



## NB IoT – Cat-M1 Operated Low Power Differential Pressure Transmitter for Liquid and Gas Media

- Compatible with most standard communication Protocols (UDP, LwM2M, MQTT, NIDD, etc.)
- Wide range of industrial applications
- High accuracy
- Designed to meet outdoor applications
- Long-term durable performance in harsh environment
- Ultra-low power
- Suitable for liquids and gases compatible with SS



## TECHNICAL SPECIFICATION

### Sensor

• Range:	Selectable between 0~0.1 to 25	bar
• Accuracy: (combined linearity, hysteresis, repeatability)	±0.25 (typ.)	%Span
• Resolution:	±0.01	%Span
• Pressure Reference:	Differential	
• Temperature Coefficient of Zero:	≤±0.02(range > 1bar), ≤±0.04 (range < 1bar)	%FS/°C
• Temperature Coefficient of Span:	≤±0.02(range > 1bar), ≤±0.04 (range < 1bar)	%FS/°C
• Long Term Stability (1 year):	≤ 0.3	%Span
• Pressure Overload:	200 (positive side); 100(negative side, max 10bar)	%FS
• Pressure Cycles (Zero to Full Scale):	10+	Million
• Compensated Temperature:	0 ~ +60	°C

### Power

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

### Physical Specification

• Materials:	O-ring: Viton, Body: SS304, Diaphragm: SS316, Oil: Silicon / Olive, Enclosure: ASA/POM	
• Process Connection:	G1/4 Male (or others on request)	
• Weight:	550	g
• Protection Rate:	IP66 /IP68, UV Protected	-

### 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 VISUALISATION

### 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)

### Visualisation and Data Management

Ellenex 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).

### Ellenex Platform Main Features

- Encrypted ultra-low power communication protocol
- Advanced device inventory
- Integration APIs for enterprise systems
- Multi-tenant role-based access control
- Data export and import
- White-label platform for enterprise runs on private account
- Variable alarm setting for high and low thresholds and multi-channel alerting
- Sampling and transmission interval configuration
- Transmission condition configuration
- Other configurations and customisation available on request



Encrypted & ultra-low power



Integratable



Dynamic alerting



Multi-tenant


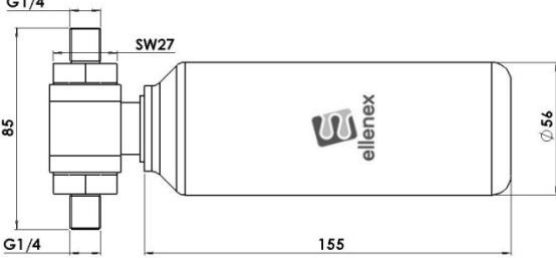


Scalable



Composable & API first

## MODEL GUIDE

Model	Drawing:
	

## INDUSTRIES



Water & Environment



Agriculture & Farming



Oil & Gas



Marine & Oceanography



Mining & Construction



Smart Building & HVAC



Transport & Logistics



Food & Beverage



Hydraulics and Compressed Air Systems

## APPLICATIONS

- Pump Performance Monitoring
- Water Pipeline Pressure Monitoring
- Pressurised System Monitoring
- Chiller and Cooling System Monitoring
- Hydraulic and Pneumatic Systems Monitoring
- Closed Liquid Storage Level Monitoring
- Spraying System Monitoring
- Air Compressor Monitoring

## ORDERING CODE

PDS2-N							
<b>Communication Type</b>							
B: NB-IoT				C: Cat-M1			
<b>Pressure Range</b>							
0.1, 0.35, 0.5, 1, 2, 4, 6, 10, 15, 20, 25bar (or any other non-standard ranges)							
<b>Process Port</b>							
G1/4 (1/4" BSPP male)				G1/2 (1/2" BSPP male)			
NPT1/4 (1/4" NPT male)				Others as specified			
<b>Enclosure</b>							
C: Standard compact				Others			
<b>Device Activation</b>							
S: on/off switch				X: No switch (always on)			
<b>Antenna</b>							
I: Internal				E: External			
<b>Options</b>							
(On request)							
PDS2-N	B	0.1bar	G1/4	C	S	I	

### Sample Product Code:

- **PDS2-N-B-0.1bar-G1/4-C-S-I**

NB-IoT differential Pressure sensor operated, range of 0.1bar, process connection of G1/4, activated by on-off switch and internal antenna.