PROTEUS INSTRUMENTS

No rival
No equal

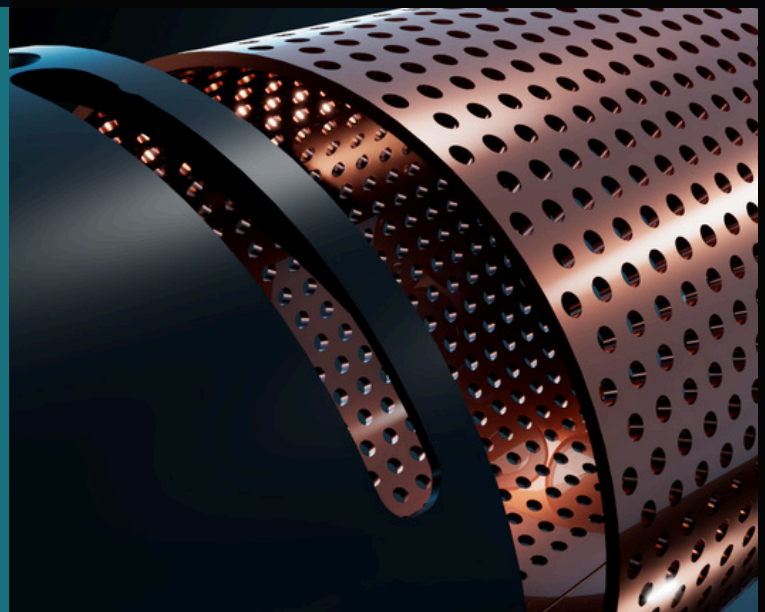
Only *pro*SONDE®

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2022

*pro***SONDE** is a fully customisable 11-port sonde and the first instrument in the world to incorporate our patent-pending UV-AF technology; full spectrum absorbance and fluorescence marking an unprecedented leap into the future.

*pro***SONDE** also features our exclusive *pro***FLUOR** fluorometers, flat-faced sensors, superior levels of anti-fouling, algorithm builder and industry-leading software with Bluetooth connectivity.

*pro*SONDE® – a new era in water quality monitoring



This is more than just a sensor; it's a world-first innovation built for water quality professionals exuding precision, performance and reliability.

Meet *pro*SONDE®– the world's most advanced multiprobe

SUPERIOR ANTI-FOULING

- Hot-swap copper mesh (in guard or flow-cell)
- Flush-faced sensors
- Hot-swap copper-plated bulkhead
- Plug & Play powerful wiper; fully programmable for direction, speed, revolutions and scrub function
- Self-draining sediment port
- Custom guard design option

