



## LoRaWAN® Operated Low Power Flush Type Pressure Transmitter for 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 liquids and gases compatible with SS

## TECHNICAL SPECIFICATION

### Sensor

• Range	Selectable between 0~0.5 to 0~100	bar
• Accuracy	±0.25 (typ.) <small>(combined linearity, hysteresis, repeatability)</small>	%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 <small>(More than 10 years for most applications)</small>	

### Physical

• Materials	O-ring: Viton, Body: SS304, Diaphragm: SS316, Oil: Silicon / Olive, Enclosure: ASA/POM	
• Process Connection	G1/2 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 <small>(other zones available on request)</small>	
• 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 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


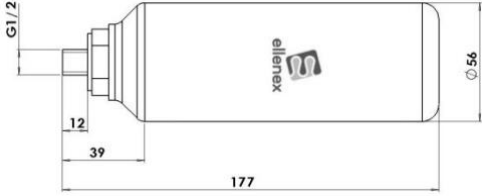

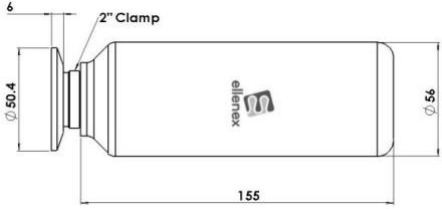

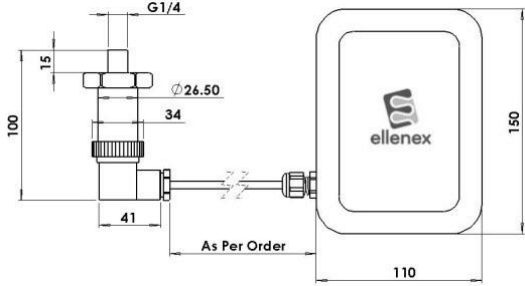


Scalable



Composable & API first

## MODEL GUIDE

Model	Option / Schematic
<p><b>C Model</b></p> 	 <p>C5: IP65 vented gauge sensor, compact, POM enclosure with on/off switch C8: IP68 sealed gauge sensor, compact, POM enclosure</p>
<p><b>C Model</b></p> 	 <p>C5 with 2inch Tri-clamp: IP65 vented gauge sensor, compact, POM enclosure with on/off switch</p>
<p><b>E Model</b></p> 	 <p>E5: IP65 sensor (vented gauge), wired, IP66 ASA enclosure and on/off switch</p>

## INDUSTRIES



Food & Beverage



Agriculture & Farming



Transport & Logistics



Water & Environment



Marine & Oceanography



Oil & Gas

## APPLICATIONS

- Food Liquid Storage Level Monitoring
- Beverage Machineries
- Water Pipeline Pressure Monitoring
- Pressurised System Monitoring
- Chiller and Cooling System Monitoring
- Pharmaceutical applications
- Agricultural equipment
- Hydrostatic level monitoring
- Spraying System Monitoring
- Air Compressor Monitoring

## ORDERING CODE

PTF2-L										
<b>LoRaWAN Frequency Zone</b>										
<b>AS</b> (AS923)		<b>AUx</b> (AU915-928) (Sub Band x)			<b>EU</b> (EU868)		<b>USx</b> (US902-928) (Sub Band x)			
<b>LoRaWAN Activation</b>										
<b>A</b> (Over the air activation - OTAA)					<b>P</b> (Activation By Personalization - ABP)					
<b>Pressure Range</b>										
0.5, 1, 2, 5, 10, 20, 50, 100bar (or any other positive or negative ranges)										
<b>Pressure Reference</b>										
<b>V</b> (Vented Gauge)			<b>S</b> (Sealed Gauge)			<b>A</b> (Absolute)				
<b>Process Port</b>										
<b>G1/2</b> (½" BSPP Male)			<b>NPT1/2</b> (½" NPT Male)			<b>T2</b> (2" Tri-clamp)				
Other options available on request										
<b>Enclosure</b>										
<b>C5</b> : Cylindrical				<b>C8</b> : Cylindrical - IP68 rated						
<b>E5</b> : Rectangular - IP66 enclosure with sensor extended using a 3m cable (or other options on request)										
<b>Device Activation</b>										
<b>S</b> : With On/Off Switch					<b>X</b> : No Switch (Always On)					
<b>Antenna Option</b>										
<b>E</b> : External					<b>I</b> : Internal					
<b>Options</b>										
(On request) <sup>1</sup>										
PTF2-L	AS	A	1bar	V	G1/2	C5	S	E		

### Sample Product Code:

- PTF2-L-AS-A-1bar-V-G1/2-C5-S-E

LoRaWAN<sup>®</sup> flush type pressure sensor, frequency of AS923, Over The Air Activated, pressure range of 1bar vented, process connection of G1/2 with cylindrical housing (compact and IP65 rated), activated by on-off switch and equipped with external antenna.

### <sup>1)</sup> 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  
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