

Wireless Differential Air Pressure Sensor

OVERVIEW:

Sometimes it is not necessary to monitor the absolute air pressure but we need to know the difference of pressures in different points. One example may be before and after a valve in a pipe. If the valve is fully open, the pressure on both sides should be the same. If there's a difference in the pressure, it could be the valve isn't fully open or there's a blockage.

Differential Pressure Sensor has two air pressure inputs. It monitors the pressure difference between these two inputs and put the value.

Differential Pressure Sensors can be used in home and industrial environments for applications such as offshore and subsea gas processing, and remote heating systems.

Dragino's Wireless Differential Pressure Sensor includes various model to cover LoRaWAN, NB-IoT or CAT-M1 wireless transmission and different range of pressure measurement.

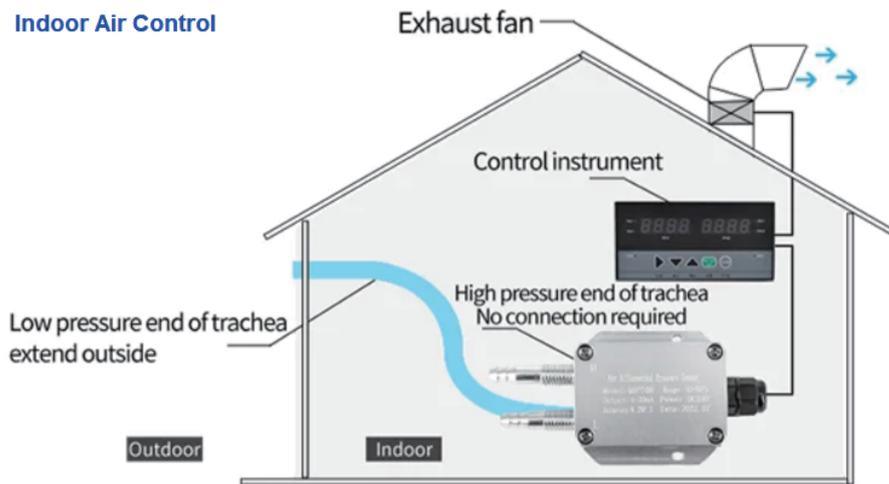
It supports BLE configure and wireless OTA update which make user easy to use.

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

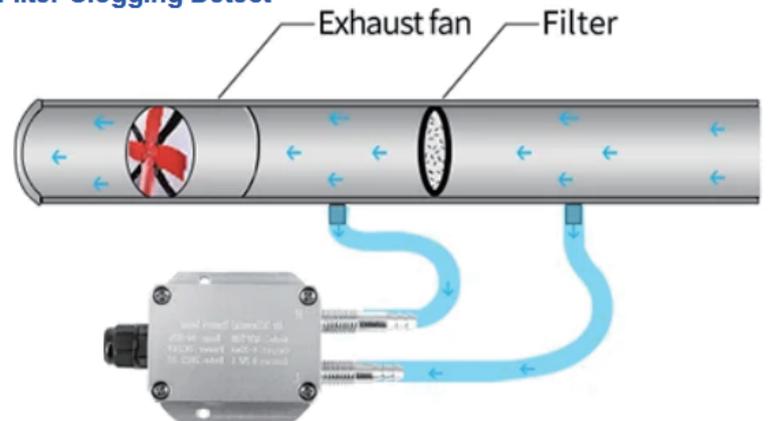


Applications:

Indoor Air Control



Filter Clogging Detect



Model Variants

Variants	PS-LB-D	PS-LS-D	PS-NB-D	PS-NS-D	PS-CB-D	PS-CS-D
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 the Differential Pressure of two input * Different pressure ranges available (from 100Pa to 10KPa) * 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-on Battery	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-on Battery	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-on 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



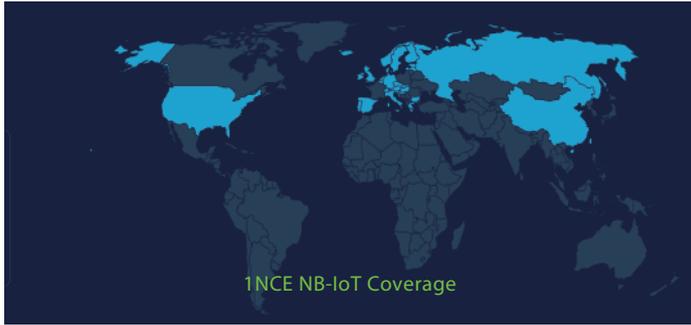
- CAT NB2 Bands:
- For -NB & -NS: B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66/B70/B85
- For -CB & -CS: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85
- Uplink via MQTT, MQTTs, TCP, UDP or CoAP
- Multiply Sampling and one uplink



- 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.

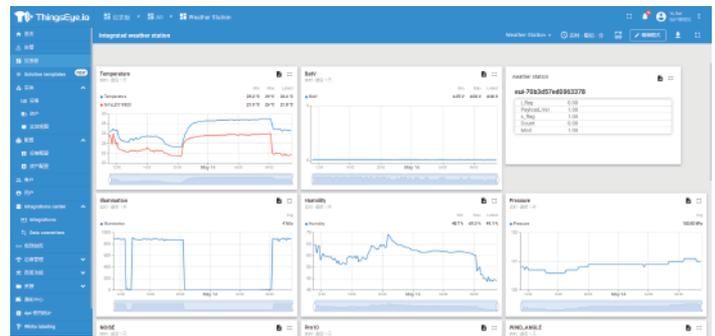


LTE-M Network : Argentina, Austria, Australia, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Japan, Jersey, Korea, Republic of, Latvia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Puerto Rico, Romania, Spain, Sweden, Switzerland, Taiwan, 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: D Differential Pressure Sensor									
PRESSURE -- Only for Thread Type									
				01	0-100Pa				
				02	0-200Pa				
				03	0-300Pa				
				04	0-1KPa				
				05	0-2KPa				
				06	0-3KPa				
				07	0-4KPa				
				08	0-5KPa				
				09	0-10KPa				
				10	-100- 100Pa				
				11	-200- 200Pa				
				12	-1- 1KPa				
				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	-	D	01	EU868	Example: PS-LB-D01-EU868
PS	-	L	-	S	-	D	01	CN470	Example: PS-LS-D01-CN470
PS	-	N	-	B	-	D	02	- GE	Example: PS-NB-D02-GE
PS	-	N	-	S	-	D	02	- 1T	Example: PS-NS-D02-1T
PS	-	C	-	B	-	D	03	- GE	Example: PS-CB-D03-GE
PS	-	C	-	S	-	D	03	- 1T	Example: PS-CS-D03-1T

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