DATALOGGING

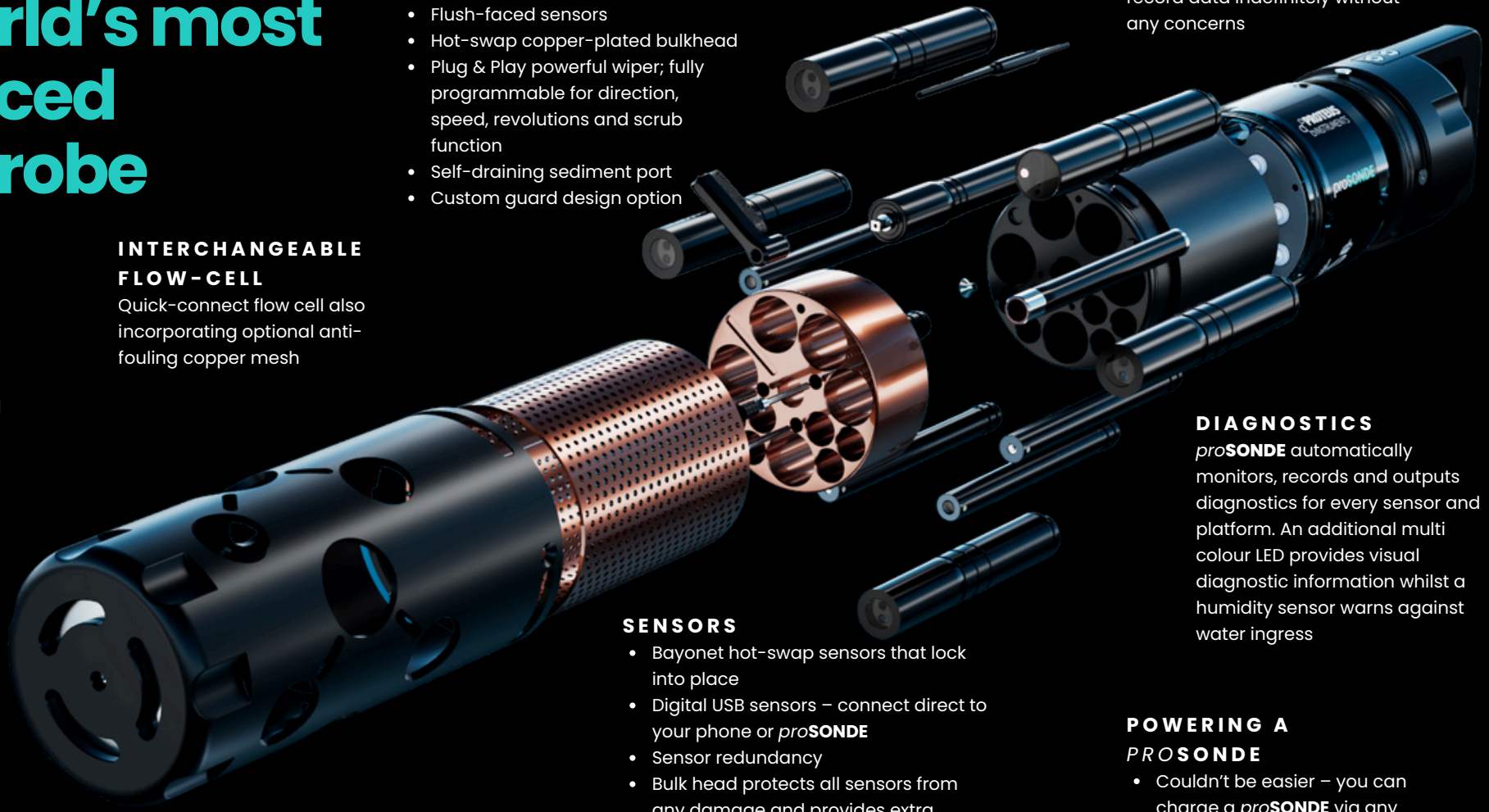
An internal replaceable SD-card (up to 64GB) allows you to record data indefinitely without any concerns

BUILT-IN ERROR PREVENTION

- Users can install any sensor in any port
- Unique sprung loaded smart sensors
- Multiple o-rings on all sensors

INTERCHANGEABLE FLOW-CELL

Quick-connect flow cell also incorporating optional anti-fouling copper mesh



DIAGNOSTICS

*pro***SONDE** automatically monitors, records and outputs diagnostics for every sensor and platform. An additional multi colour LED provides visual diagnostic information whilst a humidity sensor warns against water ingress

MULTIPLE WORLD FIRSTS

- E. coli & Enterococci - bathing waters
- Phosphates
- Optical Ammonium
- BOD/COD/TOC/DOC
- Marine or freshwater

SENSORS

- Bayonet hot-swap sensors that lock into place
- Digital USB sensors – connect direct to your phone or *pro***SONDE**
- Sensor redundancy
- Bulk head protects all sensors from any damage and provides extra security
- Flat-faced sensors for all parameters including pH & conductivity
- Unique world-leading *pro***FLUOR** technology for all fluorescence sensors
- Low-power technology on all sensors

POWERING A *PRO*SONDE

- Couldn't be easier – you can charge a *pro***SONDE** via any USB-C port or charger
- The onboard battery acts as a capacitor, therefore allowing it to be powered by ultra-low powered RTUs

CALIBRATION

- *pro***SONDE** allows you to batch calibrate multiple sensors (up to 6) at a time to increase efficiency and minimise calibration solution consumption
- Each sensor stores its calibration data locally, while the *pro***SONDE** automatically logs all calibrations performed on connected sensors—maintaining a complete, traceable calibration history

UNLIMITED INTEGRATION

With USB, modbus, RS232/RS485 and SDI12 comms connectivity is straightforward.
Bluetooth Connectivity

*pro***SONDE** comes with a standard 2-year warranty, with extended care packages and warranty options available for up to 5 years.

