



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

Sensor

• Range	Selectable between 0~0.5 to 0~20	Kg/cm ²
• 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

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	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/cm ²)	
• Cable	Φ10 mm, 0.5mm ² × 5C shielded PVC sheath cable	

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, TagIO, 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
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



Land Movement Monitoring



Agriculture & Farming



City & Councils



Marine & Oceanography



Mining



Rail Industry



Environmental Monitoring



Construction



Road

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

PTE2-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)				
Measurement Range									
0.5, 1, 2, 5, 10, 20kg/cm ² (or any other positive or negative ranges)									
Enclosure									
C5: Cylindrical					E5: Rectangular				
Cable Length									
S: 3m					Other options available on request				
Device Activation									
S: With On/Off Switch					X: No Switch (Always On)				
Antenna Option									
E: External					I: Internal				
Options									
(On request) ¹									
PTE2-L	AS	A	0.5	C5	S	S	E		

Sample Product Code:

- **PTE2-L-AS-A-0.5-C5-S-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)