PLS3-N

NB-IoT **LTE-M**

NB IoT – Cat-M1 Operated IP68
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 liquids compatible with SS and Hastelloy

TECHNICAL SPECIFICATION

Sensor

Range: (m H2O)	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:	O-ring: Viton, Body: SS304, Diaphragm: SS316, Oil: Silicon, Enclosure: POM
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:	• 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)

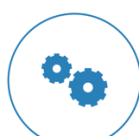## Visualization and Data Management

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
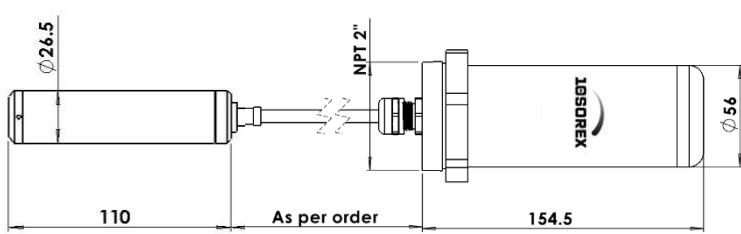
Composable& API first

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MODEL GUIDE

Model	Options:
Standard Model:	IP6o sensor head, connected to IP68 POM enclosure with on/off switch

INDUSTRIES

- Water & Wastewater
- Agriculture & Farming
- Oil & Gas
- Marine& Oceanography
- Mining & Construction
- Transport & Logistics

APPLICATIONS

- Bore Hole Level
- Liquid Tanks
- Liquid Delivery Systems

- Wastewater Tank
- Flood Monitoring
- Water Resources Level

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ORDERING CODE

PLS3-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)						
			Cable Material					
			U: Polyurethane (suitable for water, oil and Diesel)		**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]	
PLS3-N	**B**	**10m**	**U**	**S**	**X**	**I**		

Sample Product Code:

- **PLS3-N-B-10m-U-S-X-I**
  IP68 Level sensor operated on NB-IoT, measurement range of 10m H$_2$O, with stainless steel sensor head and Polyurethane cable, standard cable length, enclosure with bottom mounting thread, activated in the factory and equipped with internal antenna.