Fully EA Section 82 compliant – built for flexibility

*pro***SONDE** is the only instrument that is fully compliant with Section 82 of the Environment Act (2021) and associated technical guidance. Designed with adaptability at its core; swap out any sensor or plug in new ones—no delays, no reconfiguration. Batch calibration (of multiple sensors) can be done simultaneously or directly connect the sensors to your phone/PC, with all calibrations stored on the sensor and *pro***SONDE.** It provides instant functionality, seamless integration, and total compliance, all in one smart ultra-flexible system that will ensure you comply with the toughest of regulations, anywhere in the world.

Plug & play, using hot swap sensors. No experts needed

Install any digital sensor in any port in seconds; no complex tooling, no fuss. Change our USB sensors on the fly, keeping your system running smoothly without interruption. Featuring 11 versatile ports and a wiper, you have complete freedom on how you deploy your *pro***SONDE** and whether you want sensor redundancy as a backup. Our unique bayonet-style connectors lock each sensor securely in place with a single quick action, delivering effortless flexibility and real-world efficiency in the field.

Built to evolve with your monitoring needs

Leveraging the Proteus pedigree and the very best in intelligent design and engineering ingenuity, we've created an instrument that doesn't just meet today's standards — it's ready for tomorrow's challenges. Its USB architecture ensures rapid data processing, while the world's first patent-pending UV-AF sensor (full spectrum absorbance and fluorescence) measures the equivalent of up to four multiprobes and a UV-Vis sensor in one device! With its ability to provide a 3D matrix of water chemistry, *pro***SONDE** offers unrivalled analysis, making it the only instrument you'll ever need for comprehensive water quality measurement.

Flush-mounted sensors for maximum longevity

Get more life and performance from your sensors with *pro***SONDE**'s innovative flush-mounted design. By eliminating recesses where debris can collect, and pairing the sensing surface with an intelligent, single-sweep wiper, fouling becomes a thing of the past—even in the toughest environments, from marine deployments to sewage monitoring. The result? Reduced maintenance, extended durability, and consistent accuracy you can rely on in the field.

Engineered in house, drawing on decades of experience

Next-generation anti-fouling

We're raising the bar in anti-fouling technology with our advanced flush-mounted design. The optional bulkhead is available in acetal or copper; a powerful defence against biofouling that keeps your data clean and your sensors performing longer. When paired with a hot-swap copper guard and a fully programmable wiper – giving you precise control over direction, speed, revolutions, and even an arcing scrub function – no other multiprobe offers the same level of anti-fouling control as *pro***SONDE**, not even close.

*pro*SONDE® is the world's most versatile multiprobe thanks to its innovative and rugged design

Applications

Drinking Water

***pro*SONDE** can be used for drinking water applications including **legionella and THM monitoring.** Sensors can either be deployed in open water or via a single flow-cell. Optionally, ***pro*SONDE**'s optical sensors can be removed and deployed on their own direct to an RTU. With high-accuracy, self-cleaning sensors, ***pro*SONDE** eliminates the need for complex flow loops and individual sensors on backboards — giving you a simpler, more reliable solution.

