

PLS2-L



LoRaWAN® Operated 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



TECHNICAL SPECIFICATION

Sensor

• Range (m H2O)	1, 2, 3, 5, 10 (or other ranges up to 200)
• Accuracy (combined linearity, hysteresis, repeatability) (%Span)	±0.2 (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	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 / Olive, Enclosure: ASA/POM
• Process Connection	No Process Connection (or on request)
• Weight (g)	~1200 (for 5m range)
• Protection Rate	IP66, UV Protected enclosure and IP68 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 (Activity, Alibaba, Cisco, Digita, Everynet, Helium, Kerlink, kpn, Lorient, 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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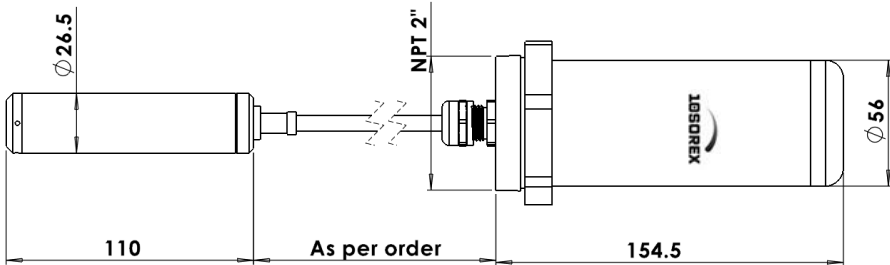

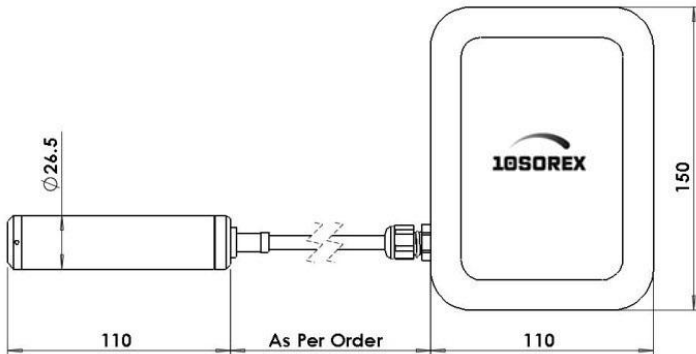
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MODEL GUIDE

Model	Option / Schematic
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>

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INDUSTRIES



Water &
Wastewater



Agriculture &
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Smart Building



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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



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ORDERING CODE

PLS2-L									
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				
Enclosure									
C5: Cylindrical				E5: Rectangular					
Device Activation									
S: With On/Off Switch					X: No Switch (Always On)				
Antenna Option									
E: External				I: Internal					
Options									
(On request) ¹									
PLS2-L	AS	A	3m	U	S	C5	S	E	

Sample Product Code:

- PLS2-L-AS-A-3m-U-S-C5-S-E

LoRaWAN® level sensor, frequency of AS923, Over The Air Activated, measurement range of 3m H2O, with Polyurethane cable and cylindrical enclosure, activated by on-off switch and external 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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