

PTC2-L Spec-sheet



LoRaWAN® Operated Low Power Pressure Transmitter for Corrosive 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 corrosive liquids and gases



TECHNICAL SPECIFICATION

Sensor

• Range	Selectable between 0~0.5 to 0~200	bar
• Accuracy (combined linearity, hysteresis, repeatability)	±0.5 (typ.)	%Span
• Resolution	±0.01	%Span
• Pressure Reference	Vented Gauge, Sealed Gauge, Absolute	
• Temperature Coefficient of Zero	±0.02	%FS/°C
• Temperature Coefficient of Span	±0.02	%FS/°C
• Long Term Stability (1 year)	≤ 0.2	%Span
• Pressure Overload	300 (range <1bar); 150 (higher range)	%FS
• Pressure Cycles (Zero to Full Scale)	10+	Million
• Compensated Temperature	-10 ~ +70	°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	Body: Hastelloy or PVDF, Diaphragm: Hastelloy or Ceramic (Al ₂ O ₃), Enclosure: PVDF/POM, O-ring: FKM/ FFKM	
• Process Connection	G1/4 Male (or others on request)	
• Weight	550	g

physical

• 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 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




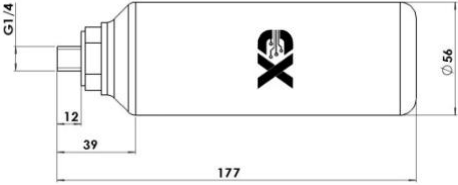

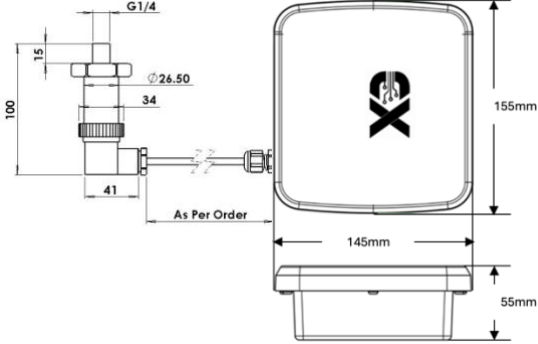
Scalable



Composable & API first

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MODEL GUIDE

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

INDUSTRIES

	<p>Water & Wastewater</p>		<p>Agriculture & Farming</p>		<p>Oil & Gas</p>
	<p>Marine & Oceanography</p>		<p>Mining & Construction</p>		<p>Smart Building & HVAC</p>
	<p>Transport & Logistics</p>		<p>Food & Beverage</p>		<p>Hydraulics and Compressed Air Systems</p>

APPLICATIONS

- Wastewater Pump Performance Monitoring
- Corrosive Liquid Storage Level Monitoring
- Corrosive Liquid Storage Pressure Monitoring
- Spraying System Monitoring
- Pressurized System Monitoring
- Compressed Corrosive Gas Monitoring

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ORDERING CODE

PTC2-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											
0.5, 1, 2, 5, 10, 20, 50, 100, 200bar (or any other positive or negative ranges)											
Pressure Reference											
V (Vented Gauge)				S (Sealed Gauge)				A (Absolute)			
Process Port											
G1/4 (1/4" BSPP Male)						Other options available on request					
Sensor Head Material											
H : Hastelloy diaphragm and process connection						C : Ceramic diaphragm with PVDF process connection					
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											
PTC2-L	AS	A	1bar	V	G1/4	H	C5	S	E		

Sample Product Code:

- **PTC2-L-AS-A-1bar-V-G1/4-H-C5-S-E**

LoRaWAN[®] corrosion resistant pressure sensor, frequency of AS923, Over The Air Activated, range of 1bar vented, wetted material of Hastelloy, 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:

- **EPB**: sensor with external power supply connector for 12V supply with internal battery backup (only for E type enclosure, adaptor is not included)
- **HG**: high-gain external antenna
- **HCB**: high-capacity battery (only for E type enclosure)

