



**TPS** | **RANGER**



**PRECISION  
MEASUREMENT  
REDEFINED**



[TPS.COM.AU](http://TPS.COM.AU)

# Introducing the TPS Ranger



**Push-Pull quick sensor connector**  
IP67 waterproof with sensor auto-detect means plug and play

**Colour Coded parameter icons**  
For easy identification



**Quick access buttons**  
Get to where you need, fast

**Rugged IP67 waterproof housing**  
Designed for real-life use

**Class-leading optically bonded Gorilla Glass**  
Strong and cuts out glare

**Large full-colour high-resolution LCD display**  
Full readability in sunlight or shadow

**Magnetic charge/data port**  
Simple to charge and download data via USB-C



# A Ground-up Design

Incorporating years of real-world experience.

Every aspect and every feature has been carefully crafted into what end users really need.

Simplicity. Reliability. Cost-effectiveness. All-in-one platform. Designed and Made in Australia.



# The Ranger



# A Measurement Platform



The TPS Ranger is an all-new measurement platform, designed from the ground up to enhance your operational efficiency while saving both time and money.

- **Cost Efficiency:** Consolidate all your water parameter readings into one rugged, waterproof instrument, reducing the need for multiple different models and saving you money.
- **Time-Saving Setup:** The generous, easy-to-read display, uniform connectors, and intuitive navigation all streamline the setup process saving time and allowing your team to get to work quickly.
- **Field Efficiency:** Maximise your productivity in the field with stability indicator, instant data capture, and effortless data download capabilities.
- **Future-Proof Flexibility:** Save on future upgrades by adding more sensors later without purchasing a new instrument.

Redefine your measurements today with the TPS Ranger, your key to efficiency, savings, and flexibility.

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## Key Features

- Simple product range means 1 instrument = multiple sensors
- Australian Designed and Made ensures local supply, service and support
- Rugged IP67 waterproof instrument designed for real-life use
- Large full-colour LCD display for full readability in sunlight or low light
- Options for pH, ORP, EC, DO and Turbidity
- The integrated temperature on every sensor
- Stability indicators mean consistent readings and calibration
- Tough IP67 waterproof sensor connectors and magnetic charge point
- Quick change cable lengths, choose the configuration that suits you
- Cables separate from sensors, full flexibility to swap and change.
- Perfect for fleet or rental use
- Simple data download to computer via USB-C

# The Ranger

## Tough in the elements, easy on the eyes.

The TPS Ranger is an award-winning design that draws on years of research and development. Every aspect is deliberately designed to be fully rugged and waterproof, even the sensor and charge connectors.

The ergonomic design is optimised for a diverse range of operators and perfectly balanced for one-handed operation.

The large Gorilla Glass display ensures crystal clear, easy-to-read measurements, saving time and reducing errors.

The measurement screen layout gives you all the information you need without cycling through sub-menus. With the intuitive navigation, save time on training, measuring and troubleshooting.

Connecting sensors is effortless with matching cables and connectors: no cross-threading or mismatched sockets. Auto sensor detection makes setup a breeze.

Calibrations are simple with the sensor health indicator and easily accessible buffer settings, giving consistent readings even with different operators.

Long battery life. It is good for approximately 1 week of average use. 1-2 hours fast charge to 80%.

Sun. Rain. Mud.

The TPS Ranger is a good design, done tough.



**GOOD  
DESIGN  
AWARD®  
WINNER**

# A whole new sensory experience



The award-winning Ranger sensors blend lightweight, slim design with intelligent technology to streamline your tasks.

Connecting them is effortless – they feature identical push-pull connectors and auto-detection on the handheld, eliminating concerns about cross-threading or channel selection. Adding, swapping, or replacing sensors is a breeze.

The built-in stability indicator enhances productivity, ensuring consistent readings and calibration, saving you time and reducing errors.

Calibration is stored on the sensor itself, enabling sensor swaps without recalibration, saving time and calibration buffer. Smart technology tracks the sensor condition giving you valuable insight into the sensor's health.

The integrated temperature in each sensor simplifies measurements and setup. No need for a separate temperature sensor reduces the use of calibration solutions. Factory-calibrated to save time at every step.

With functional and consistent design, and coloured rings for easy identification, the TPS Ranger sensors will make your work easier, simpler and quicker.



# Sensors



The pH sensor uses two junctions to reduce contamination of the reference. Factory-calibrated, integrated temperature simplifies measurement and calibration, saving time and reducing errors. Designed to be calibrated in multiple buffer sets and with built-in health tracking gives you full flexibility and full transparency.

