



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

### Physical

• Materials	Body: Hastelloy or PVDF, Diaphragm: Hastelloy or Ceramic (Al2O3), 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	
-------------------	--------------------	--

### 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, 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, 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


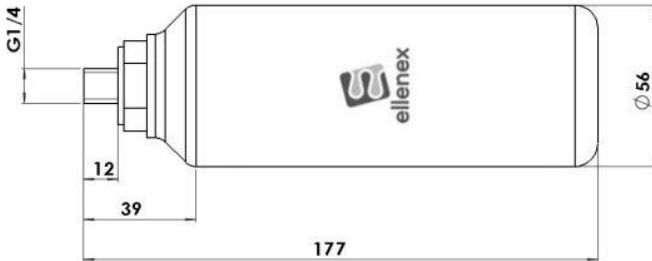

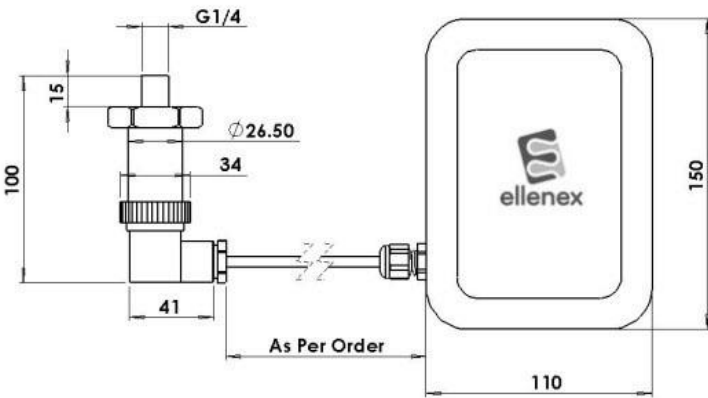


Composable &  
API first

# PTC2-L Spec-sheet



## MODEL GUIDE

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

## INDUSTRIES



Water &  
Wastewater



Agriculture &  
Farming



Oil & Gas



Marine &  
Oceanography



Mining &  
Construction



Smart Building &  
HVAC



Transport &  
Logistics



Food &  
Beverage



Hydraulics and  
Compressed Air  
Systems

## APPLICATIONS

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

## 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 (¼" 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) <sup>1</sup>											
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:

- 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)

All details are subject to change without prior notice  
© All Rights Reserved for Ellenex

Ver. 6.7-07/22