Wastewater

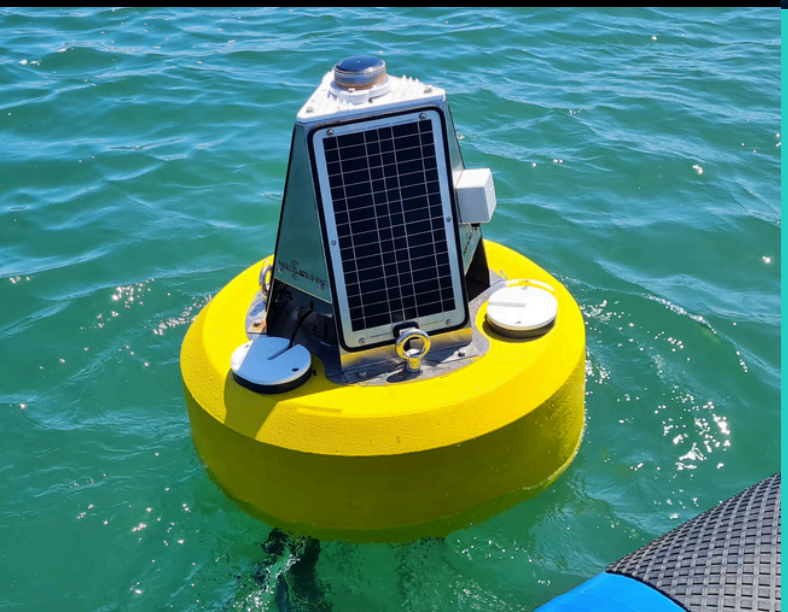
***pro*SONDE** can be installed at almost any point within the wastewater treatment process and can be used to calculate incoming BOD/COD/TOC/Ammonia/Phosphate loadings. At the same time it can be used to control aeration pumps to save energy or simply as a compliance monitor for the final effluent.

At every stage ***pro*SONDE** can be used to monitor performance, capture trade waste spikes or provide commissioning support with design changes.

Applications

Industrial

