

DUC2-L



LoRaWAN® Corrosion Resistant Low Power 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 (m)	5, 10
• Accuracy (combined linearity, hysteresis, repeatability) (%Span)	±1 (typ.)
• Resolution (mm)	1
• Sensor Minimum Distance	0 ~ 20cm for 5m range 0 ~ 50cm for 10m range
• Reading-to-reading stability	1mm in 1m (Typ)
• Compensated Temperature (°C)	-10 ~ +60

Power

• Power Supply	Built-in Replaceable Lithium Battery, External Power (option)
• Rated Voltage (V)	3.6
• Battery Lifetime	100,000+ readings and 20,000+ transmission (More than 10 years for most applications)

Physical

• Materials	Enclosure: ASA/POM, Sensor Head: Parylene coating applied to the surface of the Aluminium transducer
• Weight (g)	~500
• Protection Rate	IP65, UV Protected



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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 VISUALIZATION

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)

Visualization And Data Management

- 10Sorex 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, HPE IoT and any other major IoT platform).

10Sorex 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

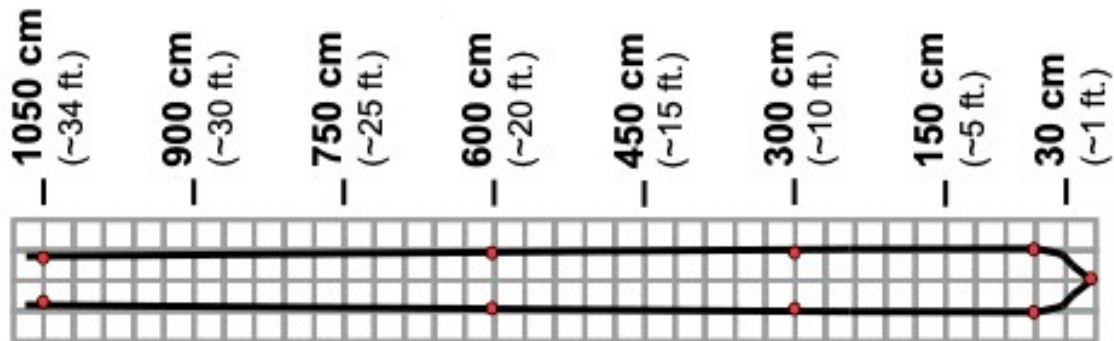


Composable &
API first




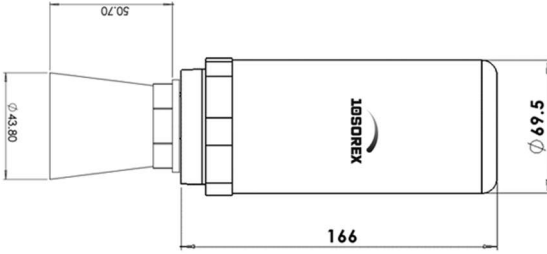
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BEAM PATTERN



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

MODEL GUIDE

Model	Option / Schematic
C Model 	 <p>Cylindrical compact, POM enclosure</p>

INDUSTRIES



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APPLICATIONS

- Chemical Tanks
- Liquid Delivery Systems
- Water Resources Level
- Food Industry

- Diesel Tank
- Liquid Storage
- Hydraulic Containers
- Wastewater Tank



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ORDERING CODE

DUC2-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							
5 meters, 10 meters							
Enclosure							
C5: Cylindrical				E5: Rectangular			
Device Activation							
X: No Switch (Always On)				S: With On/Off Switch (Only for E Type)			
Antenna Option							
E: External				I: Internal			
Options							
(On request) ¹							
DUC2-L	AS	A	5m	C5	X	E	

Sample Product Code:

- DUC2-L-AS-A-5m-C5-X-E

LoRaWAN[®] corrosion resistant ultrasonic distance sensor, frequency AS923, over the air activation, measurement range of 5m, with C5 housing (compact and IP65 rated), always on and 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)

