

# PDT2-N



## NB IoT – Cat-M1 Operated Low Power Differential Pressure Transmitter With Built-in Temperature Sensor for Pressure and Flow Measurement of Gas Media

- Compatible with most standard communication Protocols (UDP, LwM2M, MQTT, NIDD, etc.)
- Pressure range of 500Pa (or others)
- Wide range of industrial applications
- High accuracy and Ultra-low power
- Designed to meet outdoor applications
- Compatible with air and other non-conductive and non-corrosive Media



## TECHNICAL SPECIFICATION

### Sensor

• Range: (Pa)	Standard Range: $\pm 500$ (or other ranges on request)
• Accuracy: (%Span) (combined linearity, hysteresis, repeatability)	$\pm 2$ (typ.)
• Resolution: (%Span)	$\pm 0.02$
• Pressure Reference:	Bi-directional Differential
• Temperature Accuracy: ( $^{\circ}\text{C}$ )	$\leq \pm 2$
• Temperature Coefficient of Zero: (%FS/ $^{\circ}\text{C}$ )	$\leq \pm 0.05$
• Temperature Coefficient of Span: (%FS/ $^{\circ}\text{C}$ )	$\leq \pm 0.05$
• Long Term Stability (1 year): (Pa)	$\leq \pm 0.05$
• Response time: (mS)	$\leq 1$
• Pressure Overload: (kPa)	100
• Pressure Cycles (Zero to Full Scale): (Million)	10+
• Compensated Temperature: ( $^{\circ}\text{C}$ )	-20 ~ +85

### Power

• Power Supply:	Built-in Replaceable Lithium Battery, External Power (option)
• Rated Voltage (V)	3.6
• Battery Lifetime:	50,000+ readings and 10,000+ transmission (With UDP protocol/ More than 10 years for most applications)

### Physical Specification

• Media Compatibility:	Air, Inert Gas
• Process connection:	NPT1/8" Female (or others on request)
• Weight: (g)	~450
• Protection Rate: (-)	IP66, UV Protected



www.10sorex.com



Sales@10sorex.com



+1 (424) 400-4964

# PDT2-N

## Communication

• SIM Card Type	4FF Nano-SIM, from any Network Provider
• Firmware Update:	Over The Air, Locally via Wireless Connectivity
• Sampling Period:	Configurable via downlink (default 4 hours)
• Power Consumption:	Power Saving: < 5uA, Transmission: < 220mA
• Communication Standards	Cat-NB1 (NB-IoT) Cat-M1 (option of back support by GPRS)
• Communication Bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 and B39
• Data Rates:	Cat-M1: 375Kbps (DL)/375Kbps (UL) NB-IoT: 32Kbps (DL)/70Kbps (UL)
• TX Power:	23dBm
• Min Receiver Sensitivity:	Cat-M1: -107dBm / NB-IoT: -113dBm
• Antenna:	Internal (Default) / External (customised options available)
• Optional Features:	<ul style="list-style-type: none"> <li>• Attach without PDN (Packet Data Network)</li> <li>• Support for IPV6</li> <li>• SMS communication</li> <li>• Mobility support (Cat-M1 only)</li> </ul>

## NETWORK CONNECTION AND VISUALIZATION

### Network Integration

Pre-configured or configurable to all main narrow band networks (3, A1, AT&T, China Mobile, DU, Etisalat, KPN, M1 Singapore, Optus, Orange, Proximus, Spark, Sprint, Swisscom, Telefonica, Telstra, T-Mobile, Verizon, Vodafone, 1NCE, Emnify and any other network)

### Visualization and Data Management

10Sorex white label microservice platform and Integratable to all main IIoT platforms directly or through the API(AWS, Azure, PTC ThingWorx, Bosch IoT, Cisco Jasper & Kinetic, Sierra Numerex, MathWorks ThingSpeak, GE Digital Predix, LandisGyr, Siemens MindSphere, Cumulocity, myDevices, Ubidots, TagoIO, AllThingsTalk Maker, HPE IoT and any other major IoT platform).

### 10Sorex Platform Main Features

- Encrypted ultra-low power communication protocol
- Integration APIs for enterprise systems
- Data export and import
- Multi-channel, rule-based alerting
- Transmission condition configuration
- Advanced device inventory
- Multi-tenant role-based access control
- White-label platform for enterprises on private account
- Sampling and transmission interval configuration
- Other configurations and customization available on request



Encrypted & ultra-low power



Integrable



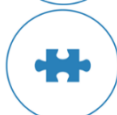
Dynamic alerting



Multi-tenant



Scalable



Composable & API first



[www.10sorex.com](http://www.10sorex.com)




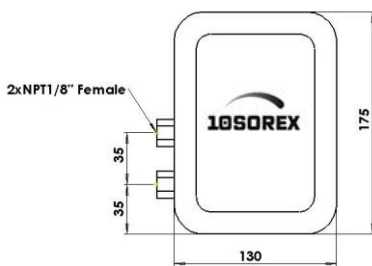


[Sales@10sorex.com](mailto:Sales@10sorex.com)



+1 (424) 400-4964

# PDT2-N

## MODEL GUIDE

Standard Model	Drawing
	
<b>Installation kit (optional)</b> For differential pressure monitoring (Static pressure tip, connector, valve)	
<b>Installation kit (optional)</b> For airflow monitoring (Pitot tube with static and dynamic pressure tip, assembly plate)	

## INDUSTRIES



Smart Building  
& HVAC



Food &  
Beverage



Oil &  
Gas



Transport &  
Logistics



Mining &  
Construction



Hydraulics and  
Compressed Air  
Systems

## APPLICATIONS

- HVAC and Air Conditioning Systems
- Air Filter Performance Monitoring
- Fan and Ventilation System Performance Monitoring
- Pressurized Chambers Monitoring
- Clean Rooms positive pressure indication
- Burner and Boiler Monitoring Systems

- Leakage Monitoring Systems
- Heat Recovery Systems
- Air velocity monitoring
- Blower vacuum monitoring
- Fan pressure indication



# PDT2-N

## ORDERING CODE

PDT2-N									
Communication Type									
B: NB-IoT					C: Cat-M1				
Pressure Range									
±500Pa (standard), ±125Pa (or any other positive or negative ranges)									
Process Port									
NPT1/8(1/8" NPT female)					Others as specified				
Device Activation									
S: on/off switch					X: No switch (always on)				
Antenna									
I: Internal					E: External				
Options									
(On request) <sup>1</sup>									
PDT2-N	B	500Pa	NPT1/8	S	I				

### Sample Product Code:

- PDT2-N-B-500Pa-NPT1/8-S-I**

NB-IoT differential pressure sensor operated, range of 500Pa, process connection of NPT1/8 female, activated by on-off switch and internal antenna.

### <sup>1)</sup> Product Options:

- EP**: sensor with external power supply connector for 12V supply (only for E type enclosure, adaptor is not included)
- EPB**: connector for 12V supply with internal battery backup (only for E type enclosure)
- HG**: high-gain external antenna
- WF**: Active WiFi module on device for communication/ firmware update through Mobile phone NFC module (only for E type enclosure)
- HCB**: high-capacity battery (only for E type enclosure)



www.10sorex.com



Sales@10sorex.com



+1 (424) 400-4964