



LoRaWAN® Low Power Cathodic Protection Monitoring Interface for Industrial Applications

- Compatible with all LoRaWAN® frequencies
- Wide range of industrial applications
- Designed to meet outdoor applications
- Long-term durable performance in harsh environment
- Ultra-low power



TECHNICAL SPECIFICATION

Sensor

• Interface Configuration	Input for Voltage and for Current <ul style="list-style-type: none"> • Voltage measurement range: -10 to 10V_{DC} & AC • Voltage resolution 0.1mV resolution • Current measurement: 0-20 Amps DC & AC (or other customised options on request) 		
• Voltage Resolution	0.1		mV
• Current Resolution	1		mA
• Electric Connection	1m cable, pin connection (or others on request)		
• Operation 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	ASA or POM		
• Weight	450		g
• Protection Rate	IP66 or IP68 and UV Protected enclosure		

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 serial terminal		
• Firmware Update	Locally via serial terminal, 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, AllThingsTalk, 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


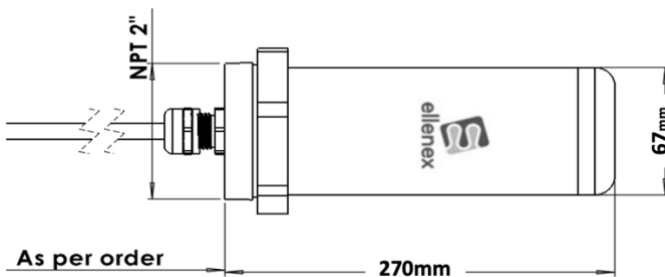

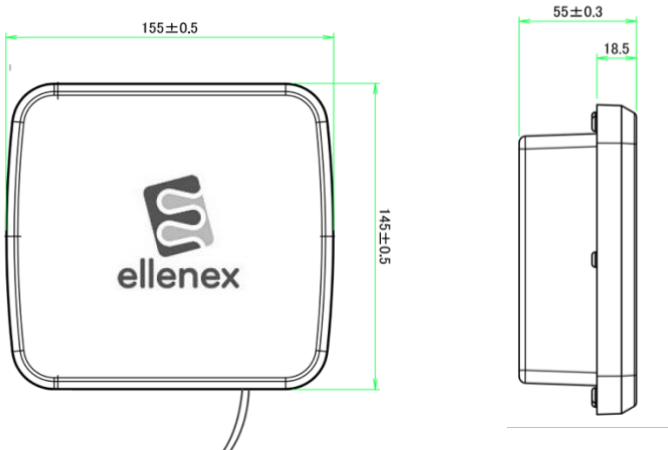


Composable &
API first

ECP2-L Spec-sheet



MODEL GUIDE

Model	Option / Schematic
C Model 	 <p>As per order 270mm 67mm</p> <p>C model comes with cylindrical shape housing suitable for battery operated applications with IP68 / IP66 rate and clamp mounting. This model has 2 option of cable output and the pin connection.</p>
E Model 	 <p>155±0.5 145±0.5 55±0.3 18.5</p> <p>E model comes with rectangular shape housing suitable for battery or external power operated applications with IP68 / IP66 rate, and wall mounting. This model has 2 option of wire cable connection and the pin connection.</p>

INDUSTRIES



Water



Oil & Gas



Marine

APPLICATIONS

- Pipes and assets cathodic protection monitoring

WIRING LAYOUT

- RED:** Voltage In
- WHITE:** Current In
- GREEN:** Current Out

ECP2-L Spec-sheet



ORDERING CODE

ECP2-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)				
Interface Options									
S: Standard						Other customised options on request			
Electric Connection									
P: pin connector						3m: 3m wire cable			
Enclosure									
C: Cylindrical (Material: POM)				E: Rectangular (Material: ASA)			X: without housing (only board)		
Device Activation									
S: With On/Off Switch							X: No Switch (Always On)		
Antenna Option									
E: External							I: Internal		
Options									
(On request) ¹									
ECP2-L	AS	A	S	3m	C	S	E		

Sample Product Code:

- **ECP-L-AS-A-S-1m-C-S-E**

LoRaWAN® Cathodic protection monitoring interface, frequency of AS923, Over The Air Activated, standard configuration with cylindrical housing, 3m cable, with 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
- **HCB**: high-capacity battery (only for E type enclosure)