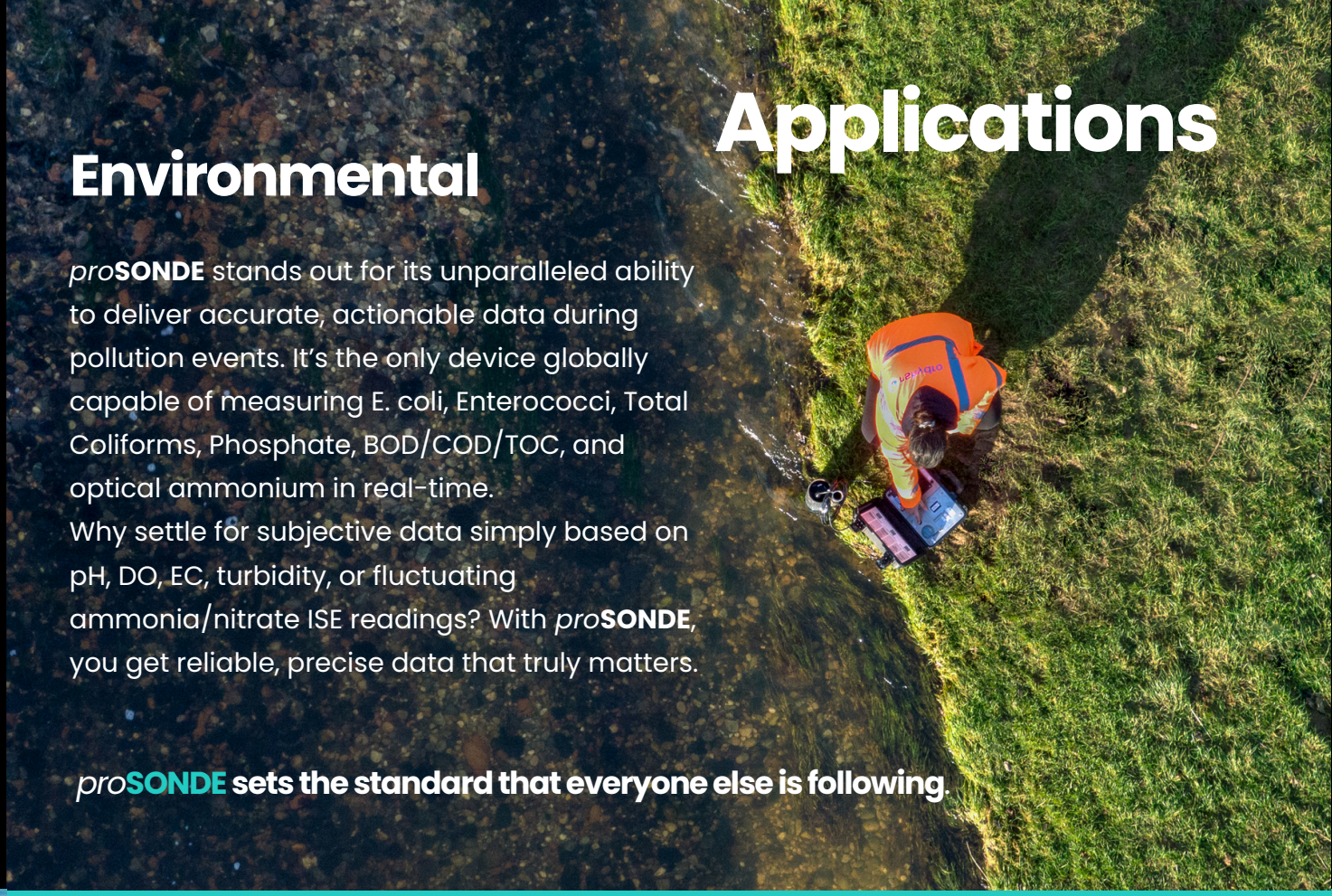
With strict regulations on organic loading, staying compliant is essential. *pro***SONDE** offers real-time data on BOD, COD, TOC, and other key parameters, ensuring your effluent consistently meets regulatory standards.
By providing early detection of potential issues, *pro***SONDE** helps prevent costly fines and operational disruptions.
Whether monitoring food and beverage effluents or landfill leachate, *pro***SONDE** provides a comprehensive, reliable solution for all your monitoring needs.



