PLS3-L

LoRaWAN®

LoRaWAN® Operated IP68 Low Power Level Transmitter for Liquid Media

- Compatible with all LoRaWAN® frequencies
- 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, 3, 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	100,000+ readings and 20,000+ transmission (More than 10 years for most applications)

Physical

Materials	O-ring: Viton, Body: SS304, Diaphragm: SS316, Oil: Silicon, Enclosure: POM
Process Connection	No Process Connection (or on request)
Weight (g)	~1300 (for 5m range)
Protection Rate	IP68, UV Protected enclosure and sensor head

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Communication

•	LoRaWAN® Version, Class	1.0.2revB, Class A (Class C on request)
•	LoRaWAN® Frequency Zone	AS923, EU868, US902-928, AU915-928 (other zones available on request)
•	LoRaWAN® Activation Type	OTA (default), ABP
•	Sampling Type	Periodic (default), Event triggered
•	Sampling Period	Configurable via downlink (default 4 hours)
•	Transmission Type	Per sample (default), Event triggered, Conditional
•	Parameter Configuration	Over-the-air via LoRaWAN® downlinks Locally via wireless connectivity
•	Firmware Update	Locally via Wireless Connectivity, Over The Air

NETWORK CONNECTION AND VISUALIZATION

Network Integration

- Integratable to all main networks (Actility, Alibaba, Cisco, Digita, Everynet, Helium, Kerlink, kpn, Loriot, machine-Q, Objenious, Orange, Orbiwise, Proximus, Senet, Sens, Swisscom, TATA, The Things Network (TTN), TTI 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, ALSO AllThingsTalk, HPE IoT and any other major IoT platform).

10Sorex 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 customization available on request

Encrypted & ultra-low power	Integratable
Dynamic alerting	
Multi-tenant	Scalable
Composable & API first	

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MODEL GUIDE

Model	Option / Schematic
Standard Model	Ø26.5 NPT 2" Ø56 110 As per order 154.5
	IP68 sensor head, connected to IP68 POM enclosure with on/off switch

INDUSTRIES

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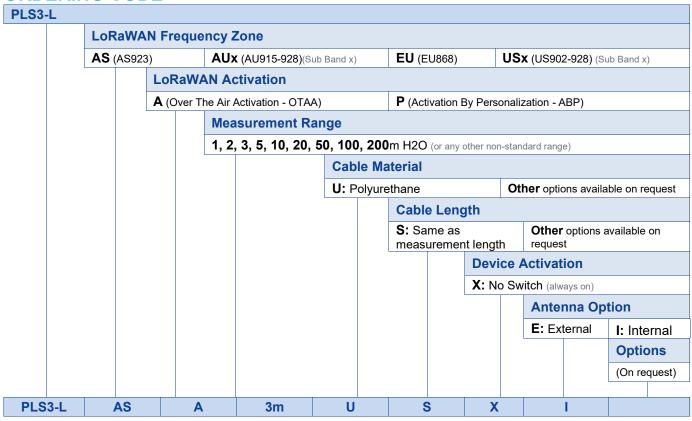- Mining & Construction
- Transport & Logistics

APPLICATIONS

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

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ORDERING CODE

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	LoRaWAN Frequency Zone								
	AS (AS923)	**AUx** (AU915-928)(Sub Band x)		**EU** (EU868)	**USx** (US902-928) (Sub Band x)				
		LoRaWAN Activation							
		A (Over The Air Activation - OTAA)		**P** (Activation By Personalization - ABP)					
			Measurement Range						
			1, 2, 3, 5, 10, 20, 50, 100, 200m H2O (or any other non-standard range)						
				Cable Material					
				U: Polyurethane	**Other** options available on request				
					Cable Length				
					S: Same as measurement length	**Other** options available on request			
						Device Activation			
						X: No Switch (always on)			
							Antenna Option		
							E: External	**I:** Internal	
								Options	
								(On request)	
PLS3-L	**AS**	**A**	**3m**	**U**	**S**	**X**	**I**		

Sample Product Code:

- **PLS3-L-AS-A-3m-U-S-X-I**
  LoRaWAN® operated IP68 rated level sensor, frequency of AS923, Over The Air Activated, measurement range of 3m H2O, with stainless steel sensor head and Polyurethane cable and cylindrical enclosure with standard mounting thread, activated in the factory and equipped with internal antenna.

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