PDS2-L Spec-sheet

LoRaWAN®

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:	50,000+ readings and 10,000+ transmission (More than 10 years for most applications)	

Physical Specification

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:	IP65 /IP67, 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)
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).
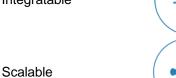
Ellenex Platform Main Features

- 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 thresholdsand 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	Drawing:

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
- Pressurised System Monitoring
- Chiller and Cooling System Monitoring
- Hydraulic and Pneumatic Systems Monitoring
- Closed Liquid Storage Level Monitoring
- Spraying System Monitoring
- Air Compressor Monitoring

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ORDERING CODE

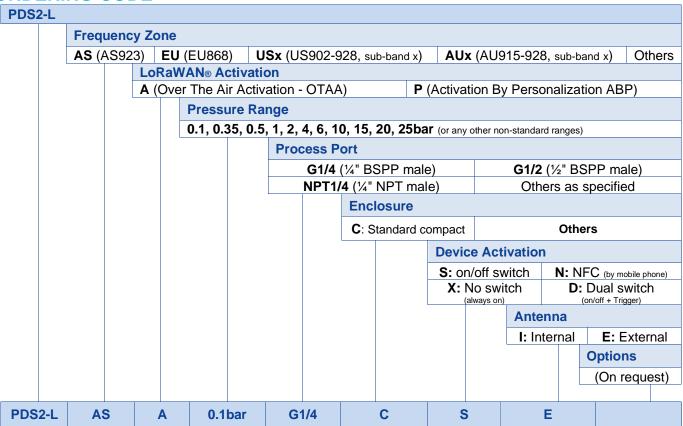| PDS2-L									
Frequency Zone									
AS (AS923)	**EU** (EU868)	**USx** (US902-928, sub-band x)		**AUx** (AU915-928, sub-band x)		Others			
	LoRaWAN® Activation								
	A (Over The Air Activation - OTAA)			**P** (Activation By Personalization ABP)					
		Pressure Range							
		0.1, 0.35, 0.5, 1, 2, 4, 6, 10, 15, 20, 25bar (or any other non-standard ranges)							
			Process Port						
			G1/4 (¼" BSPP male)		**G1/2** (½" BSPP male)				
			NPT1/4 (¼" NPT male)		Others as specified				
				Enclosure					
				C: Standard compact		**Others**			
					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)		
PDS2-L	**AS**	**A**	**0.1bar**	**G1/4**	**C**	**S**	**E**		

Sample Product Code:

- **PDS2-L-AS-A-0.1bar-G1/4-C-S-E**
  Differential Pressure sensor operated on LoRaWAN®, frequency of AS923, range of 0.1bar, process connection of G1/4, activated by on-off switch and external antenna.

Integrated IoT Solutions

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