

PLC3-N



NB IoT – Cat-M1 Operated IP68 Corrosive Resistant Low Power Level Transmitter for Liquid 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 Corrosive Media



TECHNICAL SPECIFICATION

Sensor

• Range: (m H ₂ O)	1, 2, 5, 10 (or other ranges up to 200)
• Accuracy: (combined linearity, hysteresis, repeatability) (%Span)	±0.25 (typ.)
• Resolution: (%Span)	±0.01
• Pressure reference:	Sealed Gauge (with Built-in Atmospheric Pressure Sensor)
• Temperature Coefficient of Zero: (%FS/°C)	≤±0.03
• Temperature Coefficient of Span: (%FS/°C)	≤±0.03
• Long term stability (1 year): (%Span)	≤ 0.2
• Overload Protection: (%FS)	150
• Load Cycles (Zero to Full Scale): (Million)	10+
• Storage / Operation Temperature: (°C)	-20 ~ +85
• Compensated temperature: (°C)	0 ~ 60

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

• Materials:	Body: Hastelloy or PVDF, Diaphragm: Hastelloy or Ceramic (Al ₂ O ₃), Enclosure: POM, O-ring: FKM/ FFKM
• Process Connection:	No Process Connection (or on request)
• Weight: (g)	~1,300 (for 3m range)
• Protection Rate:	IP68 and UV protected enclosure and sensor head



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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 (option of back support by GPRS)	Cat-NB1 (NB-IoT) Cat-M1
• 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 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



Integratable



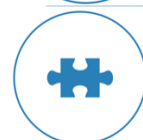
Multi-tenant



Scalable



Dynamic
alerting



Composable &
API first



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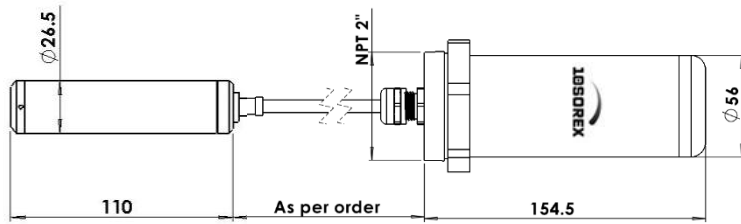
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MODEL GUIDE

Model	Options:
<p>Standard Model:</p> 	 <p>IP66 sensor head, connected to IP68 POM enclosure with on/off switch</p>

INDUSTRIES



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Wastewater



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Farming



Oil &
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APPLICATIONS

- Bore Hole Level
- Liquid Tanks
- Liquid Delivery Systems
- Wastewater Tank
- Flood Monitoring
- Water Resources Level



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ORDERING CODE

PLC3-N									
Communication Type									
B: NB-IoT					C: Cat-M1				
Measurement Range									
1, 3, 10, 20, 50, 100, 200m H ₂ O (or any other non-standard range)									
Sensor Head Material									
H: Hastelloy diaphragm and process connection					C: ceramic diaphragm with PVDF process connection			Others	
Cable Material									
U: Polyurethane			T: Teflon coated			Others			
Cable Length									
S: approximately same as measurement range						Others			
Device Activation									
X: No switch (always on)						Others			
Antenna									
I: Internal					E: External				
Options									
(On request) ¹									
PLC3-N	B	3m	S	T	S	X	I		

Sample Product Code:

- **PLC3-N-B-3m-S-T-S-X-I**

NB IoT corrosive resistance IP68 level sensor, measurement range of 3m H₂O, with Hastelloy sensor head and Teflon coated cable and rectangular enclosure, activated by on-off switch and internal antenna.

