ZX300e

Enhanced wind measurements from the world's most validated ground-based Lidar.

ZX 300e is the evolution of the trusted ZX 300, delivering enhanced performance, ultra-low power operation and the most comprehensive independent validation record in the industry. Fully IEC Classified from 21–200m, ZX 300e provides accurate, reliable and bankable wind data for onshore campaigns in both simple and complex terrain worldwide.

ZX 300e at a glance:

- Measure wind speed and exact wind direction remotely from 10–300m.
- Achieve proven, high data availability even at 300m and in clean air conditions.
- Reduce project costs with ultra-low power consumption, ideal for remote or extended sites.
- Ensure workforce safety with no need for climbing or working at height.
- Simplify planning with a compact, low-visual-impact design supporting permitting processes.
- Backed by a 5-year service interval, warranty, and proven global survivability record.

The evolution of the world's most validated wind Lidar, now proven to 300m

Deployed in more than 100 countries with over 20,000 deployments of ZX 300, ZX 300e builds on the world's most proven ground-based platform.

A rugged, field-hardened system that has already demonstrated a 10-year product life in practice, with units still performing more than a decade after deployment.

Bankable results accepted by major financial institutions, and consultants including DNV, UL, Wind Pioneers, Ramboll, Brightwind, Natural Power, Deutsche WindGuard... and more.

ZX 300e is the evolution of the globally deployed ZX 300 wind Lidar, delivering enhanced performance and the most comprehensive validation evidence base in the industry. Features include:

- Enhanced internal architecture. New-generation CW design improves accuracy, range, and wind direction sensing, with ultra-low power consumption (44 W at –25°C).
- Web-based user interface. A powerful local and remote platform supporting multi-user access, cyber security, and streamlined status checking.
- Rigorous performance verification. Independent mast campaigns up to 200 m confirmed slopes within ±1%, $R^2 > 0.985$, and availability consistently above 95%.
- Fleet-wide 300 m validations. At the UK Remote Sensing Test Site, ZX 300e units were verified to 300 m using Midar (Mast + mast-mounted Lidar) methods, achieving $R^2 > 0.985$ and availability above 94% at 300 m.
- Turbulence intensity. Machine-learning METICE approach delivers cup-equivalent TI validated at >17 sites worldwide, meeting CFARS KPIs.
- World-first classification. Classified to IEC 61400-50-2 across 21–200 m, with final accuracy class and standard uncertainty of 0% — the best and most comprehensive classification available.

ZX 300e is more than a product evolution — it is the culmination of two decades of Lidar expertise, 15 years of real-world deployments, and thousands of independent validations. From short-term prospecting to permanent met replacements, ZX 300e delivers consistent, bankable data across all terrains and conditions. With proven availability up to 300 m and and the most complete IEC classification ever published, ZX 300e retains the benchmark for finance-grade wind measurement worldwide.

With ZX 300e, we raise the benchmark again.

ZX 300e Specification

Measurements

Range	10 - 300 metres (Lidar measurement) 0 - 10 metres (onboard met weather station)
Probe length	± 0.07 metres @ 10 metres ± 7.70 metres @ 100 metres
Heights measured	10 User configurable 1 Additional met weather station measurement
Sampling rate	50Hz (up to 50 measurement points every second)
Averaging rate	True 1-second averaging 10-minute averaging
Wind speed accuracy	0.1 m/s*
Direction variation	< 0.5°*
Speed Range	< 1 m/s to 80 m/s
Data storage	6 years

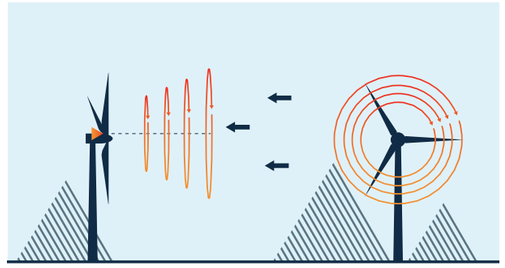
Product

Service interval	5 years from new
Size	0.9m x 0.9m x 1m
Weight	55kg
IP Rating	IP 67
Power consumption	44W
Power input	12V
Temperature range	-40 + 50°C
Warranty	5 years
Maintenance	No annual maintenance or calibration in this period
Laser	Class 1, Eye Safety (IEC 60825-1)

