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

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)	
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

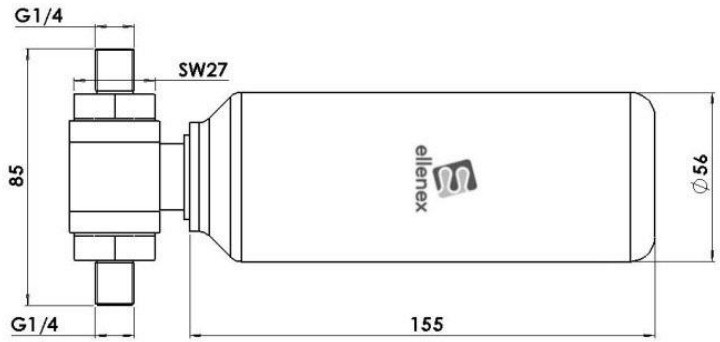

Multi-tenant


Scalable


Composable & API first

PDS2-L Spec-sheet

MODEL GUIDE

Model	Option / Schematic
C Model 	

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								
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)							
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						
Other options available on request								
Enclosure								
C5: Cylindrical	**Other** options available on request							
Device Activation								
S: With On/Off Switch	**X:** No Switch (Always On)							
Antenna Option								
E: External	**I:** Internal							
Options								
(On request)								
PDS2-L	**AS**	**A**	**1bar**	**G1/4**	**C5**	**X**	**E**	

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

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Integrated IoT Solutions

E: sales@ellenex.com
W: www.ellenex.com