



LoRaWAN® Low Power IP68 rated Ultrasonic Distance and Level Sensor

- Compatible with all LoRaWAN® frequencies
- Wide range of industrial applications
- High accuracy and repeatability
- Designed to meet outdoor applications
- Long-term durable performance in harsh environment
- Ultra-low power
- Suitable for liquid and solid media



TECHNICAL SPECIFICATION

Sensor

• Range	10	m
• Accuracy (combined linearity, hysteresis, repeatability)	±1 (typ.)	%Span
• Resolution	1	mm
• Sensor Minimum Distance	0 ~ 50cm for 10m range	
• Reading-to-reading stability	1mm in 1m (Typ.)	
• Compensated Temperature	-10 ~ +60	°C

Power

• Power Supply	Built-in Replaceable Lithium Battery, External Power (option)	
• Rated Voltage	3.6	V
• Battery Lifetime	Typ. 50,000+ readings / 20,000+ transmission (connected to ellenex platform and standard network quality)	

Physical

• Materials	Enclosure: POM	
• Weight	~500	g
• Protection Rate	IP68, 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

DUS3-L Spec-sheet

NETWORK CONNECTION AND VISUALISATION

Network Integration

- Pre-configured to ellenex LNS or configurable to all main network servers (AWS, Netmore, ChirpStack, Helium, Kerlink, Kona Tektelic, Lorient, machine-Q, Orange, Orbiwise, Proximus, Swisscom, TATA, The Things Network (TTN), TTI and any other network)

Visualization 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, 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 customization available on request



Encrypted & ultra-low power



Integratable



Dynamic alerting



Multi-tenant

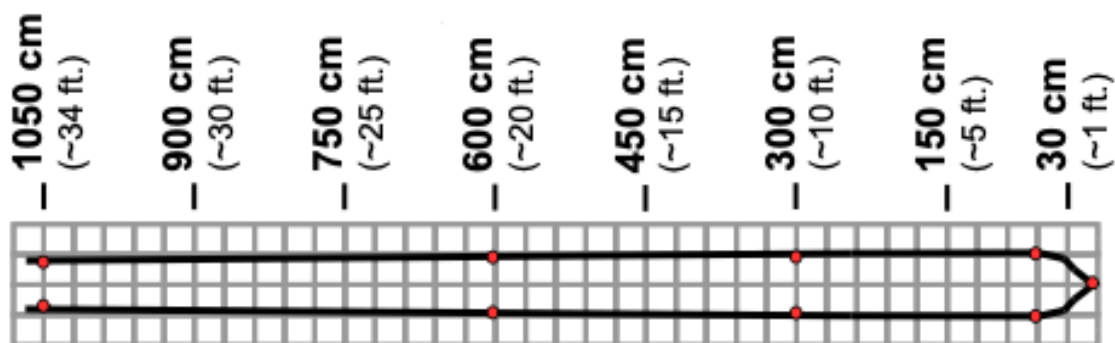


Scalable



Composable & API first


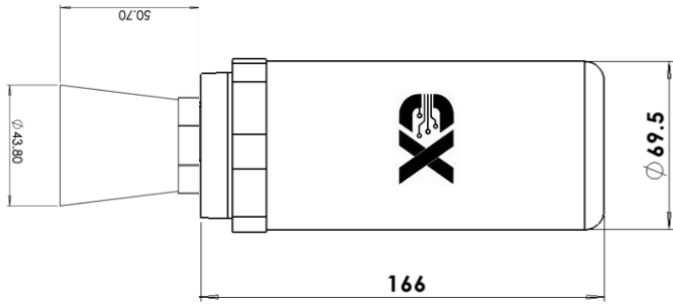
BEAM PATTERN



Typical beam patter for 30cm target mover left and right with the board parallel to the sensor face

DUS3-L Spec-sheet

MODEL GUIDE

Model	Options:
<p>C Model:</p> 	 <p>Cylindrical compact, POM enclosure</p>

INDUSTRIES



Water & Environment



Agriculture & Farming



Oil & Gas



Marine & Oceanography



Mining & Construction



Smart Building & HVAC

APPLICATIONS

- Under Ground Water Tank Level Monitoring
- Under Ground Diesel Tank Level Monitoring
- Flood Monitoring
- Distance Measurement
- Long Range Object Detection
- Under Ground

DUS3-L Spec-sheet

ORDERING CODE

DUS3-L							
LoRaWAN Frequency Zone							
AS (AS923)		AUx (AU915-928) <small>(Sub Band x)</small>		EU (EU868)		USx (US902-928) <small>(Sub Band x)</small>	
LoRaWAN Activation							
A (Over The Air Activation - OTAA)				P (Activation By Personalization - ABP)			
Measurement Range							
10 meters							
Device Activation							
X : No Switch <small>(always on)</small>							
Antenna Option							
E : External				I : Internal			
Options <small>(On request)</small>							
DUS3-L	AS	A	10m	X	I		

Sample Product Code:

- **DUS3-L-AS-A-10m-X-I**

LoRaWAN® ultrasonic distance sensor, frequency AS923, over the air activated, range of 10m, with C8 housing (compact and IP68 rated), always on and with internal antenna.