Sensor Specifications

Sensor / Parameter	Range	Accuracy	Resolution	Comments
Temperature	–5 to 50 °C	±0.1°C	0.01°C	Installed with every sonde
Conductivity	0 to 100 mS/cm	±0.5% of reading + 0.001 mS/cm	0.001 mS/cm	Open cell design with graphite electrodes
Dissolved Oxygen - mg/L, % Sat	0 to 60 mg/L	±0.1 mg/L for 0–8 mg/L ±0.2 mg/L for more than 8 mg/L ±10% reading for more than 20mg/L	0.01 mg/L	Optical Sensor HACH LDO® Lumine-scent Dissolved Oxygen
pH	0 to 14 pH	±0.2 pH	0.01 pH	Glass bulb with a user refillable reference with PTFE junction
Turbidity	0 to 3000 NTU	0 to 100 NTU: ±1% 100 to 400 NTU: ±3% 400 to 3000 NTU: ±5% - Requires 4 pointcali-bration	0 to 400 NTU: 0.1 400 to 3000 NTU: 1.0	Self-Cleaning Wiper and central cleaning brush
Depth	0 to 25m 0 to 100m 0 to 200m	±0.05 meters ±0.05 meters ±0.1 meters	0.01 meters 0.01 meters 0.01 meters	
Chlorophyll a	0 to 500 ug/L	Linearity: 0.998R^2 Serial dilution of Rhodamine WT	0.01 ug/L	Turner Designs Optical Sensor
Blue Green Algae (Freshwater Cyanobac-te-ria)	0 to 40,000 ppb	Linearity: 0.999R^2 Serial dilution of Phy-co-cyanin pigment from Prozyme diluted in deio-nized water	0.02 ppb	Turner Designs Optical Sensor
Blue Green Algae (Marine Cyanobacteria)	0 to 750 ppb	Linearity: 0.999R^2 Serial dilution of Phy-co-erythrin pigment from Prozyme diluted in deio-nized water	0.01 ppb	Turner Designs Optical Sensor
Salinity	0-70 psu	±0.2 psu	0.01 psu	Calculated parameter from Conductivity and Temperature
Specific Conductance	0 to 100 mS/cm	±0.5% of reading + 0.001 mS/cm	0.001 mS/cm	Calculated parameter from Conductivity and Temperature
TDS (Total Dissolved Solids)	0 to 64 g/l	N/A	0.01 g/l	Calculated parameter from Conductivity, Temperatu-re and defined constant
ORP	-999 to 999 mV	±20 mV	1 mV	Platinum band
Rhodamine	0 to 1000 ppb	Linearity: 0.999R^2	0.01 ppb	Turner Designs Optical Sensor
Ion Selective Electrodes - Ammonia - Nitrate - Chloride	- 0 to 250 mg/L-N - 0 to 250 mg/L-N - 0 to 18,000 mg/L	- Greater of ±10% rea-ding, or ±2 mg/L-N - Greater of ±10% rea-ding, or ±2 mg/L-N - Greater of ±10% rea-ding, or ±5 mg/L	- 0.01 mg/L-N - 0.01 mg/L-N - 0.01 mg/L	Max Depth: 15 meters

Instruments Specifications

HL7

Dimensions	Diameter: 8.9 cm (3.5 in.) without rubber bumpers; 9.8 cm (3.85 in.) with rubber bumpers Length: 66.4 cm (26.1 in.)
Weights	4.5 kg (10 lb) with four D-cell batteries, storage/calibration cup with no liquid
Sensor Ports	9 sensor ports available 2 fixed sensor ports for temperature and optional depth sensor only 7 ports for integrating other sensor options Parameters available depends on sensor installed Maximium of 5 ports available for optical dissolved oxygen and 4 another optical sensors
Power Requirements	6–24 VDC (12 VDC nominal) applied to the communications module, 12 VDC: 2.0 W average, 24 W peak
Battery Life*	90 days

HL4

Dimensions	Diameter: 4.44 cm (1.75 in.) without rubber bumpers; 5.33 cm (2.1 in.) with rubber bumpers Length: 51.43 cm (20.25 in.) with no internal battery pack and standard sensor guard Length: 66.36 cm (26.125 in.) with no internal battery pack and extended sensor guard Length: 62.23 cm (24.5 in.) with internal battery pack and standard sensor guard Length: 77.787 cm (30.625 in.) with internal battery pack and extended sensor guard
Weight	2.2 kg (5 lb) with internal battery pack, one D-cell battery
Sensor Ports	6 sensor ports available 2 fixed sensor ports for temperature and optional depth sensor only 4 ports for integrating other sensor options Parameters available depends on sensor installed Maximium of 2 ports available for optical dissolved oxygen and another optical sensor
Power Requirements	6–24 VDC (12 VDC nominal) applied to the communications module, 12 VDC: 250 mW average, 18 W peak
Battery Life**	75 days

Sonde

Operating Temperature	–5 to 50 °C (23 to 122 °F), non-freezing
Storage Temperature	1 to 50 °C (34 to 122 °F)
Depth	200 m (656 ft) maximum
Data Memory	4GB
Tensile strength (Maximum)	Mooring cap: 68 kg (150 lb); deployment cable: 227 kg (500 lb)
Communications	Communications module: USB, SDI-12, RS232 Modbus, RS485 Modbus and RS232 TTY
Sampling Rate	1 Hz minimum, (once per second)

Surveyor HL Handheld

Dimensions (L x W x H)	21.8 x 9.4 x 5.3 cm (8.6 x 3.7 x 2.1 in.)
Enclosure rating	IP67; floats in water, waterproof to 1 m (3.3 ft) when covers are installed
Weight	0.68 kg (1.5 lbs)
Display	Color, LCD, 89 mm (3.5 in.), QVGA, transflective (readable in direct sunlight)
Operating temperature	–5 to 50 °C (23 to 122 °F)
Storage temperature	–20 to 60 °C (–4 to 140 °F)
Battery life***	10 hours at 20 °C (68 °F) with continuous use and backlight on
Drop resistant	A maximum of 0.9 m (3 ft) drop on to concrete
Barometric pressure	Range: 225 to 825 mmHg : Resolution: 0.01 mmHg : Accuracy: ±3 mmHg
Data Memory	4 GB

**HL7 Battery Life – Four internal alkaline D-cell batteries, non-rechargeable. Approximately 90 days of use with a 15-minute logging interval and the default warm-up time with temperature, conductivity, pH, LDO, chlorophyll a, blue green algae (fresh water) and turbidity sensors installed, a central cleaning brush set to do one revolution and the sensors at room temperature.*

***HL4 Battery Life – One internal alkaline D-cell battery, non- rechargeable. Approximately 75 days of use with a 15-minute logging interval and the default warm-up time with depth, tempera-ture, conductivity, pH and LDO sensors installed at room temperature.*

****Surveyor HL Battery Life – Up to 10 hours of continued use with a HL4 with the depth, temperature, conductivity, pH and LDO sensors installed at room temperature.*

HYDROLAB Operating Program and user manuals available in multiple languages English, German, Chinese, French, Italian, Spanish, Portuguese and Japanese.

Specification of accuracy can be achieved immediately following correct calibration procedures and using extreme care in specially controlled conditions.

OTT HydroMet

Germany
OTT Hydromet GmbH
Ludwigstrasse 16 · 87437 Kempten
Phone +49 831 5617-0 · Fax -209
euinfo@otthydromet.com · www.otthydromet.com

USA
OTT Hydromet
5600 Lindbergh Dr. Loveland, CO 80539
Phone 800-949-3766
sales@otthydromet.com · www.otthydromet.com