PDT2-N Spec-sheet

NB-IoT

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:	Standard Range: ±500 (or other ranges on request)	Pa
• Accuracy: (combined linearity, hysteresis, repeatability)	±2 (typ.)	%Span
• Resolution:	±0.02	%Span
• Pressure Reference:	Bi-directional Differential	
• Temperature Accuracy:	≤±2	°C
• Temperature Coefficient of Zero:	≤±0.05	%FS/°C
• Temperature Coefficient of Span:	≤±0.05	%FS/°C
• Long Term Stability (1 year):	≤±0.05	Pa
• Response time:	≤1	mS
• Pressure Overload:	100	kPa
• Pressure Cycles (Zero to Full Scale):	10+	Million
• Compensated Temperature:	-20 ~ +85	°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 (More than 10 years for most applications)	

Physical Specification

• Media Compatibility:	Air, Inert Gas	
• Process connection:	NPT1/8” Female (or others on request)	
• Weight:	~450	g
• Protection Rate:	IP65, UV Protected	-

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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	Dual mode (Cat-M1 and Cat-NB1) 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:	• Attach without PDN (Packet Data Network) • Support for IPV6 • SMS communication • Mobility support (Cat-M1 only)

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).

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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

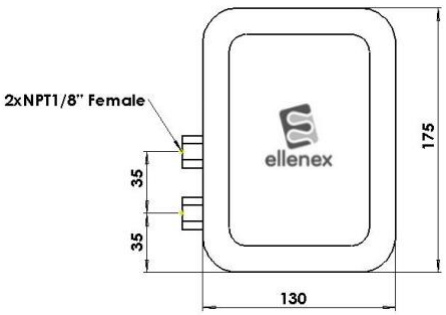
Dynamic alerting

Multi-tenant

Scalable

Composable& API first

MODEL GUIDE

Standard Model	Drawing
	
Installation kit (optional) (static pressure tip, connector, valve)	  

INDUSTRIES

Smart Building & HVAC

Food & Beverage

Oil & Gas

Transport & Logistics

Mining & Construction

Hydraulics and Compressed Air Systems

PDT2-N Spec-sheet

APPLICATIONS

- HVAC and Air Conditioning Systems
- Air Filter Performance Monitoring
- Fan and Ventilation System Performance Monitoring
- Pressurised 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

ORDERING CODE

PDT2-N

Communication Type

D (Dual mode NB-IoT and Cat-M1) | **B** (NB-IoT only) | **C** (Cat-M1 only)

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 | **N:** NFC (by mobile phone)

X: No switch (always on) | **D:** Dual switch (on/off + Trigger)

Antenna

I: Internal | **E:** External

Options

(On request)

PDT2-N	D	500Pa	NPT1/8	S	I	

Sample Product Code:

- **PDT2-N-D-500Pa-NPT1/8-S-I**
  Differential pressure sensor operated on dual mode of NB-IoT and LTE Cat M1, range of 500Pa, process connection of NPT1/8 female, activated by on-off switch and internal antenna.

Integrated IoT Solutions

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