Air/Water Pressure Sensor

OVERVIEW:

The Dragino Air/Water Pressure Sensor is used for Internet of Things solution. It can measure Air, Water pressure and liquid level and upload the sensor data send to IoT platform via LoRaWAN, NB-IoT, LTE-M, or LTE CAT-1 networks.

The Dragino Air/Water Pressure Sensor includes Thread Installation Type, Immersion Type and Food Safety Thread Type, it supports different pressure range which can be used for different measurement requirement.

Built in BLE configuration and wireless OTA firmware updates, easy to set up and maintain.

To support various deployment scenarios, the Air/Water Pressure Sensor 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.



Thread Installation Type



Immersion Type



Food Safety Thread Type

Dragino Technology Co., Limited
Room 202, Block B, BCT Incubation Bases (BaoChengTai), No.8 CaiYunRoad
LongCheng Street, LongGang District ; Shenzhen 518116,China
Direct: +86 755 86610829 |Fax: +86 755 86647123

WWW.DRAGINO.COM
sales@dragino.com

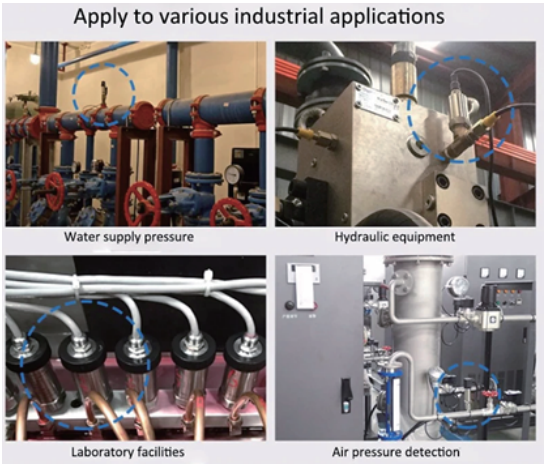
Probe Specifications

Thread Installation Type:

Probe Specification:

- Hersman Pressure Transmitter
- Measuring Range: -0.1 ~ 0 ~ 60MPa, see order info.
- Accuracy: 0.2% F.S
- Long-Term Stability: 0.2% F.S ±0.05%
- Overload 200% F.S
- Zero Temperature Drift: 0.03% FS/°C(≤100Kpa), 0.02%FS/°C(>100Kpa)
- FS Temperature Drift: 0.003% FS/°C(≤100Kpa), 0.002%FS/°C(>100Kpa)
- Storage temperature: -30°C ~ 80°C
- Operating temperature: -20°C ~ 60°C
- Material : 304 stainless steel
- Connector Type: Various Types, see order info

Application:



Immersion Type:

Probe Specification:

- Immersion Type, Probe IP Level: IP68
- Measuring Range: Measure range can be customized, up to 100m.
- Accuracy: 0.2% F.S
- Long-Term Stability: ±0.2% F.S / Year
- Overload 200% F.S
- Zero Temperature Drift: ±2% F.S
- FS Temperature Drift: ±2% F.S
- Storage temperature: -30°C ~ 80°C
- Operating temperature: 0°C ~ 50°C
- Material: 316 stainless steels
- Cable model specifications: CGYPU 5*0.2mm2
- Usage characteristics of Cable:
  - Operating temperature: -40°C ~ 70°C
  - -30°C bending cable 15 times of outer diameter can work normally

Application:



Food Safety Thread Type:

Probe Specification:

- Material: Food Grade 316L Stainless Steel, Anti-clogging, Pressure and wear resistant
- Application Scenarios: Measuring viscous media: food and beverages, viscous gels, pigments and paints, pulp and cement, pump trucks, concrete, particulate matter
- Measuring Range: -100Kpa ~ 0 ~ 100MPa
- Compensation Temperature: 10 ~ 70°C
- Output Signal: 4 ~ 20mA
- Power Supply: 24V DC
- Ambient Temperature: -40 ~ 85°C
- Enclosure Protection: IP65
- Pressure Type: Gauge pressure, Absolute pressure, Sealed pressure
- Zero-point Temperature Drift: +0.03%FS/°C
- Sensitivity Temperature Drift: +0.03%FS/°C
- Overload Pressure: 200%FS
- Long-term Stability: ≤0.2%FS/°C
- Natural Frequency: 5HZ ~ 650HZ

Application:


Milk Oil Storage Tank Monitoring


Pigment And Paint Storage Monitoring


Pulp & Cement Storage


Concrete Pump Truck

Dragino Technology Co., Limited

Room 202, Block B, BCT Incubation Bases (BaoChengTai), No.8 CaiYunRoad
LongCheng Street, LongGang District ; Shenzhen 518116,China
Direct: +86 755 86610829 |Fax: +86 755 86647123

