



# HL7

## Applications

Fresh Water Quality  
Coastal Estuary Quality  
Watershed Monitoring  
Stormwater  
Nutrient Monitoring  
Lake/Reservoir Monitoring  
Wetland Management  
Groundwater Studies  
Agriculture Runoff  
Ecosystem Assessment

## Multiparameter sonde

Continuous water quality data, reliability, and usability

**Suited for profiling and continuous deployments in a wide range of freshwater applications**

**Large sensor suite is able to thrive in demanding environmental conditions for long term continuous monitoring**

**Maximize deployment life and minimize maintenance**

**Robust construction and easy calibration**

**Provide software with unmatched ease of use producing traceable data sets supported by metadata**

**Equip with central cleaning brush to minimize biofouling**

### Customizable sensor configurations

Field proven sensor options coupled with the robust construction and easy calibration delivers high quality reliable data. The HL7 sonde has a temperature sensor, seven sensor ports and an optional internal depth sensor.

### Intuitive setup and data management

HYDROLAB Operating Software allows for quick data retrieval and setup of logging files. This powerful software tools helps to make better decisions, minimize errors, and increase efficiency in the lab or at the deployment site.

### Reliable continuous multiparameter sonde

The sonde's large sensor suite offers a versatile, durable and practical solution to the daily needs of monitoring programs for both simple and complex deployments. It can thrive in demanding environmental conditions for long term continuous monitoring.

### Streamlined calibrations

Quickly view instrument status to ensure it is functioning and identify if a calibration is needed. Guided calibrations provide step-by-step instructions, streamlining sensor calibrations and verification checks.

# Technical 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® Luminescent 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 point calibration	0 to 400 NTU: 0.1 400 to 3000 NTU: 1.0	SelfCleaning 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 <sup>2</sup> Serial dilution of Rhodamine WT	0.01 ug/L	Turner Designs Optical Sensor
BLUE GREEN ALGAE (FRESHWATER CYANOBACTERIA)	0 to 40,000 ppb	Linearity: 0.999R <sup>2</sup> Serial dilution of Phycocyanin pigment from Prozyme diluted in deionized water	0.02 ppb	Turner Designs Optical Sensor
BLUE GREEN ALGAE (MARINE CYANOBACTERIA)	0 to 750 ppb	Linearity: 0.999R <sup>2</sup> Serial dilution of Phycoerythrin pigment from Prozyme diluted in deionized water	0.01 ppb	Turner Designs Optical Sensor
SALINITY	0 to 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, Temperature and defined constant
ORP	-999 to 999 mV	±20 mV	1 mV	Platinum band
RHODAMINE	0 to 1000 ppb	Linearity: 0.999R <sup>2</sup>	0.01 ppb	Turner Designs Optical Sensor
ION SELECTIVE ELECTRODES AMMONIUM/AMMONIA NITRATE CHLORIDE	0 to 250 mg/L-N 0 to 250 mg/L-N 0 to 18000 mg/L	Greater of ±10% reading , or ±2 mg/L-N Greater of ±10% reading , or ±2 mg/L-N Greater of ±10% reading , or ±5 mg/L	0.01 mg/L-N 0.01 mg/L-N 0.01 mg/L	Max Depth: 15meters

## Instrument Specifications

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.)
WEIGHT	4.5 kg (10 lb) with four Dcell 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 Maximum 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

\*Contact your local representative for availability.

\*\*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.