

PLC2-N



NB IoT – Cat-M1 Operated Low Power Level Transmitter for Corrosive 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 liquids



TECHNICAL SPECIFICATION

Sensor

• Range: (m H ₂ O)	2, 5, 10 (or other ranges up to 200)
• Accuracy: (combined linearity, hysteresis, repeatability) (%Span)	±0.25 (typ.)
• Resolution: (%Span)	±0.01
• Pressure reference:	Vented Gauge
• 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: ASA/ POM, O-ring: FKM/ FFKM
• Process Connection:	No Process Connection (or on request)
• Weight: (g)	~1,300 (for 3m range)
• Protection Rate:	IP66 and UV protected enclosure and IP68 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



Dynamic
alerting



Multi-tenant



Scalable



Composable &
API first



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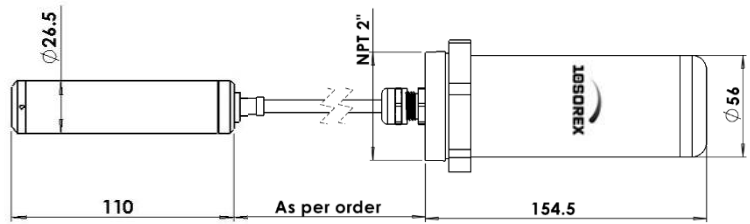

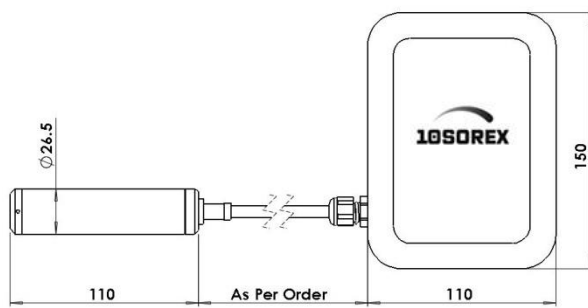
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MODEL GUIDE

Model	Options:
C Model: 	 <p>IP68 sensor head, connected to IP66 POM enclosure with on/off switch</p>
E Model: 	 <p>IP68 sensor head, connected to IP65 ASA enclosure and on/off switch</p>

INDUSTRIES



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Oil &
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Marine &
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Mining &
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Smart
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Logistics



Food &
Beverage



Hydraulic Oil
Storage

APPLICATIONS

- Chemical Tanks
- Liquid Delivery Systems
- Water Resources Level
- Flood monitoring
- Diesel Tank
- Liquid Storage
- Hydraulic Containers
- Wastewater Tank



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ORDERING CODE

PLC2-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: same as measurement range or 1m extra								Others	
Enclosure									
E: Rectangular Enclosure					C: Cylindrical Enclosure				
Device Activation									
S: on/off switch						X: No switch (always on)			
Antenna									
I: Internal					E: External				
Options									
(On request) ¹									
PLC2-N	B	3m	H	T	S	E	S	I	

Sample Product Code:

- PLC2-N-B-3m-H-T-S-E-S-I

NB IoT corrosive resistance 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.

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)



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