

# PLC2-L



## LoRaWAN Operated Low Power Level Transmitter for Corrosive 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 corrosive liquids



## 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	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	Body: Hastelloy or PVDF, Diaphragm: Hastelloy or Ceramic (Al2O3), Enclosure: ASA/ POM, O-ring: FKM/ FFKM
• 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 (Actility, 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


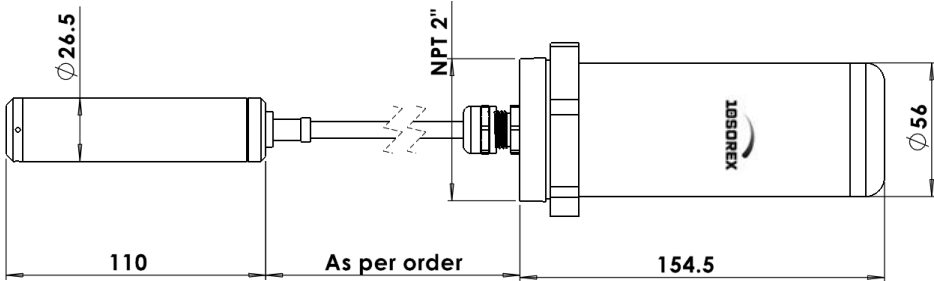

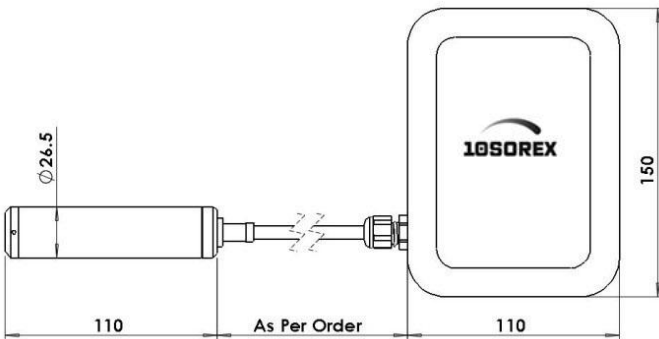


Composable &  
API first



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## MODEL GUIDE

Model	Option / Schematic
<b>C Model</b> 	 <p>IP68 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>

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## INDUSTRIES



Water &  
Wastewater



Agriculture &  
Farming



Oil & Gas



Marine &  
Oceanography



Mining &  
Construction



Smart Building



Transport &  
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-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)										
Sensor Head Material										
H: Hastelloy diaphragm and process connection						C: Ceramic diaphragm with PVDF process connection				
Other options available on request										
Cable Material										
U: Polyurethane				T: Teflon coated			Others			
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) <sup>1</sup>										
PLC2-L	AS	A	3m	H	T	S	C5	S	E	

### Sample Product Code:

- PLC2-L-AS-A-3m-H-T-S-C5-S-E**

LoRaWAN® corrosive resistance level sensor, frequency of AS923, Over The Air Activated, measurement range of 3m H2O, with Hastelloy sensor head and Teflon coated cable and cylindrical enclosure, activated by on-off switch and external 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)

