



## LoRaWAN Operated Low Power Differential Pressure Transmitter for Liquid and Gas 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 and gases compatible with SS



## TECHNICAL SPECIFICATION

### Sensor

• Range	Selectable between 0~0.1 to 25	bar
• Accuracy (combined linearity, hysteresis, repeatability)	±0.25 (typ.)	%Span
• Resolution	±0.01	%Span
• Pressure Reference	Differential	
• Temperature Coefficient of Zero	≤±0.02(range > 1bar), ≤±0.04(range < 1bar)	%FS/°C
• Temperature Coefficient of Span	≤±0.02(range > 1bar), ≤±0.04(range < 1bar)	%FS/°C
• Long Term Stability (1 year)	≤ 0.3	%Span
• Pressure Overload	200 (positive side); 100 (negative side, max 10bar)	%FS
• Pressure Cycles (Zero to Full Scale)	10+	Million
• Compensated Temperature	0 ~ +60	°C

### Power

• Power Supply	Built-in Replaceable Lithium Battery, External Power (option)	
• Rated Voltage	3.6	V
• Battery Lifetime	Typ. 50,000+ readings / 20,000+ transmission (connected to ellenex platform and standard network quality)	

### Physical

• Materials	O-ring: Viton, Body: SS304, Diaphragm: SS316, Oil: Silicon / Olive, Enclosure: ASA/POM	
• Process Connection	G1/4 Male (or others on request)	
• Weight	550	g
• Protection Rate	IP66, UV Protected	

### 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)	

# PDS2-L Spec-sheet



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• 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

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## NETWORK CONNECTION AND VISUALISATION

### Network Integration

- Pre-configured to ellenex LNS or configurable to all main network servers (AWS, Netmore, ChirpStack, Helium, Kerlink, Kona Tectelic, Lorient, machine-Q, Orange, Orbiwise, Proximus, Swisscom, TATA, The Things Network (TTN), TTI and any other network)

### Visualization 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, 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 customization available on request



Encrypted & ultra-low power



Integratable



Dynamic alerting



Multi-tenant



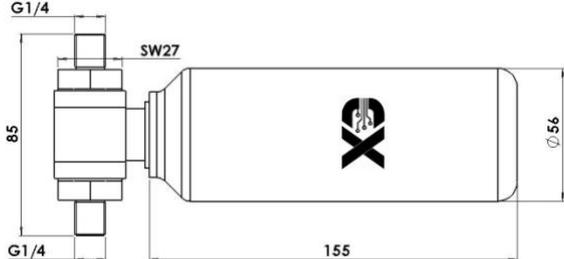
Scalable



Composable & API first

# PDS2-L Spec-sheet

## MODEL GUIDE

Model	Option / Schematic
	

## INDUSTRIES



Water & Environment



Agriculture & Farming



Oil & Gas



Marine & Oceanography



Mining & Construction



Smart Building & HVAC



Transport & Logistics



Food & Beverage



Hydraulics and Compressed Air Systems

## APPLICATIONS

- Pump Performance Monitoring
- Water Pipeline Pressure Monitoring
- Pressurized System Monitoring
- Chiller and Cooling System Monitoring
- Hydraulic and Pneumatic Systems Monitoring
- Closed Liquid Storage Level Monitoring
- Spraying System Monitoring
- Air Compressor Monitoring

# PDS2-L Spec-sheet



## ORDERING CODE

<b>PDS2-L</b>									
<b>LoRaWAN Frequency Zone</b>									
<b>AS</b> (AS923)		<b>AUx</b> (AU915-928) <small>(Sub Band x)</small>			<b>EU</b> (EU868)		<b>USx</b> (US902-928) <small>(Sub Band x)</small>		
<b>LoRaWAN Activation</b>									
<b>A</b> (Over The Air Activation - OTAA)					<b>P</b> (Activation By Personalization - ABP)				
<b>Pressure Range</b>									
<b>0.1, 0.35, 0.5, 1, 2, 4, 6, 10, 15, 20, 25bar</b> <small>(or any other non-standard ranges)</small>									
<b>Process Port</b>									
<b>G1/4:</b> 1/4" BSPP Male			<b>G1/2:</b> 1/2" BSPP Male			<b>NPT1/4:</b> 1/4" NPT Male			
<b>Other options available on request</b>									
<b>Enclosure</b>									
<b>C5:</b> Cylindrical					<b>Other options available on request</b>				
<b>Device Activation</b>									
<b>S:</b> With On/Off Switch					<b>X:</b> No Switch <small>(Always On)</small>				
<b>Antenna Option</b>									
<b>E:</b> External					<b>I:</b> Internal				
<b>Options</b> <small>(On request)</small>									
<b>PDS2-L</b>	<b>AS</b>	<b>A</b>	<b>1bar</b>	<b>G1/4</b>	<b>C5</b>	<b>X</b>	<b>E</b>		

### Sample Product Code:

- PDS2-L-AS-A-1bar-G1/4-C5-S-E**

LoRaWAN® differential Pressure sensor operated, frequency of AS923, Over The Air Activated, measurement range of 1bar, process connection of G1/4, without on-off switch (always on) and external antenna

