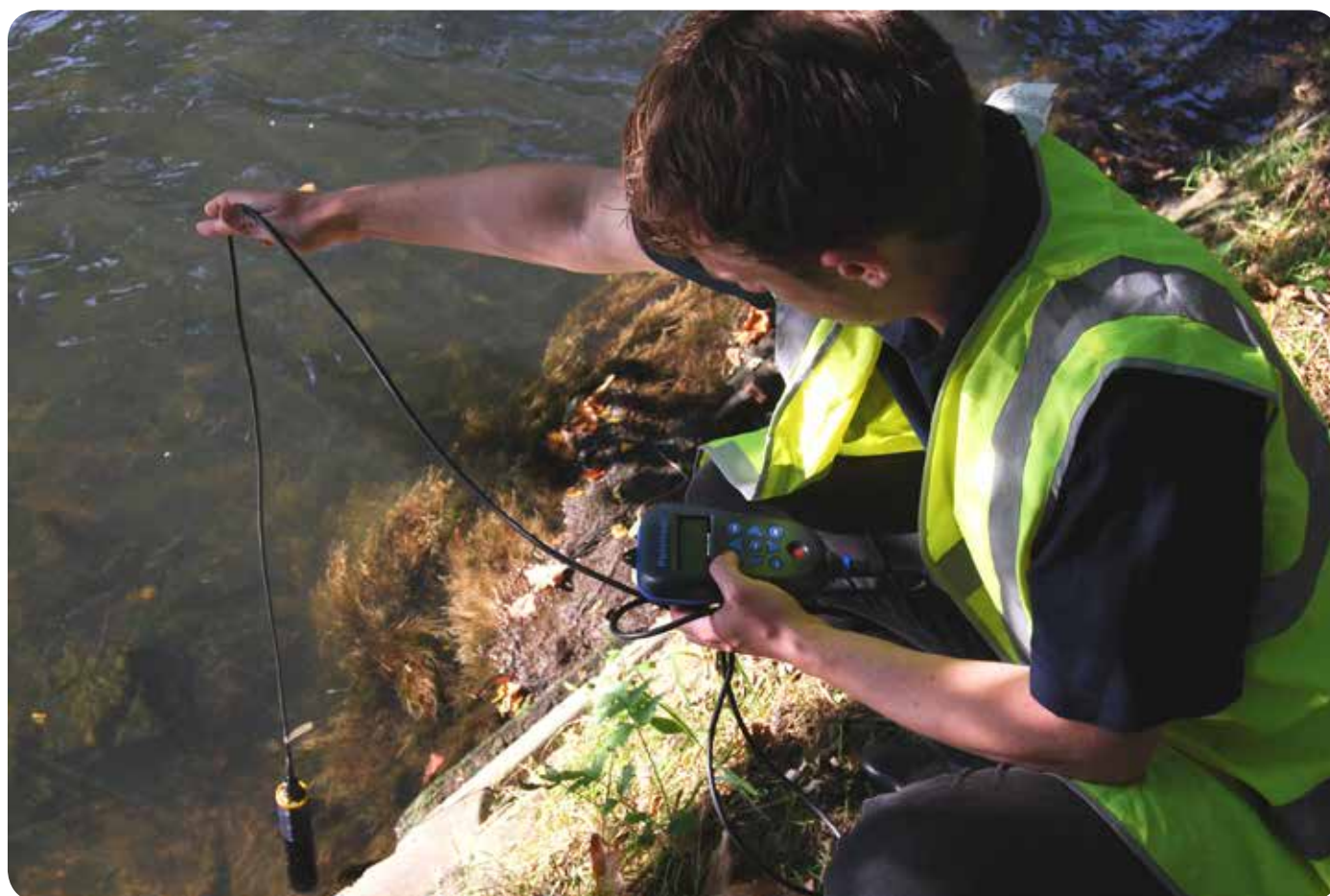


Macro 900 WQS



Macro 900 WQS

The Macro 900 **W**ater **Q**uality **S**ystem is the precise, rugged and customisable multiparameter water quality system for groundwater, aquaculture and environmental monitoring



Macro 900 Meter – completely waterproof, simple to use, rugged for field use

Macro Accessory Probes – choice of two core models with optional additional parameters

Accessories and Consumables – calibration solutions, engineered carry cases and PC software for data management

Macro 900 Meter

The Macro 900 Meter provides the user interface and control for the Macro Accessory Probe. Key features include:

- Completely waterproof to IP67
- Built-in GPS receiver for positional data
- Barometric pressure sensor for depth and Dissolved Oxygen correction
- Data log for 1000 complete result sets including GLP data

Designed for the most demanding environment the Macro 900 Meter is profiled for grip and the rubberised keys are designed to support users with cold, wet or gloved hands. The screen is large and backlit for use in low light conditions.



