



LoRaWAN® Operated  
Low Power Differential Pressure  
Transmitter With Built-in Temperature  
Sensor for Pressure and Flow  
Measurement of Gas Media

- Compatible with all LoRaWAN® frequencies
- Pressure range of 500Pa (or others)
- Wide range of industrial applications
- High accuracy and Ultra-low power
- Designed to meet outdoor applications
- Compatible with air and other non-conductive and non-corrosive Media



## TECHNICAL SPECIFICATION

### Sensor

• Range:	Standard Range: $\pm 500$ (or other ranges on request)	Pa
• Accuracy: (combined linearity, hysteresis, repeatability)	$\pm 2$ (typ.)	%Span
• Resolution:	$\pm 0.02$	%Span
• Pressure Reference:	Bi-directional Differential	
• Temperature Accuracy:	$\leq \pm 2$	$^{\circ}\text{C}$
• Temperature Coefficient of Zero:	$\leq \pm 0.05$	%FS/ $^{\circ}\text{C}$
• Temperature Coefficient of Span:	$\leq \pm 0.05$	%FS/ $^{\circ}\text{C}$
• Long Term Stability (1 year):	$\leq \pm 0.05$	Pa
• Response time:	$\leq 1$	mS
• Pressure Overload:	100	kPa
• Pressure Cycles (Zero to Full Scale):	10+	Million
• Compensated Temperature:	-20 ~ +85	$^{\circ}\text{C}$

### 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

• Media Compatibility:	Air, Inert Gas	
• Process connection:	NPT1/8" Female (or others on request)	
• Weight:	~450	g
• Protection Rate:	IP65, 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 (Activity, 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

- 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


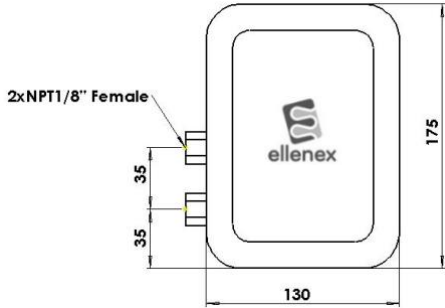



Composable & API first

# PDT2-L Spec-sheet



## MODEL GUIDE

Standard Model	Drawing
	
<b>Installation kit (optional)</b> (static pressure tip, connector, valve)	

## INDUSTRIES



Smart Building  
& HVAC



Food &  
Beverage



Oil &  
Gas



Transport &  
Logistics



Mining &  
Construction



Hydraulics and  
Compressed Air  
Systems

## APPLICATIONS

- HVAC and Air Conditioning Systems
- Air Filter Performance Monitoring
- Fan and Ventilation System Performance Monitoring
- Pressurised Chambers Monitoring
- Clean Rooms positive pressure indication
- Burner and Boiler Monitoring Systems
- Leakage Monitoring Systems
- Heat Recovery Systems
- Air velocity monitoring
- Blower vacuum monitoring
- Fan pressure indication

## ORDERING CODE

<b>PDT2-L</b>							
<b>Frequency Zone</b>							
<b>AS</b> (AS923)	<b>EU</b> (EU868)	<b>USx</b> (US902-928, sub-band x)	<b>AUx</b> (AU915-928, sub-band x)	Others			
<b>LoRaWAN® Activation</b>							
<b>A</b> (Over The Air Activation - OTAA)				<b>P</b> (Activation By Personalization ABP)			
<b>Pressure Range</b>							
±500Pa (standard), ±125Pa (or any other positive or negative ranges)							
<b>Process Port</b>							
<b>NPT1/8</b> (1/8" NPT)				Others as specified			
<b>Device Activation</b>							
<b>S</b> : on/off switch				<b>N</b> : NFC (by mobile phone)			
<b>X</b> : No switch (always on)				<b>D</b> : Dual switch (on/off + Trigger)			
<b>Antenna</b>							
<b>I</b> : Internal				<b>E</b> : External			
<b>Options</b>							
(On request)							
<b>PDT2-L</b>	<b>AS</b>	<b>A</b>	<b>500Pa</b>	<b>NPT1/8</b>	<b>S</b>	<b>E</b>	

### Sample Product Code:

- **PDT2-L-AS-A-500Pa-NPT1/8-S-E**

Differential pressure sensor operated on LoRaWAN®, frequency of AS923, Over The Air Activated, range of 500Pa, process connection of NPT1/8 female, activated by on-off switch and external antenna.