



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:	2, 5, 10 (or other ranges up to 200)	m H ₂ O
• Accuracy: (combined linearity, hysteresis, repeatability)	±0.25 (typ.)	%Span
• Resolution:	±0.01	%Span
• Pressure reference:	Vented Gauge	
• Temperature Coefficient of Zero:	≤±0.03	%FS/°C
• Temperature Coefficient of Span:	≤±0.03	%FS/°C
• Long term stability (1 year):	≤ 0.2	%Span
• Overload Protection:	150	%FS
• Load Cycles (Zero to Full Scale):	10+	Million
• Storage / Operation Temperature:	-20 ~ +85	°C
• Compensated temperature:	0 ~ 60	°C

Power

• Power Supply:	Built-in Replaceable Lithium Battery, External Power (option)
• Rated Voltage	3.6 V
• Battery Lifetime:	50,000+ Readings and 10,000+ Transmission (More than 10 years for most applications)

Physical Specification

• Materials:	Body: Hastelloy or PVDF, Diaphragm: Hastelloy or Ceramic (Al ₂ O ₃), Enclosure: ASA/ POM, O-ring: FKM/ FFKM
• Process Connection:	No Process Connection (or on request)
• Weight:	~1,200 (for 5m range) g
• Protection Rate:	IP65 and UV protected enclosure and IP68 sensor head

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 VISUALISATION

Network Integration

Integratable to all main networks (Actility, Alibaba, Cisco, Digita, Everynet, GeoWAN, Kerlink, kpn, Loriot, machine-Q, Objenious, Orange, Orbiwise, Proximus, Senet, Sens, Swisscom, TATA, The Things Network (TTN), TTI and any other network)

Visualisation and Data Management

Ellenex 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).

Ellenex 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 customisation available on request



Encrypted & ultra-low power



Integratable



Dynamic alerting



Multi-tenant


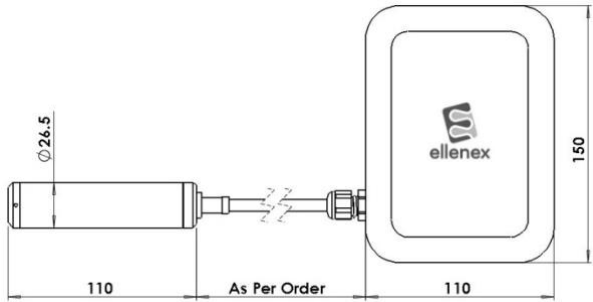

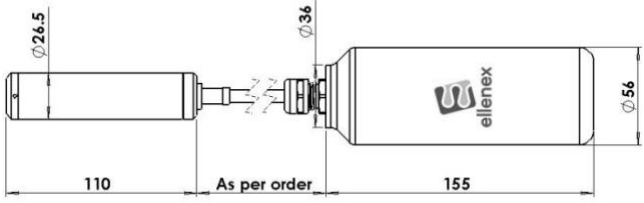


Scalable



Composable & API first

MODEL GUIDE

Model	Options:
<p>E Model:</p> 	 <p>Sensor head, connected to IP65 ASA enclosure and on/off switch</p>
<p>C Model:</p> 	 <p>Sensor head, connected to IP65POM enclosure and NFC activation</p>

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 industry
- Diesel Tank
- Liquid Storage
- Hydraulic Containers
- Wastewater Tank

ORDERING CODE

PLC2-L										
Frequency Zone										
AS (AS923)		EU (EU868)		USx (US902-928, sub-band x)			AUx (AU915-928, sub-band x)		Others	
LoRaWAN® Activation										
A (Over The Air Activation - OTAA)						P (Activation By Personalization ABP)				
Measurement Range										
1, 2, 5, 10, 20, 50, 100, 200m H ₂ O (or any other non-standard range)										
Sensor Head Material										
H: Hastelloy diaphragm and process connection				C: ceramic diaphragm with PVDF process connection				Others		
Cable Material										
U: Polyurethane				T: Teflon coated				Others		
Cable Length										
S: same as measurement range or 1m extra								Others		
Enclosure										
E: Rectangular Enclosure						C: Cylindrical Enclosure				
Device Activation										
S: on/off switch					N: NFC (by mobile phone)					
X: No switch (always on)					D: Dual switch (on/off + Trigger)					
Antenna										
I: Internal						E: External				
Options										
(On request)										
PLC2-L	AS	A	2m	H	T	S	E	S	E	

Sample Product Code:

- **PLC2-L-AS-A-2m-H-T-S-E-S-E**

Corrosive resistance level sensor operated on LoRaWAN®, frequency of AS923, measurement range of 2m H₂O, with Hastelloy sensor head and Teflon coated cable and rectangular enclosure, activated by on-off switch and external antenna.