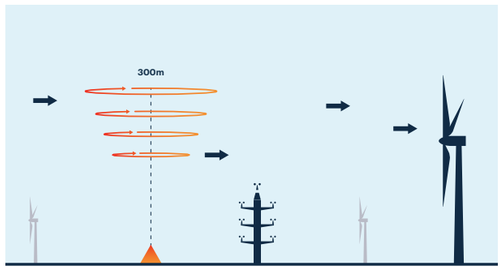
* as measured against a calibrated moving target

Use Cases

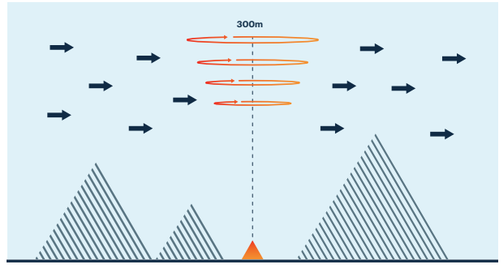
Lidar · Wind · Lidar beam



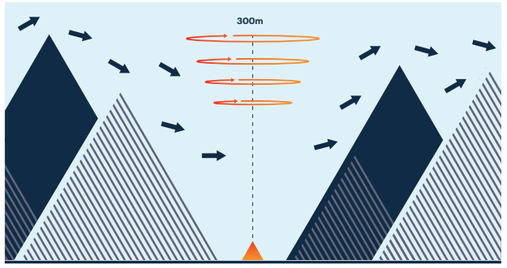
Power Curve Measurements from the turbine, including IEC 61400-50-3



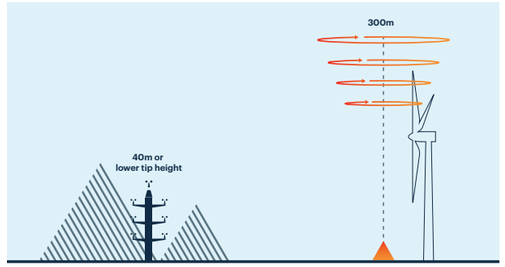
Power Curve Measurements to IEC 61400-12-1: 2017



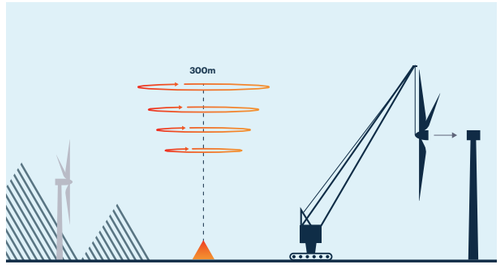
Stand alone wind measurements



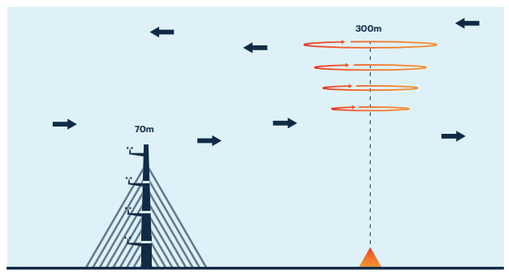
Working in complex flow



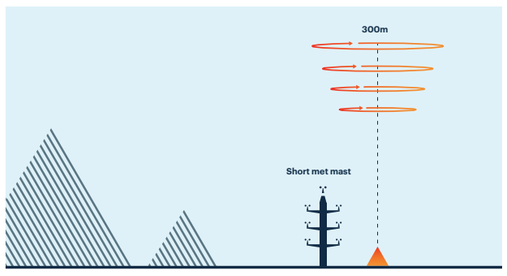
Site Calibration to IEC 61400-12-1: 2017 Annex C



