

4-Channels Distance Detection Sensor

OVERVIEW:

The Dragino DDS04 series is a **4-Channels Distance Sensor** for Internet of Things solution. It is capable to add up to four Ultrasonic Sensors to measure four distances at the same time.

The Dragino DDS04 series 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.

It detects the distance between the measured object and the sensor, and transmits the data to an IoT server via **LoRaWAN, NB-IoT, LTE-M, or LTE CAT-1** networks.

With **built-in BLE configuration and wireless OTA firmware updates**, the DDS04 is simple to set up and maintain.

To support various deployment scenarios, the DDS04 offers multiple power options — including **8,500 mAh or 19,000 mAh high-capacity non-rechargeable battery**, **1,000 mAh rechargeable Li-ion battery**, as well as a **solar-powered version with a rechargeable Li-ion battery for long-term, maintenance-free operation**.



Model DDS04 series doesn't include probes.
Probes are purchased separately

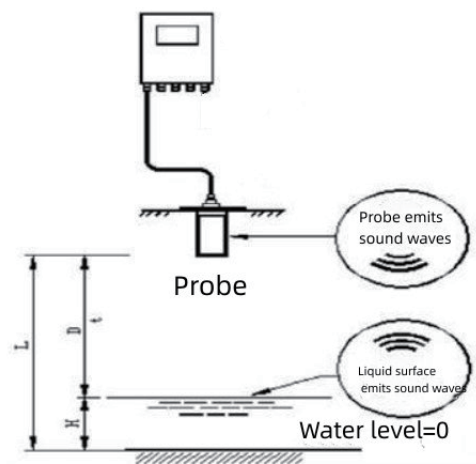
Features:

- Distance Detection by Ultrasonic technology
- Max: 4 x Distance Detect Channels
- Different types of probes can be used together
- Detect Range: Base on External Probe

Applications:



Intelligent Trash Can Management



Liquid Level Measurement

4-channel Distance Sensor -- Probe Option

A01A-15

- ※ Detect Distance: 28 cm ~ 750 cm
- ※ Blink Spot Distance: 0 ~ 28cm
- ※ Accuracy: $\pm(1\text{cm}+S*0.3\%)$ (S: Distance)
- ※ Measure Angle: $\sim 40^\circ$
- ※ Cable Length: 1.5 meter
- ※ Temperature Compensation
- ※ Suitable for Flat Object Detect
- ※ IP67 Water Proof



A02-15

- ※ Detect Distance: 3cm ~ 450cm
- ※ Blink Spot Distance: 0 ~ 3cm
- ※ Accuracy: $\pm(1\text{cm}+S*0.3\%)$ (S: Distance)
- ※ Measure Angle: $\sim 60^\circ$
- ※ Cable Length: 1.5 meter
- ※ Temperature Compensation
- ※ Suitable for Flat Object Detect, Rubbish Bin
- ※ IP67 Water Proof



A13-15

- ※ Detect Distance: 25cm ~ 200cm
- ※ Blink Spot Distance: 0 ~ 25cm
- ※ Accuracy: $\pm(1\text{cm}+S*0.3\%)$ (S: Distance)
- ※ Measure Angle: $\sim 20^\circ$
- ※ Cable Length: 1.5 meter
- ※ Temperature Compensation
- ※ Suitable for Flat Object Detect, Rubbish Bin
- ※ IP67 Water Proof



A16-15

- ※ Detect Distance: 50cm ~ 1500cm
- ※ Blink Spot Distance: 0 ~ 50cm
- ※ Accuracy: $\pm(1\text{cm}+S*0.3\%)$ (S: Distance)
- ※ Measure Angle: $\sim 40^\circ$
- ※ Cable Length: 1.5 meter
- ※ Temperature Compensation
- ※ Suitable for Long Distance Detect, Water Level
- ※ IP67 Water Proof



Wireless & Battery Selection

	LB	LB2	LS	NB	NB2	NS	CB	CB2	CS	KS	KN
Wireless	LoRaWAN	LoRaWAN	LoRaWAN	NB-IoT	NB-IoT	NB-IoT	NB-IoT & LTE-M	NB-IoT & LTE-M	NB-IoT & LTE-M	LTE CAT-1	LTE CAT-1
Module	LA66	LA66	LA66	BC660K-GL	BC660K-GL	BC660K-GL	BG95-M2	BG95-M2	BG95-M2	EG800xx	EG800xx
Frequency Band	EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4	EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4	EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4	CAT-NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B70/B85	CAT-NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B70/B85	CAT-NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B70/B85	CAT-NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 LTE-M: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85	CAT-NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 LTE-M: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85	CAT-NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 LTE-M: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85	EU: For European, Asia, Australia, LTE-FDD: B1/3/5/7/8/20/28 LA: For Latin America, LTE-FDD: B2/3/4/5/7/8/28/66 NA: For North America, LTE-FDD: B2/4/5/12/13/66	EU: For European, Asia, Australia, LTE-FDD: B1/3/5/7/8/20/28 LA: For Latin America, LTE-FDD: B2/3/4/5/7/8/28/66 NA: For North America, LTE-FDD: B2/4/5/12/13/66
Uplink Method	LoRaWAN, OTAA, ABP	LoRaWAN, OTAA, ABP	LoRaWAN, OTAA, ABP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP or UDP	MQTT, MQTTs, TCP or UDP
Enclosure	Type B	Type B2	Type S	Type B	Type B2	Type S	Type B	Type B2	Type S	Type S	Type N
Battery	8500mAh	19000mAh	3000mAh	8500mAh	19000mAh	3000mAh	8500mAh	19000mAh	3000mAh	3000mAh	1000mAh
Battery Type	Li-SOCI2	Li-SOCI2	Li-ion	Li-SOCI2	Li-SOCI2	Li-ion	Li-SOCI2	Li-SOCI2	Li-ion	Li-ion	Li-ion
Rechargeable	--	--	Yes	--	--	Yes	--	--	Yes	Yes	Yes
Solar Panel	--	--	Yes	--	--	Yes	--	--	Yes	Yes	--
Solar Panel Power	--	--	0.9W	--	--	0.9W	--	--	0.9W	0.9W	--
DC Connector	--	--	Optional	--	--	Optional	--	--	Optional	Optional	Provides 12V DC power
GNSS	--	--	--	--	--	--	Yes	Yes	Yes	--	--
BLE Config	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IP Rate	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP54