WWW.DRAGINO.COM
sales@dragino.com

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/B17/B18/B19/B20/B25/B28/B66/B70/B85	**CAT-NB2:** B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66/B70/B85	**CAT-NB2:** B1/B2/B3/B4/B5/B8/B12/B13/B1/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

Dragino Technology Co., Limited

Room 202, Block B, BCT Incubation Bases (BaoChengTai), No.8 CaiYunRoad
LongCheng Street, LongGang District ; Shenzhen 518116,China
Direct: +86 755 86610829 |Fax: +86 755 86647123

WWW.DRAGINO.COM
sales@dragino.com

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

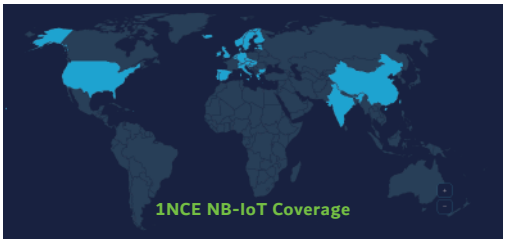
Enclosure Type N

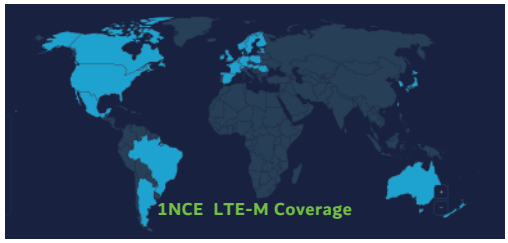


- Battery: 1000 mAh
- Rechargeable
- Provides 12V DC power
- Dimension: 118 x 57 x 47 mm

What is 1T version for Cellular version?

The 1T version of NB-IoT/LTE-M/LTE CAT-1 Air/Water Pressure 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 confgure IoT server.
Below is Dash Board is the demo in ThingsEye.io.



Dragino Technology Co., Limited
Room 202, Block B, BCT Incubation Bases (BaoChengTai), No.8 CaiYunRoad
LongCheng Street, LongGang District ; Shenzhen 518116,China
Direct: +86 755 86610829 |Fax: +86 755 86647123

WWW.DRAGINO.COM
sales@dragino.com

Ordering Information

Example: PS-LB-T20-B-EU868

PS : Pressure Sensor Series Prefix

Wirless 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 **(Only for Thread Type)**
S: Solar Panel + 3000 mAh Li-ion Battery
N: 1000 mAh Li-ion Battery

Probe Type:

T20: Thread Type - M20 x 1.5
T14: Thread Type - M14 x 1.5
T27: Thread Type - M27 x 2
TG2: Thread Type - G1/2
TG4: Thread Type - G1/4
TN4: Thread Type - NPT1/4
TP4: Thread Type - PT1/4
I1: Immersion Version - 1 meter cable
I2: Immersion Version - 2 meter cable
I3: Immersion Version - 3 meter cable
I4: Immersion Version - 4 meter cable
Ixx: Immersion Version - xx meter cable
I100: Immersion Version - 100 meter cable
F20: Food Safety Thread Type (316L stainless steel) for Viscous Liquid - M20 x 1.5
FG2: Food Safety Thread Type (316L stainless steel) for Viscous Liquid - G1/2
FG4: Food Safety Thread Type (316L stainless steel) for Viscous Liquid - G1/4
FN4: Food Safety Thread Type (316L stainless steel) for Viscous Liquid - NPT1/4
FP4: Food Safety Thread Type (316L stainless steel) for Viscous Liquid - PT1/4

PRESSURE: Only for Thread Type

A: 0 ~ 0.6MPa
B: 0 ~ 1MPa
C: 0 ~ 1.6MPa
D: 0 ~ 2.5MPa
E: 0 ~ 10MPa
F: 0 ~ 40MPa
G: 0 ~ 60MPa
H: -0.1 ~ 0MPa
I: -0.1 ~ 0.1MPa
J: 0 ~ 5KPa
K: 0 ~ 50KPa
L: 0 ~ 100KPa
M: -1 ~ 300KPa

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

Dragino Technology Co., Limited
Room 202, Block B, BCT Incubation Bases (BaoChengTai), No.8 CaiYunRoad
LongCheng Street, LongGang District ; Shenzhen 518116,China
Direct: +86 755 86610829 |Fax: +86 755 86647123

WWW.DRAGINO.COM
sales@dragino.com