Model GEO-WQpro

Self-Cleaning Multiparameter Water Quality Probe

GEO-WQpro our largest multiparameter water quality probe. GEO-WQpro allows you to add up to 6 additional sensors alongside the standard parameters found on all of our GEO-WQpro. The probe is designed for long periods of unmanned monitoring, facilitated by the integral self cleaning system that cleans all sensors installed on the probe.

Build

All GEO-WQpro are made with the same marine grade aluminium, finished in black with hard anodising for excellent corrosion and biofouling resistance. The use of metal, as opposed to plastic, gives our products their characteristic weight and high quality look and feel.

Sensors

GEO-WQpro comes with all of the common water quality testing sensors pre fitted to the probe:

pH • ORP • Conductivity • TDS • SSG • Resistivity • Salinity

• Dissolved Oxygen • Depth • Temperature

Probes come with 6 empty sockets

GEO-WQpro comes with six empty Aux sockets pre-fitted with removable blanking plugs. These sockets allow you to customise your probe by adding in additional sensors. Each socket can house either an Ion Selective Sensor (ISE) or any of our optical sensors:

ISE Electrode Options:
Ammonium / Ammonia,
Chloride,
Nitrate,
Fluoride,
Calcium

Optical Electrode Options:
Turbidity,
Chlorophyll,
Blue Green Algae, Rhodamine,
Fluorescein,
Refined Oil,
CDOM / FDOM

Protection Class	IP68 (permanent immersion)
Immersion Depth	Min 75mm. Max 100m*
Operating Temperature	-5°C - +70°C
Dimensions (L x Dia)	440mm x 77mm
Weight	1350g

Self cleaning system

GEO-WQpro uses a built in central cleaning system that will clean ALL installed sensors multiple times per cleaning cycle. Cleaning can also be triggered prior to calibration to remove any air bubbles from optical sensors.

Easy and cost effective to maintain

Over time the brushes can become fouled particularly during long deployments, so the wiper arm is designed to be easily removed for quick and simple brush replacement in the field:

Top: Remove the pin from the top of the cleaning arm Middle: Slide out the cleaning arm Bottom: Slide out the brushes and quickly replace.

The wiper brushes will keep all sensors clean during the deployment, this is paticularly important for the optical sensors that use lenses for measurement.

Cleaning control

The wiper cleaning frequency can be configured when used with as instrument. When used with a telemetry system the wiper will run every 6 hours to reduce battery drain.

METEODATA datalogger

Direct connection and integrated with METEODATA Data Acquisition System.

*100m submersion for period of 12 hours, 30m submersion suitable for permanent deployment, depth measurement up to 100m.

GEO-WQpro Specifications:

Standard Parameters

Parameter		
Dissolved Oxygen	Range	0 – 500.0% / 0 – 50.00 mg/L
	Resolution	0.1% / 0.01mg/L
	Accuracy	0 - 200%: ± 1% of reading. 200% - 500%: ± 10%
Depth GEO-WQ	Range	± 0 – 60.00 m (60m max displayed depth, max probe immersion 100m)
	Resolution	1cm
	Accuracy	± 0.5% FS
Depth GEO-WQpro	Range	± 0 – 99.99 m
	Resolution	1cm
	Accuracy	± 0.2% FS
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 – 200.0mS/cm
	Accuracy	± 1% of reading
TDS*	Range	0 – 100,000 mg/L (ppm)
	Resolution	2 Auto-range scales: 0 – 9999mg/L, 10.00 – 100.00g/L
	Accuracy	± 1% of reading
Resistivity*	Range	5 Ω • cm – 1 MΩ • cm
	Resolution	2 Auto-range scales: 5 – 9999 Ω • cm, 10.0 – 1000.0 KΩ • cm
	Accuracy	± 1% of reading
Salinity*	Range	0 – 70 PSU / 0 – 70.00 ppt (g/Kg)
	Resolution	0.01 PSU / 0.01 ppt
	Accuracy	± 1% of reading
Seawater Specific Gravity*	Range	0 – 50 σt
	Resolution	0.1 σt
	Accuracy	± 1.0 σt
pH	Range	0 – 14 pH / ± 625mV
	Resolution	0.01 pH / ± 0.1mV
	Accuracy	± 0.1 pH / ± 5mV
ORP	Range	± 2000mV
	Resolution	0.1mV
	Accuracy	± 5mV
Temperature (non freezing)	Range	-5℃ – +50℃ (23℉ – 122℉)
	Resolution	0.01℃ / 0.1℉
	Accuracy	± 0.5 ℃

* Readings calculated from EC and temperature electrode values

ISE

Parameter		
Ammonium	Range	0 – 9,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 8,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Ammonia†	Range	0 – 9,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 8,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Chloride	Range	0 – 20,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 19,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Fluoride	Range	0 – 1,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Nitrate	Range	0 – 30,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 29,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)
Calcium	Range	0 – 2,000mg/L (ppm)
	Resolution	2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 – 1,999.9 mg/L
	Accuracy	± 10% of reading or 2ppm (whichever is greater)

† Ammonium electrode required. Readings calculated from ammonium, pH and temperature values.

Optical

Parameter		
Turbidity	Range	0 – 3000 NTU
	Resolution	2 Auto-range scales: 0.0 - 99.9 NTU, 100 - 3000 NTU
	Accuracy	± 5% of auto-ranged scale
Chlorophyll	Range	0 – 500.0 μg/L (ppb)
	Resolution	2 Auto-range scales: 0.00 - 99.99 μg/L, 100.0 - 500.0 μg/L
	Repeatability	± 5% of reading
Phycocyanin (freshwater BGA)	Range	0 – 300,000 cells/mL
	Resolution	1 cell/mL
	Repeatability	± 10% of reading
Phycerythrin (marine BGA)	Range	200,000 cells/mL
	Resolution	1 cell/mL
	Repeatability	± 10% of reading
Rhodamine WT Dye	Range	0 – 500 μg/L (ppb)
	Resolution	2 Auto-range scales: 0.00 - 99.99 μg/L, 100.0 - 500.0 μg/L
	Accuracy	± 5% of reading
Fluorescein Dye	Range	0 – 500 μg/L (ppb)
	Resolution	2 Auto-range scales: 0.00 - 99.99 μg/L, 100.0 - 500.0 μg/L
	Accuracy	± 5% of reading
Refined Oil	Range	0 – 10,000 μg/L (ppb) (Napthalene)
	Resolution	0.1 μg/L
	Repeatability	± 10% of reading
CDOM / FDOM	Range	0 – 20,000 μg/L (ppb) (Quinine Sulphate)
	Resolution	2 Auto-range scales: 0.0 – 9,999.9 μg/L, 10,000 – 20,000 μg/L
	Repeatability	± 10% of reading

The accuracy figures quoted throughout this document represent the equipment's capability at the calibration points at 25°C. These figures do not take into account errors introduced by variations in the accuracy of calibration solutions and errors beyond the control of the manufacturer that may be introduced by environmental conditions in the field. Accuracy in the field is also dependent upon full calibration and minimal time between calibration and use.