Environmental

*pro***SONDE** stands out for its unparalleled ability to deliver accurate, actionable data during pollution events. It's the only device globally capable of measuring E. coli, Enterococci, Total Coliforms, Phosphate, BOD/COD/TOC, and optical ammonium in real-time.
Why settle for subjective data simply based on pH, DO, EC, turbidity, or fluctuating ammonia/nitrate ISE readings? With *pro***SONDE**, you get reliable, precise data that truly matters.

***pro*SONDE sets the standard that everyone else is following.**



Marine/Coastal

Marine monitoring is synonymous with tough environmental conditions; and that is exactly where *pro***SONDE** excels. With all of its superior anti-fouling technologies, *pro***SONDE** is delivering multiple world-first capabilities worldwide for marine and coastal environments but also at the same time lowering CAPEX costs and improving reliability. From precise detection of E. coli and Enterococci in bathing waters to breakthrough measurements of phosphates, optical ammonium, and organic matter including BOD, COD, TOC, and DOC—no other system offers this level of innovation, versatility, and reliability.

*pro***VIEW**
Powering precision in water quality monitoring

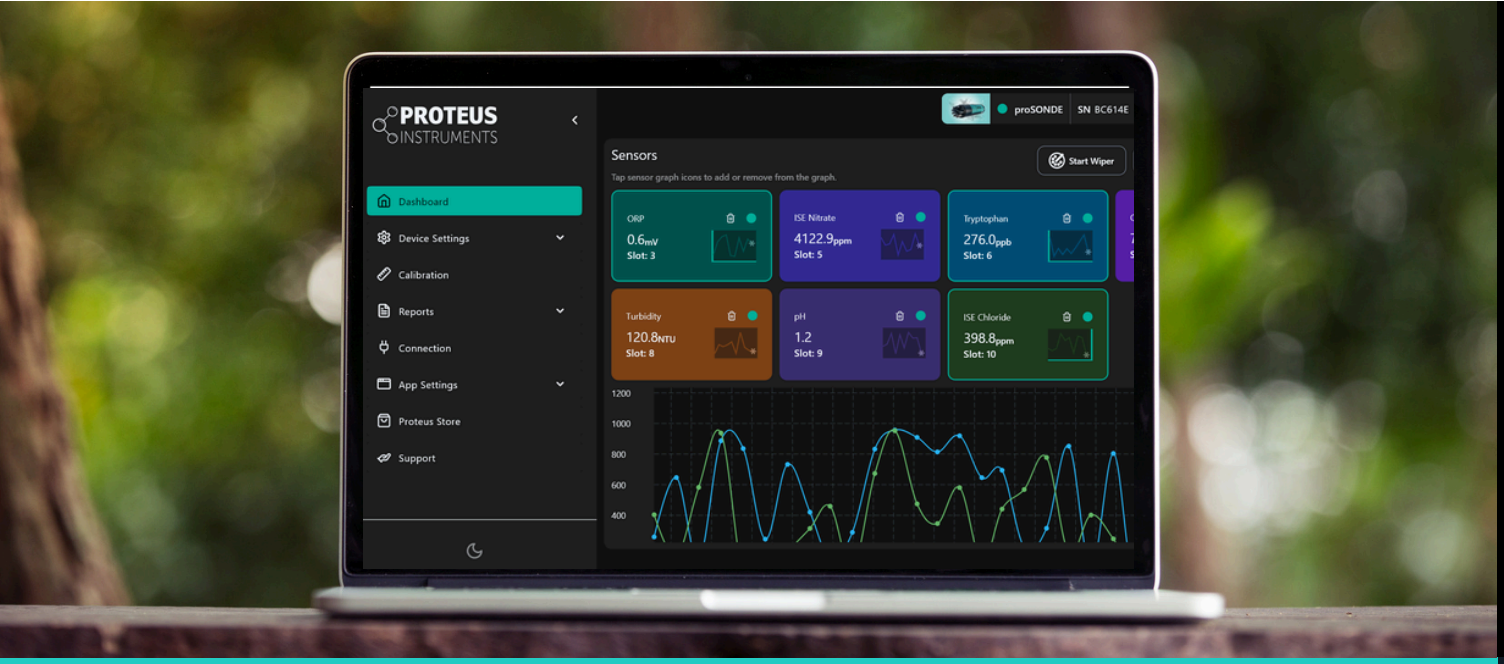
Our data interface *pro***VIEW** ensures users find every function of a *pro***SONDE** to be intuitive and easy to use. *pro***VIEW** gives you full control of any sensor or its data; view it in real-time, capture it and send it an instant.

Download on:

GET IT ON Google Play

Download on the App Store

- **Freely Configurable Dashboard** – Tailor your workspace for instant access to the data that matters.
- **Smart Alarm Handling** – Stay informed with configurable alerts or critical events.
- **Seamless Sensor Integration** – Connect directly to instruments or individual sensors with ease.
- **Advanced Calibration Tools** - Multi-sensor calibration, virtual sensors, algorithm builder, calibration schedules, and detailed event logs, all with secure multi-level access.
- **Programmable Wiper Control** – Complete control over speed, direction, interval, angle, and rotations.



Stay informed with configurable alerts or critical events.

- **Datalogging and Spot Measurements** – Capture single or multiple readings: GPS-enabled for location-tagged data
- **Flexible Communications** – USB-C for data transfer and charging, Bluetooth for wireless operation, and an SDI-12 Mapper.
- **Direct Connections to Proteus Store and Support Portals** – Fast updates (with firmware/software update notifications), resources, and expert assistance at your fingertips.