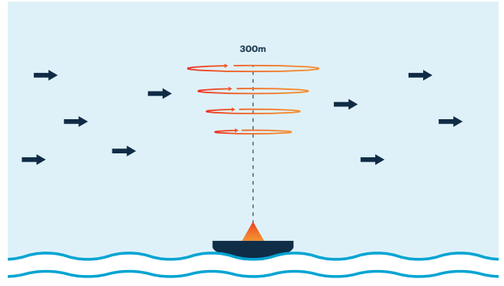
Crane lift monitoring



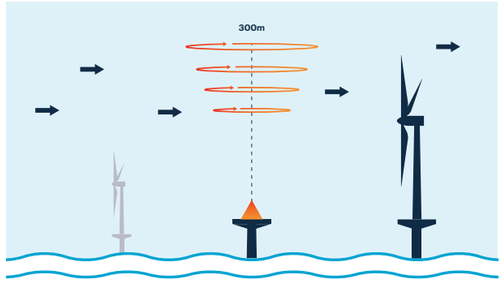
Complement and go beyond your met mast measurements



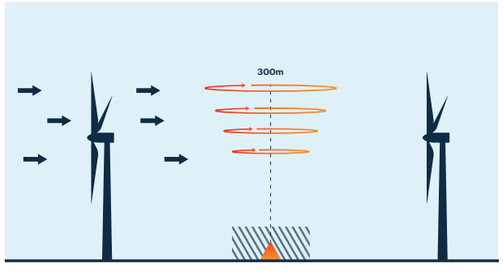
Combine fixed short met masts with roaming Lidar



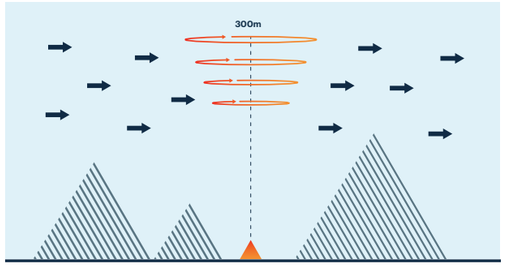
Stand alone wind measurements



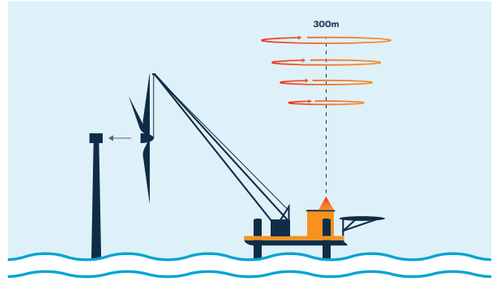
Offshore Permanent Met Lidar



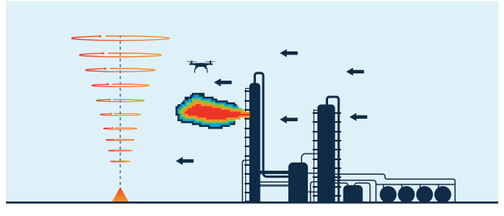
Permanent Met Lidar



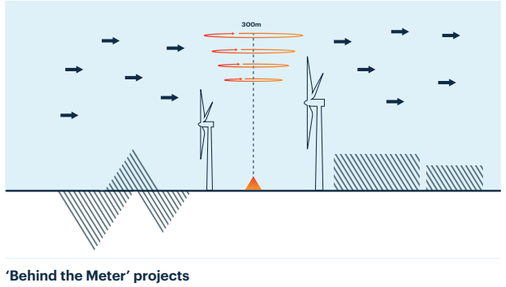
Lidar Weather Station



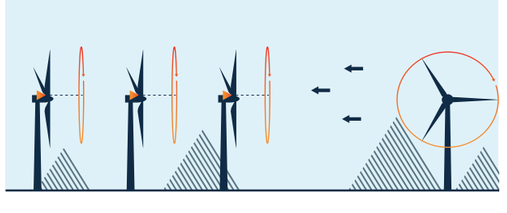
Offshore construction and operations & maintenance wind monitoring



Methane emissions monitoring

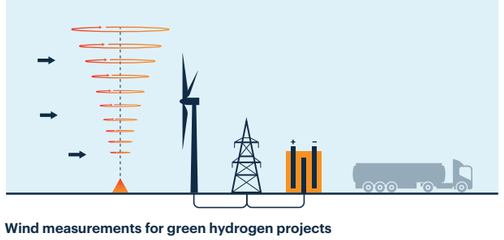


'Behind the Meter' projects



Lidar Assisted Control

Wind monitoring for droneports, spaceports and airports



Wind measurements for green hydrogen projects

Your Lidar adventure starts today by speaking to ZX Lidars.

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ZX Measurement Services