



## LoRaWAN® Operated Low Power Earth and Sludge Pressure Transmitter

- Compatible with all LoRaWAN® frequencies
- Wide range of industrial applications
- High accuracy
- Long-term durable performance in harsh environment
- Ultra-low power



### **TECHNICAL SPECIFICATION**

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•	Range	Selectable between 0~0.5 to 0~20	Kg/cm²	
•	Accuracy	±0.5 (typ.)	%Span	
•	Non-linearity	±1	%Span	
•	Long Term Stability (1 year)	≤ 0.2	%Span	
•	Pressure Overload	120	%FS	
•	Compensated Temperature	-10 ~ +70	°C	
Powe	er			
•	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)		
<b>Phys</b>	ical			
•	Materials	Special Stainless Steel, high grade epoxy potting. Enclosure: ASA/POM		
•	Weight	2 ~ 4.5 (depends on the range)	kg	
•	Protection Rate	Sensor head: waterproof for 300m H2O Enclosure: IP66/68 and UV protected		
•	Size	Φ230mm (OD), Thickness: 10.5mm (for the range of 2kg/cm²)		
•	Cable	Φ10 mm, 0.5mm2 × 5C shielded PVC sheath cable		
Com	munication			
•	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		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, 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, TagolO, 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





### **MODEL GUIDE**

Model	Option / Schematic		
C Model	C model comes with cylindrical shape housing suitable for battery operated applications with IP65 or IP68 rate and clamp mounting		
E Model	E model comes with rectangular shape housing suitable for battery or external power operated applications with IP66 rate, and wall mounting.		

### **INDUSTRIES**



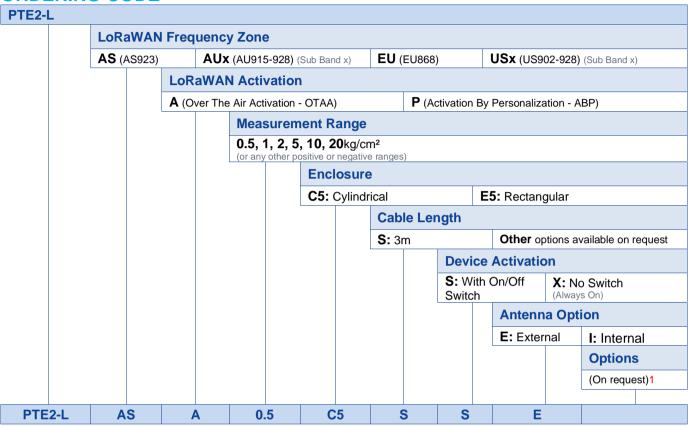
### **APPLICATIONS**

- Land movement monitoring
- Road overload monitoring
- Pavement foundation movement
- Soil level monitoring

- Sludge level monitoring in water channels
- Rail foundation movement monitoring
- Under-ground water in soil level monitoring
- Overload monitoring



### **ORDERING CODE**



#### **Sample Product Code:**

• PTE2-L-AS-A-0.5-C5-S-E

LoRaWAN® earth pressure sensor, range of 0.5kg/cm2, with cylindrical housing (compact and IP65 rated), 3m cable, 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)

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Ver. 6.7-07/22