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QL40-OCEAN Data Sheet

The QL40-OCEAN combines the multi-parameter sensing unit manufactured by Idronaut that enables the probe to be run on a standard logging wireline using standard telemetry schemes. The probe is specially designed for borehole applications.

The standard probe is equipped to measure temperature, pressure, dissolved oxygen, fluid electrical conductivity, pH & Redox. Other optional sensors include ammonia, nitrate, and chloride ion concentration estimates.

Borehole water quality profiling is important in many industries including ground water studies, environmental site assessment, mine dewatering, salt-water intrusion, etc. Data from time-lapse water quality profiling can be entered into regional water study models and used in the prediction for future ground water quality assessments.

QL40-OCEAN water sampling probe schematic. Image courtesy of Mt Sopris Instruments.

Parameter	Range	Accuracy	Resolution	Time cst
Pressure	0.. 1000 dbar	0.05 %F.S.	0.0015% F.S.	50 ms
Temperature	-1.. +50°C	0.005 °C	0.001 °C	50 ms
Conductivity				
Salt water	0..70 mS/cm	0.007 mS/cm	0.01 mS/cm	50 ms
Fresh water	0.. 7000 µS/cm	5 µS/cm	0.1 µS/cm	50 ms
Oxygen	0.. 50 ppm	0.1 ppm	0.01 ppm	3s
	0..500 %sat.	0.2 1%sat.	0.02 0.1 %sat.	3s
pH	0.. 14 pH	0.01 pH	0.001 pH	3s
Redox	+/- 1000mV	1 mV	0.1 mV	3s

Table 1 *Parameters recorded with the standard configuration of the sensor unit*

Optional sensors are available:

Parameter	Range	Accuracy	Resolution	Time cst
Pressure	0.. 6000 dbar	0.01 %F.S.	0.002% F.S.	50 ms
Ammonia	0.. 100 mg/l-N		0.1 mV	
Nitrate	0.. 100 mg/l-N		0.1 mV	
Chloride	0.5.. 18000 mg/l-N		0.1 mV	

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Technical specifications of each sensor. Table courtesy of Mt Sopris Instruments.

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	141cm x 4.2cm x 4.2cm	5.45kg

Technical Specifications

Pressure Rating:	150 bar (2175 psi).
Operating Temperature:	50ºC.
Cable type:	Mono, 4 or 7 conductor (for multi conductor only 1 line used).
Digital data transmission:	Up to 500 Kbits per second depending on wireline.

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