Technical Specification

Dimensions (H x W x D):	180mm x 90mm x 39mm
Weight (including batteries):	450g
Power Supply:	5 'AA' cells
Battery life:	>40 hours (NiMH)
User Interface:	Nine rubberised keys, LCD screen with backlight
Languages:	English, French, Spanish (German on request)
Data memory:	1000 full data sets plus GLP data
PC Interface:	USB (cable provided)
Operating Temperature	-20 to 70°C
Ingress Protection:	IP67
GPS Specification:	12 channel with integral antenna, ± 10m in three dimensions
Atmospheric Pressure:	150 – 1150 mb ± 1 mb

Macro Accessory Probes

Constructed from marine grade aluminium, Macro Accessory Probes deliver the optimum combination of rugged performance and portability.



Protected by the outer sleeve is a range of high integrity probes for key parameters such as pH/ORP, Dissolved Oxygen, Conductivity and TDS. Key features are:

- Marine grade aluminium body for probe protection
- Small diameter for insertion into small boreholes
- Comprehensive range of core parameters with optional additional electrodes and optical sensors

Two standard versions of the Macro Accessory Probe are available – the MAP 2000 and MAP 2100.

MAP 2000 – pH, ORP, Conductivity, TDS, Salinity, Seawater Specific Gravity, Resistivity, Dissolved Oxygen (Optical), Temperature

MAP 2100 – pH, ORP, Conductivity, TDS, Salinity, Seawater Specific Gravity, Resistivity, Dissolved Oxygen (Optical), Temperature, Differential and Total Depth

Specification

Dimensions (L x D):	290mm x 48mm
Weight :	725g
Ingress Protection:	IP68
Immersion Depth:	75mm min. 30m max.
Operating Temperature:	-5 to 50°C
Standard cable lengths:	3m, 10m, 20m or 30m

Both probes can be further enhanced by utilising the additional ports available for ion selective electrodes and optical probes. A maximum of one additional electrode plus one additional optical probe can be installed but both can be changed as required for different applications.

Optional Ion Selective Electrodes – Ammonia/Ammonium, Chloride, Nitrate, Calcium, Fluoride

Optional Optical Probes – Turbidity, Chlorophyll, Blue Green Algae (fresh water), Blue Green Algae (marine water), Rhodamine WT, Fluorescein, Refined Oil (Hydrocarbons)

Parameters

Standard Parameters

Optical Dissolved Oxygen	Range	0 – 500.0% / 0 – 50.00 mg/l
	Resolution	0.1% / 0.01 mg/l
	Accuracy	0 – 200%: ± 1% of reading. 200% – 500%: ± 10%
Conductivity (EC)	Range	0 – 200 mS/cm (0 – 200,000 µS/cm)
	Resolution	3 Auto-range scales: 0 – 9999 µS/cm, 10.00 – 99.99 mS/cm, 100.0 – 200.0 mS/cm
	Accuracy	± 1% of reading or ± 1 µS/cm if greater
TDS	Range	0 – 100,000 mg/l (ppm)
	Resolution	2 Auto-range scales: 0 – 9999 mg/l, 10.00 – 100.00 g/l
	Accuracy	± 1% of reading or ± 1 mg/l if greater
Resistivity	Range	5 Ωcm – 1 MΩcm
	Resolution	2 Auto-range scales: 5 – 9999 Ωcm, 10.0 – 1000.0 KΩcm
	Accuracy	± 1% of reading or ± 1 Ωcm if greater
Salinity	Range	0 – 70 PSU / 0 – 70.00 ppt (g/kg)
	Resolution	0.01 PSU / 0.01 ppt
	Accuracy	± 1% of reading or ± 0.1 unit if greater
Seawater Specific Gravity	Range	0 – 50 st
	Resolution	0.1 st
	Accuracy	± 1.0 st
pH	Range	0 – 14 pH / ± 625 mV
	Resolution	0.01 pH / ± 0.1 mV
	Accuracy	± 0.01 pH / ± 5mV
ORP	Range	± 2000 mV
	Resolution	0.1 mV
	Accuracy	± 5 mV
Temperature	Range	-5°C – +50°C (23°F – 122°F)
	Resolution	0.1° C/F
	Accuracy	± 0.5°C
Depth	Range	0 – 30 m (0 – 100 ft)
	Resolution	0.01 m (0.01 ft)
	Accuracy	± 0.1 m (± 4")