Sensor specifications

Parameter		Range**	Resolution	Accuracy	Comments
Temperature	Water Temperature	-5 to 50°C	0.01	±0.01°C	Never needs calibration.
pH	pH	0 to 13 units	0.01	±0.1 within 10°C of calibration, 0.2°C otherwise	Refillable reference electrode; corrected for temperature; typical sensor life > 4 years.
ORP	ORP	-999 to 999 mV	± 0.05	±20 mV	Platinum ORP sensor is combined with pH sensor.
Turbidity	Turbidity	0-4000 NTU	4 digits max 2 d.p.	±2 % of reading or 0.2	Compensated for temperature; filtered for non-turbidity spikes; includes wiper to clean the optics.
Optical Dissolved Oxygen	Concentration	0 to 50 mg/l	0.01	±0.1	Compensated for temperature and salinity; EPA approved "lifetime" luminescence method;
	% saturation	0 to 500 % saturation	0.1%	Corresponds with the accuracy of the concentration reading	
Conductivity	Specific conductance, µS/cm	1 µS to 200 mS/cm	0.1	±0.5 % of reading upto 5000 µS ±2 % thereafter	Corrected for temperature; four easy-to-clean graphite electrodes.
	Salinity	0 to 70 PSU	0.01	±2 % of reading	Calculated from specific conductance. PSU = Practical Salinity Units which is equivalent to ppt.
Fluorometers	CDOM/fDOM	0.6 to 2000 ppb	4 digits max 2 d.p.	Linearity of 0.99R^2 (temperature compensated 0-50°C) Accuracy ±0.5 ppb	Highest-quality LED based fluorometric sensors rated to 100 m depth otherwise max depth same as depth sensor.
	Chlorophyll a (red excitation)	0 to 500 µg/l			
	Chlorophyll a (blue excitation)	0 to 500 µg/l			
	Tryptophan	0 to 2000 ppb			
Ion-selective electrodes (ISE's)	Ammonium	0 to 100 mg/l as nitrogen	0.1	±2 mgl or ± 5% whichever is the greater	Corrected for ionic strength (via conductivity readings); the accuracy specification relies on non-trivial maintenance practice and frequent calibration near the temperature of measurement; ammonium and nitrate require tip replacement every 3 - 6 months. Please contact us for applications >10 m.
	Nitrate	0.1 to 14000 ppm as nitrogen			
	Chloride	1.8 to 35,500 ppm			
	Sodium***	0 to 20,000 mg/l			
	Calcium***	0 to 40,000 mg/l			
	Bromide***	0 to 80,000 mg/l			

* Providing local adequate field calibration. Contact us for details.

** customised ranges are available

*** Q2 2026

Derived parameter specifications

Parameter		Range	Resolution	Accuracy	Comments
BOD	BOD mg/l	0 - 2000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
Coliform Counts	CFU/100 ml	>1 count/100ml	1 count/100ml	±10 Coliforms*	Local site calibration can improve accuracy. Can be used for faecal coliforms, E. coli or total coliforms.
COD	COD mg/l	0 - 4000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
DOC	DOC mg/l	0 - 3000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
TOC	TOC mg/l	0 - 3000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
Ammonium (Optical or ISE)	NH4	0-200 mg/l	0.01 mg/l	±0.1 mg/l 0 -10 mg/l* ±0.5 mg/l 10 - 200 mg/l*	Environmental/river applications typically 0 - 2 mg/l Wastewater applications typically 0 - 50 mg/l
Phosphate	PO4	0 -100 mg/l	0.01mg/l	±0.1 mg/l 0 -2 mg/l* ±0.5 mg/l 2 -100 mg/l*	Environmental/river applications typically 0 - 1mg/l Wastewater applications typically 0 - 50 mg/l
Total Suspended Solids (TSS)	TSS mg/l	0 to10000 mg/l	0.1 mg/l	±2 % of reading or 0.2	Calculated using the correlation between turbidity and a sediment standard or sample. Local calibration can be applied.

General specifications

*pro*SONDE® ensures you comply with the toughest of regulations, anywhere in the world

Internal Power Battery Life	1 to 24 month depending on sensors / logging rates
External Power	5-15 vdc
Operating Temperature	-5 to 50°C, non-freezing
Calibrated Range	0 to 40°C
Depth Rating	100 m

Communications	USB, RS232, Modbus® SDI-12 as standard.
Sample Rate	1 Hz
Data Memory	64Gb removable SD card
Logging Rates	1 second to 1 day
Warranty	2 years (All sensors excluding ISE's)

Diameter	90 mm (3.5")
Length - w/o Battery Pack	460 mm (18.11")
Material	Acetal/Polycarbonate
Typical Weight	1.97 kg (4.34 lbs)
Number of sensors	Up to 11
Internal Battery Pack	5000mAh

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Made in Great Britain

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