

Nextriv Probe Ultrasonic

Ultrasonic level and distance sensor

NX-PR-ULS

Nextriv Probe

A non-contact ultrasonic level and distance sensor for tanks, silos and channels — the transducer measures from above the surface, so no component touches the medium and nothing corrodes. Range variants up to 5 m and up to 10 m with 1 mm resolution, and the blind zone starts from just 0.25 m. The sealed IP67 enclosure handles year-round outdoor operation, and the replaceable 19,000 mAh battery lasts up to 10 years. A local memory of 1,000 readings with retransmission plus threshold alarms and a sudden-change alarm complete the picture.



up to 10 m

measuring range

1 mm

measurement resolution

up to 10 yrs

battery life

IP67

ingress protection

Key features

- Fully non-contact measurement — an ultrasonic pulse from above the surface; nothing corrodes and nothing gets coated in the medium
- Range variants up to 5 m and up to 10 m — from drums to tall silos; blind zone from just 0.25 m
- 1 mm resolution and $\pm 1\%$ of range accuracy — enough for stock accounting and detecting slow losses
- Up to 10 years on a replaceable 19,000 mAh battery — a measurement point with no mains power and no cables
- IP67 sealing and UV resistance — year-round outdoor operation for years
- 1,000-reading memory with automatic retransmission — gap-free history after connectivity outages
- Threshold alarms plus a sudden-change alarm — immediate warning of a rising level or a rapid loss
- Configuration over NFC from a smartphone, via USB-C from a computer or remotely from the platform (downlink)

Technical specification

Measurement — distance and level

Measurement method	non-contact — an ultrasonic pulse sent from above the medium surface
Measuring range	0.3...5 m or 0.5...10 m (standard variants); 0.25...5 m or 0.25...10 m (short-blind-zone variants)
Accuracy	$\pm 1\%$ of full scale (standard variants); $\pm(1 + 0.3\% \times S)$ cm, where S = measured distance (short-blind-zone variants)
Resolution	1 mm
Sensing element	ultrasonic transducer

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 20 dBm (US915)
Receiver sensitivity	down to -137 dBm
Antenna	internal
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

Interfaces and indicators	
Indicators	1× status LED (internal)
Button	1× power / reset (internal)
USB port	1× USB-C (internal) — configuration and service console

Device features	
Local buffer	1,000 readings; automatic retransmission and data recovery after a connectivity outage
Alarms	on-device thresholds + a sudden-change alarm; alert rules in the Nextriv platform
Configuration	mobile app over NFC; PC software via USB-C; remotely via platform downlink
Power on / off	NFC or button (internal)

Power	
Battery	1× lithium Li-SOCl ₂ ER34615 (D size), 19,000 mAh, replaceable
Battery life	up to 10 years — 10-min interval, 25 °C [1]

Enclosure and operating environment	
Operating temperature	-30...65 °C (standard variants); -15...60 °C (short-blind-zone variants)
Ambient humidity	0...80% RH, non-condensing
Ingress protection	IP67 (outdoor use)
Housing	ABS + PC, UV-resistant; grey (standard variants) or black-grey (short-blind-zone variants)
Dimensions	156.1 × 71 × 69.5 mm (6.1 × 2.8 × 2.7 in)
Weight	approx. 370 g (standard variants) / approx. 363 g (short-blind-zone variants) — with battery and mounting bracket
Mounting	pole/mast, wall or DIN rail

Compliance and approvals

Approvals	CE, FCC, ISED, Telec
EMC	EN 55032, EN 55035; IEC 61000-4-2 level 3, IEC 61000-4-3 level 2, IEC 61000-4-8 level 4
Radio frequency	FCC Part 15B, FCC Part 15.247, EN 300 330, EN 300 220-1/2, EN 301 489-1/3
Safety	EN 62368-1
Environmental	RoHS

Ordering information

Product code (SKU)	NX-PR-ULS
Variants	range up to 5 m or up to 10 m; standard or short-blind-zone transducer (from 0.25 m); a variant for snow and soft materials available — specify the variant when ordering
System requirement	a Nextriv Hub gateway (e.g. NX-GW-MINI, NX-GW-PRO)

[1] Battery life determined under laboratory conditions with the standard battery — indicative value; the actual time depends on the reporting interval, battery brand and environmental factors.

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