



LoRaWAN® Operated IP68 Low Power Floating Level Transmitter for Water Resource Management

- Compatible with all LoRaWAN® frequencies
- Wide range of industrial applications
- High accuracy and Ultra-low power
- Designed to meet outdoor applications
- Long-term durable performance in harsh environment
- Designed for Water Resource Level and Volume Measurement



TECHNICAL SPECIFICATION

Sensor

• Range:	2, 5, 10 (or other ranges up to 200)	m H2O
• Accuracy: (combined linearity, hysteresis, repeatability)	±0.25 (typ.)	%Span
• Resolution:	±0.01	%Span
• Pressure reference:	Sealed Gauge (with Built-in Atmospheric Pressure Sensor and floating housing)	
• 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:	O-rings: Viton, Sensor Head: SS304, Diaphragm: SS316, Oil: Silicon, Enclosure: POM and Compressed Plastic	
• Process Connection:	No Process Connection (or on request)	
• Weight:	~1,800 (for 10m range)	g
• Protection Rate:	IP68 and UV protected enclosure	

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, Lorient, 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

- Volume calculation based on the land topography formula
- Encrypted ultra-low power communication protocol
- 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


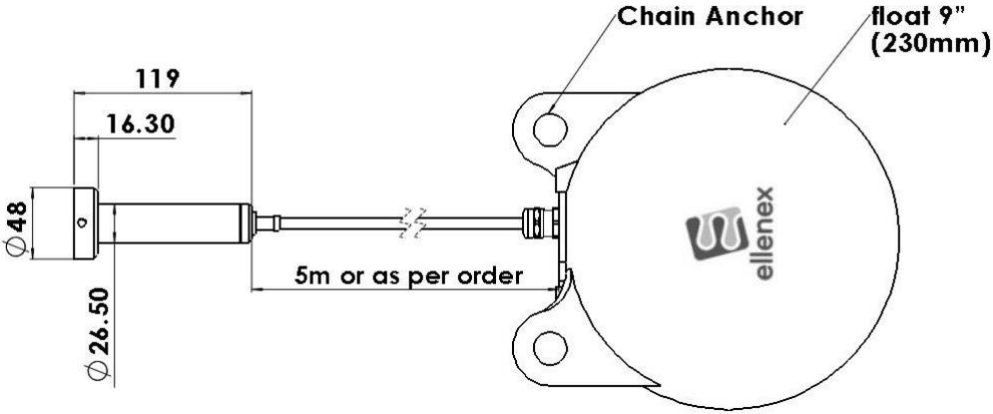


Composable & API first

PLV2-L Spec-sheet



MODEL GUIDE

Model	
	 <p>Chain Anchor float 9" (230mm)</p> <p>119 16.30 48 Ø 26.50 5m or as per order</p> <p>ellenex</p> <p>PLV2 dimensions</p>

INDUSTRIES



Water & Wastewater



Agriculture & Farming



Environmental Monitoring



Marine & Oceanography



Mining & Construction



Water Delivery

APPLICATIONS

- Water Resources Level
- Dam Level
- Water Supply
- Lake Level
- Hydrology Research
- Bush Fire Management

ORDERING CODE

PLV2-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										
S: SS304 or SS316L				H: Hastelloy			Others			
Cable Material										
U: Polyurethane								Others		
Cable Length										
S: same as measurement range or 1m extra								Others		
Enclosure										
S: Standard								Others		
Device Activation										
X: No switch (always on)						N: NFC (by mobile phone)				
Antenna										
I: Internal						E: External				
Options (on request)										
PLV2-L	AS	A	10m	S	U	S	S	X	E	

Sample Product Code:

- **PLV2-AS-A-10m-S-U-S-S-X-E**

IP68 Level sensor with floating housing operated on LoRaWAN®, frequency of AS923, Over The Air Activated, measurement range of 10m H₂O, with stainless steel sensor head and Polyurethane cable, standard cable length and enclosure, activated in the factory and equipped with external antenna.