- Double junction design
- Integrated temperature
- Protective guard

pH Range	0 - 14 pH
pH Resolution	0.01 pH
pH Accuracy	±0.01 pH
pH Response Time	< 30 seconds to 95% of full response
pH Sensor Type	Double Junction w/ceramic & pellaon, Ag/AgCl, Gel - Bulb Tip
Temperature Sensor	Integrated



The ORP sensor design uses a platinum disc design to enable fast results with maximum surface area. Two junctions are used to reduce contamination of the reference. Factory-calibrated, integrated temperature simplifies measurement and calibration, saving time and reducing errors. Built-in health tracking gives you full transparency.

- Double junction design
- Integrated temperature
- Protective guard

ORP Range	± 1500 mV
ORP Resolution	1 mV
ORP Accuracy	± 1 mV
ORP Response Time	< 30 seconds to 95% of full response
ORP Sensor Type	Platinum Disc, DJ w/ceramic & pellaon, Ag/AgCl, Gel
Temperature Sensor	Integrated



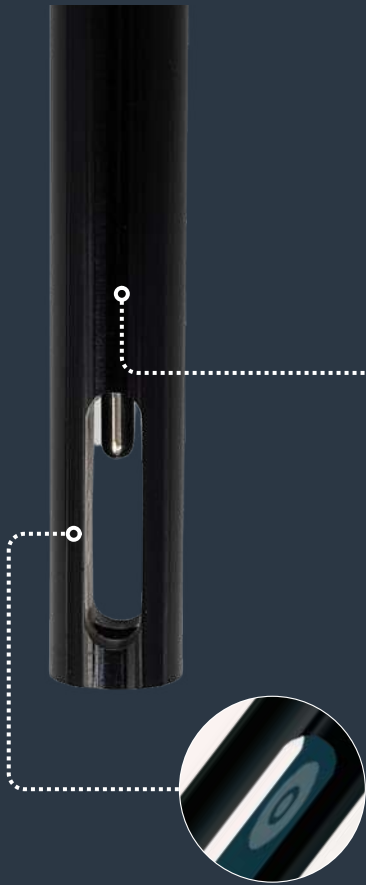




Designed for the real world, the tough, solid graphite Conductivity sensor is ready for the harshest environments. Contamination? No problem. Rise, wipe, scrub. Clean it any way you need to get back to work. No fragile sensing plates, no glass. Utilising wide-ranging technology, this sensor has got you covered from creek to ocean, eliminating the cost of extra sensors. Zero EC and temperature calibration handled at the TPS factory saves time and errors. Sensor health tracking and the option for multiple calibration points give you transparency and flexibility.

- Rugged body design, ready for fieldwork
- Tough, easy clean graphite sensing surface
- Conveniently slim, only 12 mm wide
- 4 pole, bullseye sensing for wide-range, low noise measurements
- Auto ranging
- Integrated temperature

EC Range	0 - 200 mS/cm
TDS Range	0 - 100 g/L (100ppt)
Salinity Range	0.00 to 80.00 ppt 0.000 to 8.000 %
Resolution	Auto Ranging Up to 4 Significant Digits
Accuracy	±0.5% < 200mS/cm
EC Sensor Type	4 Cell Graphite K 0.42
Temperature Sensor	Integrated



The plug-and-play optical Dissolved Oxygen sensor is designed to save time on setup with no membranes, liquids or air bubbles to worry about. Zero calibration is taken care of in the factory saving time and errors. The optical design ensures no oxygen is consumed from samples giving you confidence in your measurements. Designed to be slim enough to fit inside a wine bottle, the DO sensor is simple and convenient.

- Optical DO sensor suitable for outdoor or indoor use
- Conveniently slim, only 12 mm wide
- Easy, wipe clean, no fuss design, saving time and training
- Replaceable cap for simple maintenance

DO Range	DO - 0.00 to 20.00 mg/L Saturation - 0.0 to 200.0 %
DO Resolution	0.01 mg/L, 0.1%
DO Accuracy	±0.2 mg/L, ±2 %
DO Response Time	< 90 seconds to 95% of full response
DO Sensor Type	Optical
Temperature Sensor	Integrated



# Accessories



## Rugged sleeve

Silicone sleeve to protect your investment.



## Cables

Push pull connectors. IP67 waterproof. 1m, 3m, 5m and 10m option.



## Charge/data cable

Anti-fouling, wipe clean magnetic design. USB-C for easy data download. International wall plug options.



## Carry Case

Rugged protective case, specially designed to fit Ranger with rugged sleeve, sensors and cables.



## Calibration buffers

All calibration options available.



## Snap caps

Cover handheld ports for protection when not in use.

# Parts



Each TPS Ranger comes with a charge/data cable and wall plug included.

