PTF2-L Spec-sheet

LoRaWAN®

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: (combined linearity, hysteresis, repeatability)	±0.25 (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:	O-ring: Viton, Body: SS304, Diaphragm: SS316, Oil: Silicon / Olive, Enclosure: ASA/POM	
Process Connection:	G1/4 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

NETWORK CONNECTION AND VISUALISATION

Network Integration

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

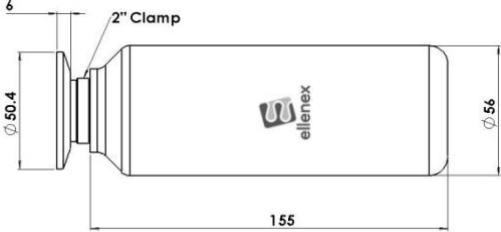|		
Encrypted & ultra-low power	Integratable	Dynamic alerting
Multi-tenant	Scalable	Composable& API first
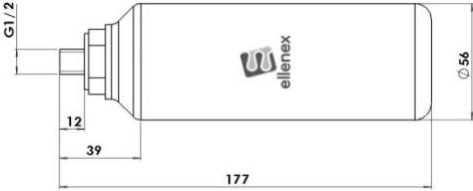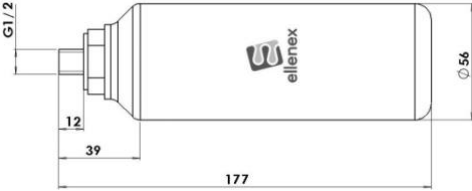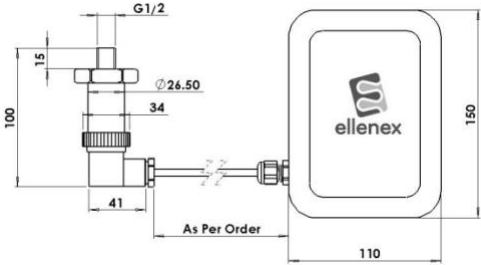
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MODEL GUIDE

Model	Options:	
C Model:	**C8:** IP68 sealed gauge sensor, compact, POM enclosure with NFC activation	**C5:** IP65 vented gauge sensor, compact, POM enclosure with on/off switch
	C5 with 2inch Tri-clamp: IP65 vented gauge sensor, compact, POM enclosure with on/off switch	
E Model:	**E5:** IP65 sensor (vented gauge), wired, IP65 ASA enclosure and on/off switch	

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

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ORDERING CODE

PTF2-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, 100bar (or any other positive or negative ranges)							
				Pressure Reference						
				V (vented gauge)		**S** (sealed gauge)		**A** (absolute)		
					Process Port					
					G1/2(½" BSPP male)		**NPT1/2**(½" NPT male)			
					T2 (2" Tri-clamp)		Others as specified			
						Enclosure				
						C5	**C8**	**E5**		**Others**
						Compact		Standard cable length: 1m (or other options on request)		
							Device Activation			
							S: on/off switch		**N:** NFC (by mobile	
							X: No switch (always on)		**D:** Dual switch (on/off + Trigger)	
								Antenna		
								I: Internal	**E:** External	
									Options	
									(On request)	
PTF2-L	**AS**	**A**	**0.5bar**	**V**	**G1/2**	**C5**	**S**	**E**		

Sample Product Code:

- **PTF2-L-AS-A-0.5bar-V-G1/2-C5-S-E**
  Flush type Pressure sensor operated on LoRaWAN®, frequency of AS923, Over The Air Activated, range of 0.5bar vented, process connection of G1/2, with C5 housing (compact and IP65 rated), activated by on-off switch and external antenna.

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