# DISSOLVED OXYGEN: HACH LDO® PROBE, MODEL 2

#### **Applications**

- Wastewater
- Industrial Water
- Drinking Water



# Take "No" for an answer when measuring dissolved oxygen with the next generation Hach LDO probe.

#### **No Calibration Required**

The Hach LDO probe is ready to work in your process right out of the box with no calibration required for the entire 2-year life of the sensor cap.

#### **No Membranes to Replace**

There is virtually no maintenance with Hach's breakthrough luminescent technology. There are no membranes to replace, no electrolyte solution to replenish, and no anode or cathode to clean.

#### **No Missed Cleaning Cycles**

Customizable service indicators trigger a service message so that a cleaning cycle is never missed.

#### **No Drift**

A cutting-edge, 3D calibration procedure at the factory makes oxygen measurement with the Hach LDO probe more accurate than ever before.

#### **No Complications**

A robust new design gives the Hach LDO enhanced durability and reduced size for easier handling.



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#### Specifications\*

0 to 20.00 ppm Range

0 to 20.0 mg/L (or ppm)

0 to 200 % air saturation

**Accuracy** ± 0.05 ppm below 1 ppm

± 0.1 ppm below 5 ppm

± 0.2 ppm above 5 ppm

**Response Time**  $T_{95} < 60 \text{ s}$ 

 $T_{90} < 40 \text{ s}$ 

Resolution 0.01 ppm DO

0.1% saturation

 $\pm$  0.1 (mg/L) ppm Repeatability

Flow Rate None required

Sensor Immersion Down to 345 kPa 345 kPa (50 psi), Depth

maximum; accuracy may not be

maintained at this depth

**Transmission Distance** 1000 m (3280 ft.) maximum when

used with a termination box

**Cable Length** 10 m

(options with 30m, 60m, 100m)

Dimensions (D x L) 1.9 in x 10 in

(48.25 mm x 254 mm)

Weight 2.2 lbs. (1 kg), probe only

\*Subject to change without notice.

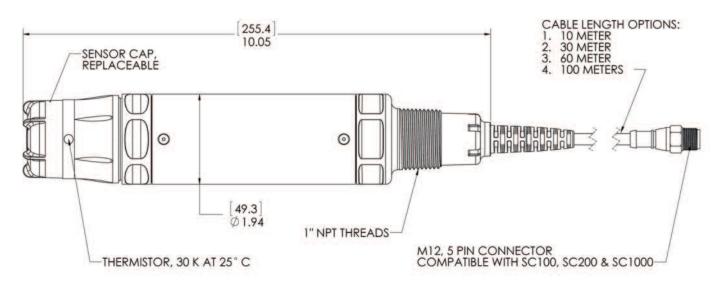
### **Principle of Operation**

The HACH LDO sensor is coated with a luminescent material. Blue light from an LED is transmitted to the sensor surface. The blue light excites the luminescent material. As the material relaxes it emits red light. The time it takes for the red light to be emitted is measured. Between the flashes of blue light, a red LED is flashed on the sensor and used as an internal reference.

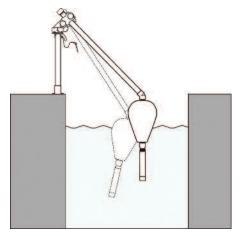
Increased oxygen in the sample decreases the time it takes for the red light to be emitted. The time measurements correlate to the oxygen concentration.



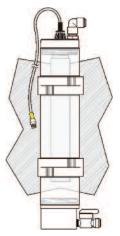
#### **Dimensions**



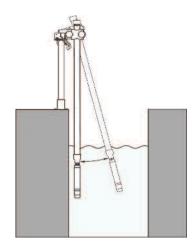
# **Installation / Mounting**



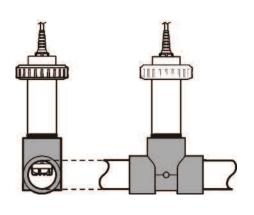




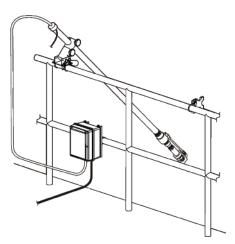
Flow Cell



Pole Mount Kit



Union Mount Kit



Air Blast Cleaning System

#### **Ordering Information**

9020000 Hach LDO Model 2 Probe

9020000-UPGRADE LDO Probe, Mounting Conversion Adapter9020000-SC200 LDO Probe, Mounting Conversion Adapter,

sc200 controller with 2 channels

**Accessories** 

**5867000** Digital Termination Box

 5796000
 Digital Extension Cable, 7.7 m (25 ft.)

 5796100
 Digital Extension Cable, 15 m (50 ft.)

 5796200
 Digital Extension Cable, 31 m (100 ft.)

6860000 High Output Air Blast Cleaning System, 115 Vac6860100 High Output Air Blast Cleaning System, 230 Vac

9253500 Air Blast Hardware Components

**Replacement Parts** 

9021100 LDO Model 2 Sensor Cap Replacement Kit

**Mounting Kits** 

9253000 Pole Mount Kit, PVC9253100 Ball Float Mount Kit, PVC9257000 Union Mount Kit, PVC

9253400 Mounting Conversion Adapter, LDO Model 1 to LDO Model 2

7300800 1 NPT sc Sensors Flow Cell

**Controllers** 

sc200 Digital Controllers

**LXV404.99.00552** sc200 controller, 2 channel, digital

LXV404.99.00542 sc200 controller, 2 channel, digital & mA input

**LXV404.99.00502** sc200 controller, 1 channel, digital

**LXV404.99.00512** sc200 controller, 2 channel, digital & pH/DO sc200 controller, 2 channel, digital & Conductivity

**LXV404.99.00532** sc200 controller, 2 channel, digital & Flow

sc1000 Digital Controllers

**LXV402.99.00002** sc1000 Display Module

**LXV400.99.1R572** sc1000 Probe Module, 4 sensors, 4 mA Out, 4 mA In,

4 Relavs, 110-230V

**LXV400.99.1B572** sc1000 Probe Module, 4 sensors, 4 mA Out, 4 mA In,

4 Relays, Modbus RS485, 110-230V

**LXV400.99.1F572** sc1000 Probe Module, 4 sensors, 4 mA Out, 4 mA In,

4 Relays, PROFIBUS DP, 110-230V

**LXV400.99.1R582** sc1000 Probe Module, 6 sensors, 4 mA Out, 4 mA In,

4 Relays, 110-230V

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