Part	Product Code
Ranger Handheld	WP-103
pH Sensor	pH-100
ORP Sensor	ORP-100
EC Sensor	EC-100
DO Sensor	DO-100
1m Sensor Cable	CBL-SNS101
3m Sensor Cable	CBL-SNS103
5m Sensor Cable	CBL-SNS105
10m Sensor Cable	CBL-SNS110
Rugged Sleeve	ACC-SLV-100
Carry case	ACC-CSE-100
Charge/Data Cable	CBL-USB101
Power Adapter	ACC-USB102
Snap caps (3 pack)	ACC-SNP-100

# Specifications

## RANGER

Channels	3x Universal Isolated Sensor Channels
Connectors	Light Weight Aluminium PushPull Connectors
Charging & Data Transfer	Magnetic USB-C Cable
Display	High Resolution, Sunlight Readable 4.0" , 480x800, 233ppi, with Gorilla Glass
Keypad	Mechanical Switches rated to 500,000 key presses
Battery	Built In Fast Charge Lithium Battery. 20%-80% in 2 Hrs Recharge
Battery Life	Approximately 1 week of average use
Data Logging	Up To 10,000 Data Records CSV Format
GLP Features	Date, Time, Calibration, Sensor Identification, Handheld Identification
Body Material	Poly-carbonate (Main Body), Silicone (Protective Sleeve)
Operating Temperature Range	0 - 50 °C (Operating), 0 - 40 °C (Charging)
Weight	Approx - 490 grams (Without Protective Sleeve) Approx- 590 grams (With Protective Sleeve)
Size	225mm (L), 85mm (W), 40mm (H) (Without Protective Sleeve) 228mm (L), 91mm (W), 45mm (H) (With Protective Sleeve)
Ingress Protection	IP67



pH Range	0 - 14 pH
pH Resolution	0.01 pH
pH Accuracy	±0.01 pH
pH Response Time	< 30 seconds to 95% of full response
pH Sensor Type	Double Junction w/ceramic & pellon, Ag/AgCl, Gel - Bulb Tip
Calibration Buffer Sets	USA, NIST, NIST10, Auto Buffer Recognition
Temperature Sensor	Integrated
Temperature Sensor Resolution	0.1 °C
Temperature Sensor Accuracy	±0.2 °C
Sensor Body Material	Polycarbonate
Sensor Wetted Material	Epoxy
Operating Temperature Range	0 - 80 °C
Weight	93 grams
Size	25mm (Diameter), Length-252mm (L)
Ingress Protection	IP67



DO Range	DO - 0.00 to 20.00 mg/L Saturation - 0.0 to 200.0 %
DO Resolution	0.01 mg/L, 0.1%
DO Accuracy	±0.2 mg/L, ±2 %
DO Response Time	< 90 seconds to 95% of full response
DO Sensor Type	Optical
DO Calibration	1 Point (100%) Auto Buffer Recognition
Temperature Sensor	Integrated
Temperature Sensor Resolution	0.1 °C
Temperature Sensor Accuracy	±0.2 °C
Sensor Body Material	Poly carbonate
Sensor Wetted Material	ABS and Stainless
Operating Temperature Range	0 - 50 °C
Weight	89 grams
Size	25mm (Dia), Length-252mm (L)
Ingress Protection	IP67



ORP Range	± 1500 mV
ORP Resolution	1 mV
ORP Accuracy	± 1 mV
ORP Response Time	< 30 seconds to 95% of full response
ORP Sensor Type	Platinum Disc, DJ w/ceramic & pellon, Ag/AgCl, Gel
Temperature Sensor	Integrated
Temperature Sensor Resolution	0.1 °C
Temperature Sensor Accuracy	±0.2 °C
Sensor Body Material	Poly carbonate
Sensor Wetted Material	Epoxy
Operating Temperature Range	0 - 80 °C
Weight	94 grams
Size	25mm (Dia), Length-252mm (L)
Ingress Protection	IP67



EC Range	0 - 200 mS/cm
TDS Range	0 - 100 g/L (100ppt)
Salinity Range	0.00 to 80.00 ppt 0.000 to 8.000 %
Resolution	Auto Ranging Up to 4 Significant Digits
Accuracy	±0.5% < 200mS/cm
EC Sensor Type	4 Cell Graphite K 0.42
Calibration Points	Up to 4 Points Auto Detection
Temperature Sensor	Integrated
Temperature Sensor Resolution	0.1 °C
Temperature Sensor Accuracy	±0.2 °C
Sensor Body Material	Polycarbonate
Sensor Wetted Material	ABS and Stainless
Operating Temperature Range	0 - 50 °C
Weight	82 grams
Size	25mm (Dia), Length-252mm (L)
Ingress Protection	IP67

Specifications subject to change