

Nextriv Probe Ultrasonic Compact

Compact ultrasonic level sensor

NX-PR-ULSC

Nextriv Probe

A compact ultrasonic distance and fill-level sensor for waste bins, tanks and manholes. Two measuring transducers minimise the blind zone: a reliable measurement starts just 3 cm from the sensor, and the range reaches 450 cm at 1 mm resolution. A built-in three-axis accelerometer detects device tilt, e.g. a lifted manhole cover. The IP67, salt-spray-resistant enclosure and over 10 years on one battery set make the measurement point practically maintenance-free.



3–450 cm

measuring range

≥ 10 yrs

battery life

IP67

ingress protection, salt-spray resistant

~15 km

open-terrain range

Key features

- Two ultrasonic transducers — an ultra-short blind zone, reliable measurement from just 3 cm
- A wide 3–450 cm range with 1 mm resolution — from a street bin to a tank several metres deep
- A 60° beam angle forgives imprecise mounting and an uneven material surface
- A three-axis accelerometer detects device tilt and movement — incl. manhole-cover protection
- IP67, salt-spray-resistant enclosure — outdoor-ready and easy to clean
- Over 10 years on one set of replaceable batteries — a practically maintenance-free measurement point
- Configuration with a single smartphone tap (NFC) — mass roll-outs without opening enclosures
- Radio range up to approx. 2 km in built-up areas / approx. 15 km in open terrain — one gateway per estate or plant

Technical specification

Measurement — distance / fill level	
Measuring range	3–450 cm
Accuracy	±(1 cm + 0.3% of measured distance)
Resolution	1 mm
Beam angle	60°
Sensing element	ultrasonic transducer — two measuring heads, short blind zone

Measurement — device position

Position status	normal / tilt
Sensing element	3-axis accelerometer (MEMS)

Radio connectivity

Technology	long-range, low-power radio (LPWAN)
Radio band	EU868 (EU); regional variants: US915, AU915, AS923, IN865, KR920, RU864
Tx power	up to 16 dBm (EU868); up to 22 dBm (US915)
Receiver sensitivity	down to -137 dBm
Sensor-gateway range	up to approx. 2 km in built-up areas / approx. 15 km in open terrain
Communication	two-way — readings to the platform, remote configuration via downlink

Device features

Configuration	mobile app over NFC (with card emulation mode); remotely via platform downlink
Tamper detection	the accelerometer reports device tilt / movement — e.g. a lifted manhole cover
Threshold alarms	alert rules and thresholds in the Nextriv platform

Power

Batteries	2× lithium Li-SOCl ₂ ER17505, 3,500 mAh (7,000 mAh total)
Battery life	≥10 years — 10-min interval + 20 trigger events per day [1]

Enclosure and operating environment

Operating temperature	-15...60 °C
Ambient humidity	up to 90% RH, non-condensing
Ingress protection	IP67; salt-spray-resistant enclosure
Housing	ABS, black
Dimensions	111 × 62 × 40 mm (4.37 × 2.44 × 1.57 in)
Weight	168 g
Mounting	on flat surfaces, with screws

Compliance and approvals

Approvals	CE, FCC
Environmental	RoHS

Ordering information	
Product code (SKU)	NX-PR-ULSC
Variants	regional radio-band variants — specify the operating region when ordering
System requirement	a Nextriv Hub gateway (e.g. NX-GW-MINI, NX-GW-PRO)

[1] Battery life determined under laboratory conditions — indicative value; the actual time depends on the reporting interval and radio conditions.

Specifications are subject to change without notice. The latest document versions are available in the download centre: nextriv.com/files. Questions: nextriv.com/contact.