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:	50,000+ readings and 10,000+ transmission (More than 10 years for most applications)	

Physical Specification

Materials:	Body: Hastelloy or PVDF, Diaphragm: Hastelloy or Ceramic (Al2O3),Enclosure: PVDF/POM, O-ring: FKM/ FFKM	
Process Connection:	G1/2 Male (or others on request)	
Weight:	550	g
Protection Rate:	IP65 /IP67, 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

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NETWORK CONNECTION AND VISUALISATION

Network Integration

Integratable to all main networks (Actility, Alibaba, Cisco, Digita, Everynet, Kerlink, GeoWAN, 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, 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

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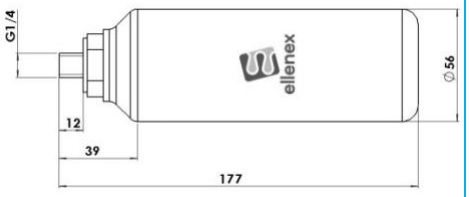
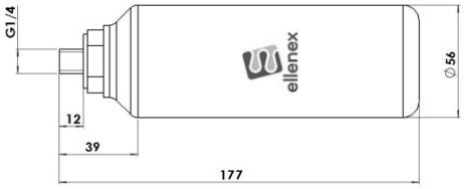
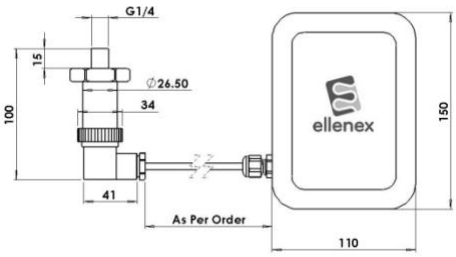
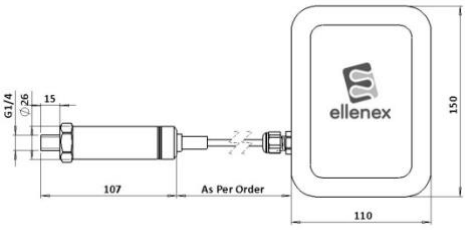
MODEL GUIDE

Model	Options:	
C Model (with Hastelloy head):	 C8: IP68 sealed gauge sensor, compact, POM enclosure with NFC activation	 C5: IP65 vented gauge sensor, compact, POM enclosure with on/off switch
E Model(with Hastelloy head):	 E5: IP65 sensor (vented gauge), wired, IP65 ASA enclosure and on/off switch	 E7: IP67 sensor (sealed gauge), wired, IP67 ASA enclosure and on/off switch

Note: Ceramic sensor head is similar to the Hastelloy or will be confirmed by the order.

INDUSTRIES

- Water & Environment
- 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 Pipeline Pressure Monitoring
- Pressurised System Monitoring
- Corrosive Liquid Storage Level Monitoring
- Spraying System Monitoring
- Compressed Corrosive Gas Monitoring

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ORDERING CODE

PTC2-L										
Frequency Zone										
AS (AS923)	**EU** (EU868)	**USx** (US902-928, sub-band x)			**AUx** (AU915-928, sub-band x)				Others	
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)										
Sensor Head Material										
H: Hastelloy diaphragm and process connection			**C:** ceramic diaphragm with PVDF process connection				**Others**			
Pressure Reference										
V (vented gauge)			**S** (sealed gauge)				**A** (absolute)			
Process Port										
G1/2 (½" BSPP male)							Others as specified			
Enclosure										
C5		**C8**		**E5**		**E7**		**E8**		
Compact				Standard cable length: 1m (or other options on request)						
Device Activation										
S: on/off switch				**N:** NFC (by mobile phone)						
X: No switch (always on)				**D:** Dual switch (on/off + Trigger)						
Antenna										
I: Internal				**E:** External						
Options										
(On request)										

PTC2-L	AS	A	0.5bar	H	V	G1/2	C5	S	E	

Sample Product Code:

- **PTC2-L-AS-A-0.5bar-V-G1/2-C5-S-E**
  Corrosion resistant pressure sensor operated on LoRaWAN®, frequency of AS923, Over The Air Activated, range of 0.5bar vented, wetted material of Hastelloy, process connection of G1/2, with C5 housing (compact and IP65 rated), activated by on-off switch and external antenna.

All details are subject to change without prior notice
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