PLV3-L Spec-sheet

ellenex

LoRaWAN®

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	1, 2, 3, 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	100,000+ readings and 20,000+ transmission (More than 10 years for most applications)	

Physical

•	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	~1800 (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, Helium, 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, ALSO AllThingsTalk, 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
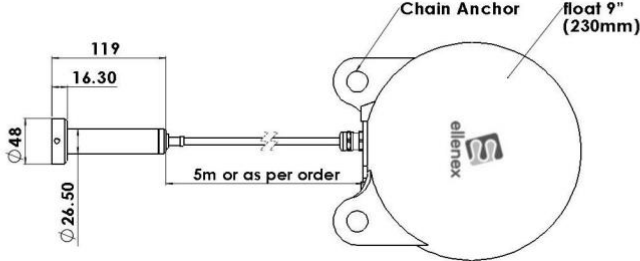
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MODEL GUIDE

Model	Option / Schematic
Standard Model	

PLV3 Dimensions

Chain Anchor — float 9" (230mm) — 119 — 16.30 — Ø48 — Ø26.50 — 5m or as per order — ellenex

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

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ORDERING CODE

PLV3-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

S: SS304 or SS316L	H: Hastelloy

Cable Material

U: Polyurethane	Other options available on request

Cable Length

S: Same as measurement length	Other options available on request

Enclosure

S: Standard

Device Activation

X: No Switch
(always on)

Antenna Option

E: External	I: Internal

Options

(On request)1

PLV3-L	AS	A	3m	S	U	S	S	X	E	

Sample Product Code:

- **PLV3-L-AS-A-3m-S-U-S-S-X-E**
  LoRaWAN® operated IP68 rated level sensor with floating housing, frequency of AS923, over the air activated, measurement range of 3m H2O, with stainless steel sensor head and Polyurethane cable, standard cable length activated in the factory and equipped with external antenna.

Integrated IoT Solutions

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