PTE2-N Spec-sheet

NB-IoT **LTE-M**

Industrial NB IoT – Cat-M1 Operated Low Power Earth and Sludge Pressure Transmitter

- Compatible with most standard communication Protocols (UDP, LwM2M, MQTT, NIDD, etc.)
- Wide range of industrial applications
- High accuracy
- Long-term durable performance in harsh environment
- Ultra-low power

TECHNICAL SPECIFICATION

Sensor

Range:	Selectable between 0~0.5 to 0~20	Kg/cm^2
Accuracy:	±0.5 (typ.)	%Span
Non-linearity:	±1	%Span
Long term stability (1 year):	≤ 0.2	%Span
Pressure overload:	120	%FS
Compensated temperature:	-10 ~ +70	°C

Power

Power Supply:	Built-in Replaceable Lithium Battery, external power (option)	
Rated Voltage	3.6	V
Battery Lifetime:	100,000+ readings and 20,000+ transmission (More than 10 years for most applications)	

Physical Specification

Materials:	Special Stainless Steel, high grade epoxy potting Enclosure: ASA/ POM	
Weight:	2 ~4.5 (depends on the range)	kg
Protection rate:	Sensor head: waterproof for 300m H2O Enclosure: IP66/ IP68 and UV protected	-
Size:	Φ230mm (OD), Thickness: 10.5mm (for the range of 2kg/cm^2)	
Cable:	Φ10 mm, 0.5mm2 × 5C shielded PVC sheath cable	

Communication

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

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• 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, 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

APPLICATIONS

- Land movement monitoring
- Road overload monitoring
- Pavement foundation movement
- Soil level monitoring

- Sludge level monitoring in water channels
- Rail foundation movement monitoring
- Under-ground water in soil level monitoring
- Overload monitoring

PTE2-N Spec-sheet

INDUSTRIES

- Land Movement Monitoring
- Agriculture & Farming
- City & Councils
- Marine & Oceanography
- Mining
- Rail Industry
- Environmental Monitoring
- Construction
- Road

MODEL GUIDE

Housing			
C Model:		**E Model:**	
	C model comes with cylindrical shape housing suitable for battery operated applications with IP65 or IP68 rate and clamp mounting.		**E model** comes with rectangular shape housing suitable for battery or external power operated applications with IP66 rate, and wall mounting.

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ORDERING CODE

PTE2-N								
	Communication Type							
	B: NB-IoT		**C:** Cat-M1					
		Measurement range						
		0.5, 1, 2, 5, 10, 20 kg/cm^2 (or any other positive or negative ranges)						
			Enclosure					
			C: Cylindrical	**E:** Rectangular				
				Cable Length				
				S: 3m	**Others**			
					Device Activation			
					S: On/Off switch	**X: No switch** (Always on)		
						Antenna		
						I: Internal	**E:** External	
							Options	
							(on request)[1]	
PTE2-N	B	0.5	C	S	S	I		

Sample Product Code:

- **PTE2-N-B-0.5-C-S-S-I**
  NB IoT Earth pressure sensor with range of 0.5kg/cm^2, with cylindrical housing, 3m cable, and activated by on-off switch comes with internal antenna.

[1] 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)

Integrated IoT Solutions

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