

PTS3-N Spec-sheet



NB IoT – Cat-M1 Operated IP68 Rated Low Power 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 0~0.5 to 0~1000	bar
• Accuracy: (combined linearity, hysteresis, repeatability)	±0.25 (typ.)	%Span
• Resolution:	±0.01	%Span
• Pressure Reference:	Vented Gauge, Sealed Gauge, Absolute	
• Temperature Coefficient of Zero:	≤±0.02	%FS/°C
• Temperature Coefficient of Span:	≤±0.02	%FS/°C
• Long Term Stability (1 year):	≤ 0.2	%Span
• Pressure Overload:	300 (range <1bar); 150 (higher range)	%FS
• Pressure Cycles (Zero to Full Scale):	10+	Million
• Compensated Temperature:	-10 ~ +70	°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:	IP68, UV Protected	-

Communication

• SIM Card Type	4FF Nano-SIM, from any Network Provider
• Firmware Update:	Over The Air, Locally via Serial Port
• Sampling Period:	Configurable via downlink (default 4 hours)
• Power Consumption:	Power Saving: < 5uA, Transmission: < 220mA

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• 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">• 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).

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



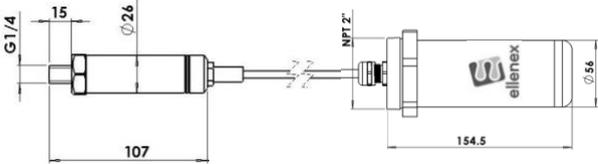
Scalable



Composable & API first

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MODEL GUIDE

Model	Options:
<p>Compact Model:</p> 	 <p>C8: IP68 sealed gauge sensor, compact, POM enclosure (available for the range of more than 20bar with Sealed gauge sensor head)</p>
<p>Extended cable Model:</p> 	 <ul style="list-style-type: none"> C83: IP68 sensor head, wired with IP68 POM enclosure without on/off switch (available for the range of more than 20bar with Sealed gauge sensor head) C63: IP68 sensor head, wired with IP66 POM enclosure with on/off switch (available for all ranges of pressure)

INDUSTRIES



Water & Environment



Agriculture & Farming



Oil & Gas



Marine & Oceanography



Mining & Construction



Smart Building & HVAC



Transport & Logistics



Food & Beverage



Hydraulics and Compressed Air Systems

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APPLICATIONS

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

ORDERING CODE

PTS3-N									
Communication Type									
B: NB-IoT					C: Cat-M1				
Pressure Range									
0.5, 1, 2, 5, 10, 20, 50, 100, 200, 400, 700, 1000bar (or any other positive or negative ranges)									
Pressure Reference									
V (vented gauge)			S (sealed gauge)			A (absolute)			
Process Port									
G1/4 (1/4" BSPP male) <small>(standard option for the ranges less than 200bar)</small>					G1/2 (1/2" BSPP male) <small>(standard option for the ranges more than 200bar)</small>				
NPT1/4 (1/4" NPT male)					Others as specified				
Enclosure									
C8			C83			C63			
Compact			With extended cable. Standard cable length: 3m <small>(or other options on request)</small>						
Device Activation									
X: No switch <small>(always on)</small>					Others on request				
Antenna									
I: Internal					E: External <small>(on request)</small>				
Options									
(On request)									
PTS3-N	B	400bar	S	G1/2	C8	X	I		

Sample Product Code:

- **PTS3-N-B-400bar-S-G1/2-C8-S-I**

NB IoT pressure sensor, range of 400bar, sealed, process connection of G1/2, with C8 housing (compact and IP68 rated), without on-off switch and internal antenna.