Enclosure Type

Enclosure Type B



- Battery: 8500 mAh
- None-rechargeable
- Dimension: 118 x 57 x 47 mm

Enclosure Type B2



- Battery: 19000 mAh
- None-rechargeable
- Dimension: 145 x 105 x 45 mm

Enclosure Type S



- Battery: 3000 mAh
- Rechargeable
- 0.9w Solar Panel
- Dimension: 108 x 102 x 40 mm

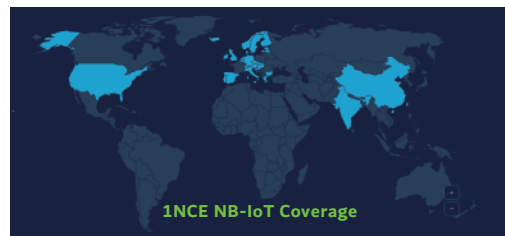
Enclosure Type N



- Battery: 1000 mAh
- Rechargeable
- Provides 12V DC power
- Dimension: 118 x 57 x 47 mm

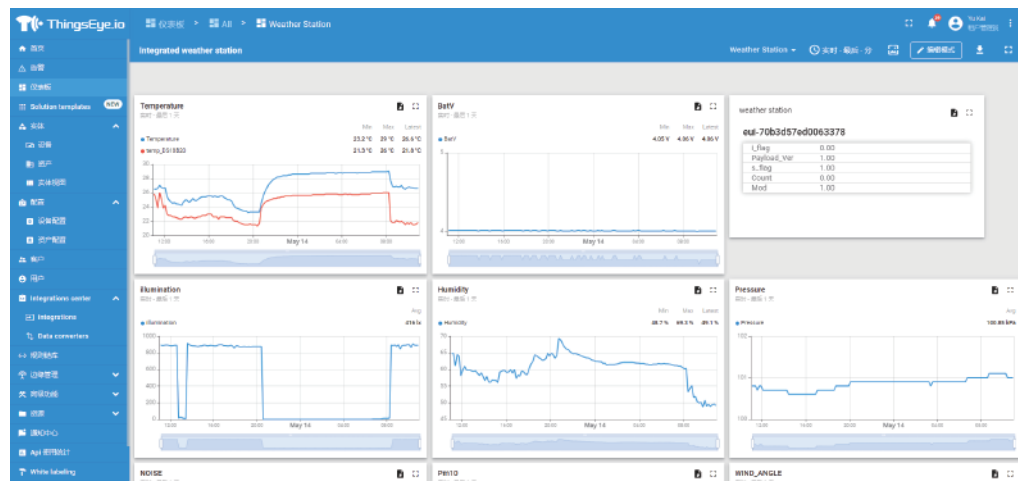
What is 1T version for Cellular version?

The 1T version of NB-IoT/LTE-M/LTE CAT-1 4-Channels Distance Sensor is with 1) 1NCE SIM Card & 2) ThingsEye Pre-configured.
1NCE SIM Card (10 Years Cellular service with 500MB Data Traffic, Enough for devices to uplink 10 years at 1hour interval).



ThingsEye.io platform:

1T version with ThingsEye IoT service pre-installed. This save a lot of work from user side to configure IoT server.
Below is Dash Board is the demo in ThingsEye.io.



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Ordering Information

Example:

DDS04-LB-EU868

Model Name:

DDS04 (Max: 4 ultrasonic distance detection channels, different types of probes can be used together)

Wireless Tech:

L: LoRaWAN
N: NB-IoT
C: NB-IoT & LTE-M
K: LTE CAT-1

Battery Type:

B: 8500 mAh Li-SOIC2 Battery
B2: 19000 mAh Li-SOIC2 Battery
S: Solar Panel + 3000 mAh Li-ion Battery
N: 1000 mAh Li-ion Battery

Frequency Band or Cellular SIM:

Frequency Band:

For LoRaWAN version: EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4

For CAT-1 version:
EU: For European, Asia, Australia
LA: For Latin America
NA: For North America

Cellular SIM option (For NB-IoT, LTE-M, CAT-1):

GE -- General version (Exclude SIM card)
1T -- With 1NCE & ThingsEye Pre-configured

Probe Option (Order Separately):

A01A-15: Suitable for Flat Object Detect
A02-15: Suitable for Flat Object Detect, Rubbish Bin
A13-15: Suitable for Flat Object Detect, Rubbish Bin
A16-15: Suitable for Long Distance Detect, Water Level