

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 or CAT-M1 network.

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

It supports BLE configure and wireless OTA update which make user easy to use.

The Dragino Air/Water Pressure Sensor series is powered by 8500mA Li/SOCI2 battery or solar panel with Li-ion battery for long term use.



Thread Installation Type

Immersion Type

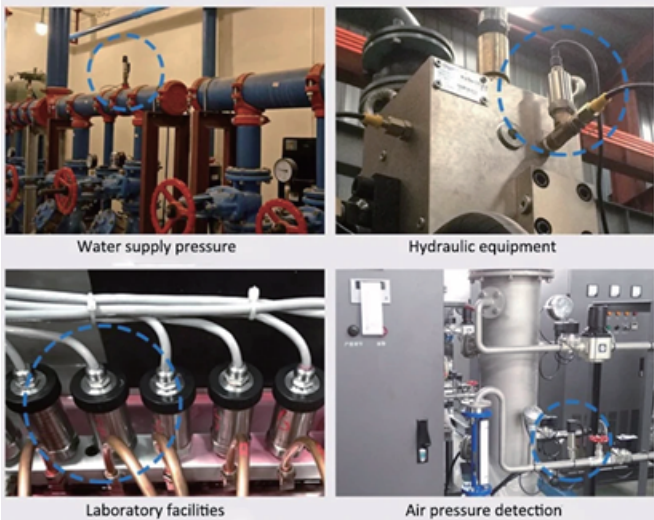
Thread Installation Type

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: -40 °C~60 °C
- Material : 304 stainless steel
- Connector Type: Various Types, see order info

Application:

Apply to various industrial applications



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: -40 °C~85 °C
- Material: 316 stainless steels

Application:



Model Variants

Variants	PS-LB	PS-LS	PS-NB	PS-NS	PS-CB	PS-CS
Connectivity						
Configure Method	TTL, BLE, LoRaWAN	TTL, BLE, LoRaWAN	TTL, BLE, NB-IoT	TTL, BLE, NB-IoT	TTL, BLE, NB-IoT, LTE-M	TTL, BLE, NB-IoT, LTE-M
Upgrade Method	TTL, BLE, LoRa	TTL, BLE, LoRa	TTL, BLE	TTL, BLE	TTL, BLE	TTL, BLE
Features	<p>Sensor /Probe:</p> <ul style="list-style-type: none"> * Measure air / gas or water pressure * Different pressure range available * Thread Installation Type or Immersion Type * Controllable 3.3v,5v and 12v output to power external sensor * Monitor Battery Level <p>General Features:</p> <ul style="list-style-type: none"> * Ultra-low power consumption * Support Bluetooth v5.1 remote configure and OTA update firmware * Uplink on periodically * GNSS for Location Report (for -CB & -CS models only) * Downlink to change configure 					
Battery & Power	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-ion Battery	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-ion Battery	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-ion Battery
Power Consumption	* Sleep Mode: 5uA @ 3.3v * LoRa Transmit Mode: 125mA @ 20dBm, 82mA @ 14dBm	* Sleep mode: 74uA@3.8V * LoRa Transmit Mode: 206mA@14dBm, 236mA@20dBm	* Sleep mode: 14uA@3.3V * Max Transmit power: 350mA@3.3V	* Sleep mode: 74uA@3.4V * Max Transmit power: 350mA@3.4V	* Sleep mode: 14uA@3.3V * Max Transmit power: 350mA@3.3V	* Sleep mode: 74uA@3.4V * Max Transmit power: 350mA@3.4V
Supply Voltage	2.5v ~ 3.6v	3.7v ~ 4.2v	2.5v ~ 3.6v	3.7v ~ 4.2v	2.6v ~ 3.6v	3.7v ~ 4.2v
Operating Temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C

Battery & Enclosure Option:

Li-SOCI2 Battery & Enclosure:



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

Solar Version & Enclosure:



- 3000mAh Re-chargeable battery
- 0.9W on board solar pannel Suitable to used in the place where sun is sufficient



- This icon means support location feature by: GPS/ GLONASS/BDS/Galileo/ QZSS

Wireless Option:



- LoRaWAN 1.0.3 Class A
- Bands: CN470/EU433/KR920/US915/ EU868/AS923/AU915/IN865
- OTAA or ABP Mode.
- World Wide Unique LoRaWAN Key
- RX sensitivity: down to -139 dBm.
- Max +22 dBm - 100 mW RF output



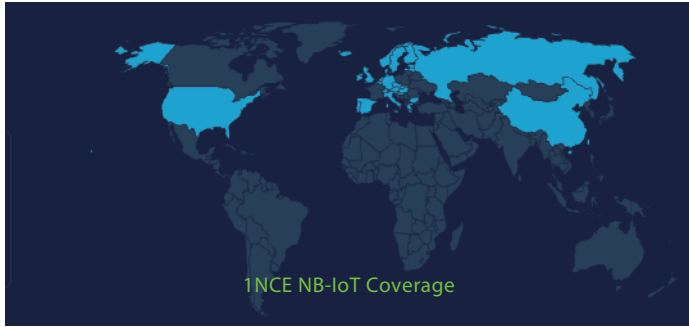
- CAT NB2 Bands:
- For -NB & -NS: B1/B2/B3/B4/B5/B8/B12/B13/ B17/B18/B19/B20/B25/B28/B66/B70/B85
- For -CB & -CS: B1/B2/B3/B4/B5/B8/B12/B13/ /B18/B19/B20/B25/B28/B66/B71/B85
- Uplink via MQTT, MQTTs, TCP, UDP or CoAP
- Multiply Sampling and one uplink



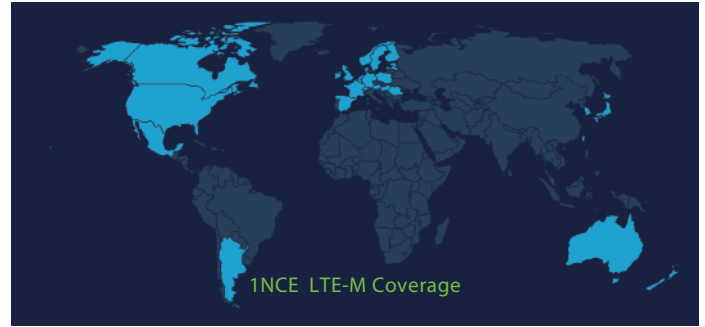
- CAT-M1 / LTE-M Bands: B1/B2/B3/B4/B5/ B8/B12/B13/B18/B19/B20/B25/B26/B27/ B28/B66/B85
- Uplink via MQTT, MQTTs, TCP, UDP or CoAP
- Multiply Sampling and one uplink

What is 1T version for NB-IoT version?

The 1T version of NB-IoT Air/Water Pressure Sensor is with a) 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).



NB-IoT Network : Austria, Belgium, Bulgaria, China, Croatia, Czech Republic, Denmark, Estonia, Finland, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Malta, Netherlands, Norway, Portugal, Puerto Rico, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, USA, US Virgin Islands.



LTE-M Network : Argentina, Austria, Australia, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Japan, Jersey, Korea, Republic of, Latvia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Puerto Rico, Romania, Spain, Sweden, Switzerland, Taiwan, USA, US Virgin Islands.

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.



Order Info:

PS - Pressure Sensor Series Prefix						
Wireless Tech: L: LoRaWAN, N: NB-IoT, C: CAT-M1						
Battery Type: B: 8500mAh LI-SOIC2 Battery, S: Solar Panel + Li-on 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				
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				
Frequency or SIM Version		CN470/EU433/KR920/US915/ EU868/AS923/AU915/IN865 GE -- General version (Exclude SIM card) 1T -- With 1NCE & ThingsEye Pre-configured				
PS	- L	B	- T20	- B	EU868	Example: PS-LB-T20-B-EU868
PS	- L	S	- I5	-	US915	Example: PS-LS-I5-US915
PS	- N	B	- T20	- B	- GE	Example: PS-NB-T20-B-GE
PS	- N	S	- I5	-	- 1T	Example: PS-NS-I5-1T
PS	- C	B	- T20	- B	- GE	Example: PS-CB-T20-B-GE
PS	- C	S	- I5	-	- 1T	Example: PS-CS-I5-1T

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