PTD2-L

LoRaWAN®

LoRaWAN® Operated Low Power Pressure Transmitter for Liquid and Gas Media with Built-in Temperature Sensor

- 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 (bar)	Selectable between 0~0.5 to 0~1000
• Accuracy (%Span)	±0.25 (typ.) (combined linearity, hysteresis, repeatability)
• Temperature Accuracy (°C)	±0.2 (typ.) (temperature sensor is mounted on the back of pressure sensor and doesn't reflects the media temperature)
• Resolution (%Span)	±0.01
• Pressure Reference	Vented Gauge, Sealed Gauge, Absolute
• Temperature Coefficient of Zero (%FS/°C)	≤±0.02
• Temperature Coefficient of Span (%FS/°C)	≤±0.02
• Long Term Stability (1 year) (%Span)	≤ 0.2
• Pressure Overload (%FS)	300 (range <1bar); 150 (higher range)
• Pressure Cycles (Zero to Full Scale) (Million)	10+
• Compensated Temperature (°C)	-10 ~ +70

Power

• Power Supply	Built-in Replaceable Lithium Battery, External Power (option)
• Rated Voltage (V)	3.6
• 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 (g)	550
• Protection Rate	IP66, UV Protected

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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 VISUALIZATION

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)

Visualization And Data Management

- 10Sorex 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).

10Sorex 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

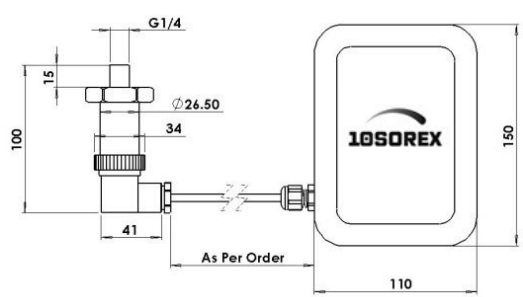|		
Encrypted & ultra-low power	Integratable	Dynamic alerting
Multi-tenant	Scalable	Composable & API first

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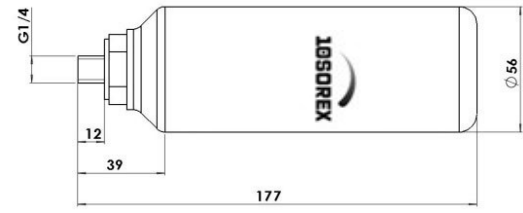
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MODEL GUIDE

Model	Option / Schematic
C Model	C5: IP65 vented gauge sensor, compact, POM enclosure with on/off switch
E Model	E5: IP65 sensor (vented gauge), wired, IP66 ASA enclosure and on/off switch

INDUSTRIES

- Smart Building & HVAC
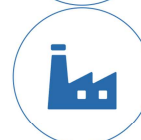- Food & Beverage
- Oil & Gas
- Transport & Logistics
- Mining & Construction
- Hydraulics and Compressed Air Systems

APPLICATIONS

- HVAC and Air Conditioning Systems
- Air Filter Performance Monitoring
- Fan and Ventilation System Performance Monitoring
- Pressurized 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

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ORDERING CODE

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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

0.5, 1, 2, 5, 10, 20, 50, 100, 200, 400, 700, 1000bar (or any other positive or negative values)

Pressure Reference

V (Vented Gauge)	**S** (Sealed Gauge)	**A** (Absolute)

Process Port

G1/4 (¼" BSPP Male) (Standard Option for the ranges less than 200bar)	**G1/2** (½" BSPP Male) (Standard Option for the ranges more than 200bar)	**NPT1/4** (¼" NPT Male)
Other options available on request		

Enclosure

C5: Cylindrical	**E5:** Sensor head connected to housing with 3m cable

Device Activation

S: With On/Off Switch	**X:** No Switch (Always On)

Antenna Option

E: External	**I:** Internal

Options

(On request)1

PTD2-L	AS	A	1bar	V	G1/4	C5	S	E	

Sample Product Code:

- **PTD2-L-AS-A-1bar-V-G1/4-C5-S-E**
  LoRaWAN® pressure-temperature sensor, frequency of AS923, Over The Air Activated, pressure range of 1bar vented, process connection of G1/4, with C5 housing (compact and IP65 rated), activated by on-off switch and equipped with external antenna.

1) Product Options:

- **EP**: sensor with external power supply connector for 12V supply (only for E type enclosure, adaptor is not included)
- **EPB**: connector for 12V supply with internal battery backup (only for E type enclosure)
- **HG**: high-gain external antenna
- **WF**: Active WiFi module on device for communication/ firmware update through Mobile phone NFC module (only for E type enclosure)
- **HCB**: high-capacity battery (only for E type enclosure)

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