARKS

(1) a. When the ambient temperature is 0-39 °C, the maximum humidity is 90% (non-condensing)

b. When the ambient temperature is 40-50°C, the highest humidity is the highest humidity

in the natural world at the current temperature (no condensation)