Optional Parameters

Ammonium	Range	0 – 1,000 mg/l (ppm)
	Resolution	2 Auto-range scales: 0.00 – 99.99 mg/l, 100.0 – 999.9 mg/l
	Accuracy	± 10% of reading
Ammonia (requires pH electrode)	Range	0 – 1,000 mg/l (ppm)
	Resolution	2 Auto-range scales: 0.00 – 99.99 mg/l, 100.0 – 999.9 mg/l
	Accuracy	± 10% of reading
Chloride	Range	0 – 1,000 mg/l (ppm)
	Resolution	2 Auto-range scales: 0.00 – 99.99 mg/l, 100.0 – 999.9 mg/l
	Accuracy	± 10% of reading
Flouride	Range	0 – 1,000 mg/l (ppm)
	Resolution	2 Auto-range scales: 0.00 – 99.99 mg/l, 100.0 – 999.9 mg/l
	Accuracy	± 10% of reading
Nitrate	Range	0 – 1,000 mg/l (ppm)
	Resolution	2 Auto-range scales: 0.00 – 99.99 mg/l, 100.0 – 999.9 mg/l
	Accuracy	± 10% of reading
Calcium	Range	0 – 1,000 mg/l (ppm)
	Resolution	2 Auto-range scales: 0.00 – 99.99 mg/l, 100.0 – 999.9 mg/l
	Accuracy	± 10% of reading
Turbidity	Range	0 – 3000 NTU
	Resolution	2 Auto-range scales: 0.00 – 99.9 NTU, 100 – 3000 NTU
	Accuracy	± 2% of reading
Chlorophyll	Range	0 – 500 µg/l (ppb)
	Resolution	0.1 µg/l
	Accuracy	± 2% of reading
Phycocyanin (Freshwater Blue-Green Algae)	Range	0 – 300,000 cells/ml
	Resolution	1 cell/ml
	Accuracy	± 2% of reading
Phycoerythrin (Marine Blue-Green Algae)	Range	0 – 200,000 cells/ml
	Resolution	1 cell/ml
	Accuracy	± 2% of reading
Rhodamine WT Dye	Range	0 – 500 µg/l (ppb)
	Resolution	0.1 µg/l
	Accuracy	± 5% of reading
Fluorescein Dye	Range	0 – 500 µg/l (ppb)
	Resolution	0.1 µg/l
	Accuracy	± 5% of reading
Refined Oil	Range	0 – 10,000 µg/l (ppb)
	Resolution	0.1 µg/l
	Accuracy	± 2% of reading

Accessories

Macro 900 Link Software

Each Macro 900 Meter is provided with a USB data cable to download to the PC software supplied. The Macro 900 Link software allows the instrument data memory to be retrieved and exported in various formats including Microsoft Excel or as mapped graphical data using the GPS position information.

Software is suitable for Windows XP, Vista and Windows 7 operating systems



Calibration and Filling/Storage Solutions

Supplied in either 300ml or 600ml wide neck bottles designed for immersion of the complete probe, a full range of calibration solutions are available. Single pH buffers, zero oxygen solution and unique Macro-Cal solution for simultaneous calibration of pH, conductivity and turbidity can be packed into the case.

Filling and storage solutions are provided in 25ml bottles, also packed into the case.

Additional Accessories

All Macro 900 WQS kits are provided in a heavy duty case with foam inserts for the meter and probe plus accessories.

Additional accessories available include the Macro Flow Cell for flow-through monitoring installation, suitable for use with either Macro Accessory Probe. Various extension cables can be fitted to any probe to increase the working distance.

Ordering Information

How to Order

Each Macro 900 Water Quality System starts with the Macro 900 Meter:

PT 1401 Macro 900 Meter Kit including Macro 900 Meter with integral GPS and atmospheric pressure monitoring, Macro Link software CD, USB cable, screwdriver, quick release lanyard, 5 AA batteries supplied in a heavy duty case with foam insert

Choose which probe is required – depth or no depth:

PT 1528 MAP 2000 - conductivity, TDS, resistivity, salinity, seawater specific gravity, dissolved oxygen (optical), pH, ORP and temperature

PT 1529 MAP 2100 - conductivity, TDS, resistivity, salinity, seawater specific gravity, depth, dissolved oxygen (optical), pH, ORP and temperature

Select the cable length for the probe:

PT 1530 3 metre probe cable
PT 1531 10 metre probe cable
PT 1532 20 metre probe cable
PT 1533 30 metre probe cable

Choose optional ISE parameters (one installation port):

PT 1541 Ammonia/Ammonium
PT 1542 Nitrate
PT 1543 Chloride
PT 1544 Calcium
PT 1545 Fluoride

Choose optional optical probes (one installation port):

PT 1551 Turbidity
PT 1552 Blue Green Algae (fresh water)
PT 1553 Blue Green Algae (marine water)
PT 1554 Rhodamine WT
PT 1555 Fluorescein
PT 1556 Chlorophyll
PT 1557 Refined Oils (Hydrocarbons)

Optional probes can be exchanged/installed as required.

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