

# PLD2-N



## NB IoT – Cat-M1 Operated Low Power Level Transmitter for Liquid with Built-in Temperature Sensor

- 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 compatible with SS



## TECHNICAL SPECIFICATION

### Sensor

• Level Range: (m H <sub>2</sub> O)	2, 5, 10 (or other ranges up to 200)
• Level Accuracy: (combined linearity, hysteresis, repeatability) (%Span)	±0.25 (typ.)
• Temperature Accuracy: (°C)	±2 (typ.) (temperature sensor is mounted on the back of pressure sensor and doesn't reflect the media temperature)
• 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:	O-ring: Viton, Body: SS304, Diaphragm: SS316, Oil: Silicon, Enclosure: ASA/POM
• 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"> <li>• Attach without PDN (Packet Data Network)</li> <li>• Support for IPV6</li> <li>• SMS communication</li> <li>• Mobility support (Cat-M1 only)</li> </ul>

## 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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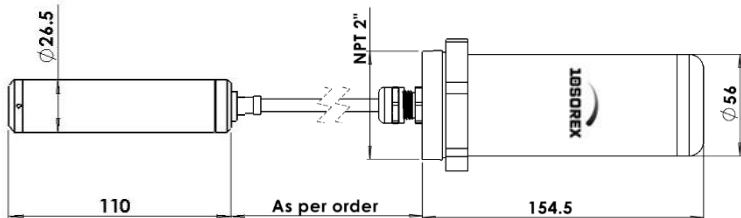

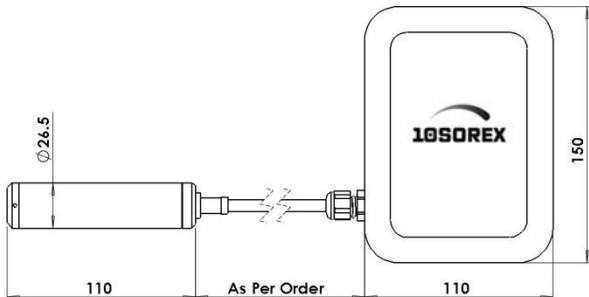
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## MODEL GUIDE

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

## INDUSTRIES



Water &  
Wastewater



Agriculture &  
Farming



Oil &  
Gas



Marine &  
Oceanography



Mining &  
Construction



Smart  
Building



Transport &  
Logistics



Food &  
Beverage



Hydraulic Oil  
Storage

## APPLICATIONS

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



# PLD2-N

## ORDERING CODE

PLD2-N									
Communication Type									
B: NB-IoT					C: Cat-M1				
Measurement Range									
1, 3, 10, 20, 50, 100, 200m H <sub>2</sub> O (or any other non-standard range)									
Cable Material									
U: Polyurethane (suitable for oil and Diesel)							Others (on request)		
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) <sup>1</sup>									
PLD2-N	B	3m	U	S	E	S	I		

### Sample Product Code:

- **PLD2-N-B-3m-U-S-E-S-I**

NB IoT level- temperature sensor, measurement range of 3m H<sub>2</sub>O, with Polyurethane cable and rectangular enclosure, activated by on-off switch and internal antenna.

### <sup>1</sup> 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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