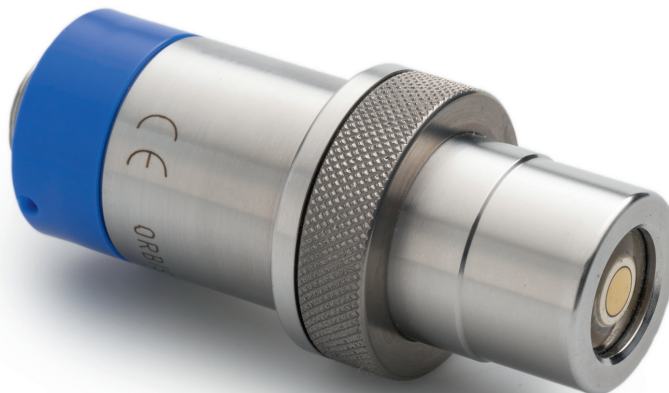


# Hach Orbisphere GA2400/GA2800 Oxygen Sensors

## Applications

- Beverage
- Boiler Water
- Cooling Water
- Industrial Water
- Ultrapure Water



## Highly accurate and customizable oxygen measurement for all environments

The Hach® Orbisphere GA2400 & GA2800 EX oxygen (O<sub>2</sub>) Electrochemical (EC) sensors are designed for process monitoring of dissolved oxygen in ppm or ppb environments. It can also be utilized as part of laboratory analysis of oxygen in the liquid or gas phases.

The Hach Orbisphere GA2400 can be used for a wide range of non-harsh applications, including beer or soft-drinks production, rinsing of semiconductor waters in chip-manufacturing plants, and reactor coolant systems in nuclear power plants.

The Hach Orbisphere GA2800 EX sensor is suitable for harsh environments, including chemical, oil, or petrochemical plants.

There are several different pre-mounted membrane kits, able to be customized to fulfill any particular process requirements and oxygen measurement ranges required. This allows for low measurement ranges of 0.1 ppb, or even very high measurement ranges of 400 ppm.

### Easy and fast maintenance

Traditional cleaning processes can take more than thirty minutes to complete. The GA2400 and GA2800 EX come with an innovative cartridge system that contains everything needed to complete membrane and electrolyte solution change in less than 5 minutes.

### Low level oxygen measurement and unrivaled accuracy

The Hach Orbisphere GA2400 and GA2800 EX utilize an electrochemical oxygen sensor with a lower detection level of 0.1 ppb and unrivaled highly accurate readings of  $\pm 1\%$ . This feature allows users to ensure control of low oxygen levels, for product and equipment integrity and avoiding corrosion.

### Robust for harsh environments

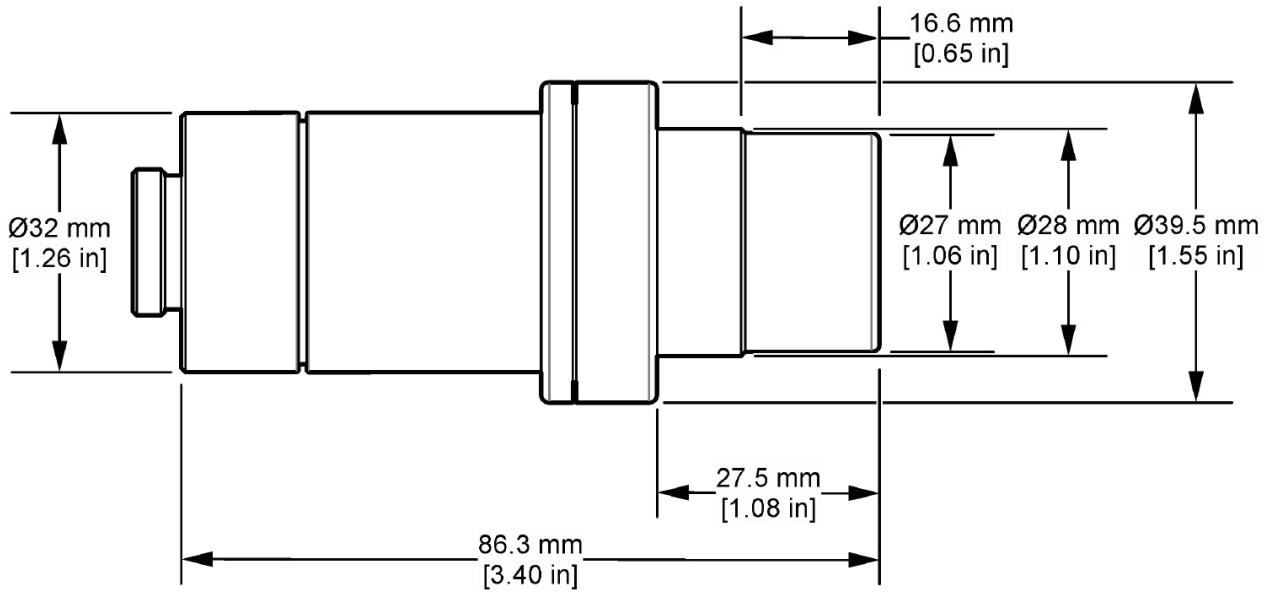
The robust stainless steel or Hastelloy design makes the GA2400 and GA2800 EX sensor ideal for the most demanding applications. ATEX certification comes standard in all GA2800 units, making the sensor especially suitable for harsh chemical environments.

## Technical Data\*

Model	GA2400	GA2800 EX
<b>Certifications</b>	CE	CE, Ex II 1 G, Ex ia IIC T6
<b>Wetted Materials</b>	Stainless Steel 1.4404 (AISI 316L) No O-rings are in contact with the sample	Hastelloy or Stainless Steel No O-rings are in contact with the sample
<b>Pressure resistance</b>	40 bar minimum with default PPS collar (100 bar with stainless steel collar)	
<b>Temperature resistance</b>	-5 - 100 °C (23 - 212 °F)	
<b>Flow Rate</b>	Recommended flow rate in flow chamber 2935A-A: 25 mL/min 2952A-A: 50 mL/min 2956A-A: 180 mL/min 29552A-A: 50 mL/min	
<b>Protection Class</b>	IP66	
<b>Range</b>	Range at 25 °C (77 °F) 2935A-A: 10 ppb - 400 ppm or 20 Pa - 1,000 kPa 2952A-A: 1 ppb - 80 ppm or 5 Pa - 200 kPa 2956A-A: 0.1 ppb - 20 ppm or 0.25 Pa - 50 kPa 29552A-A: 2 ppb - 80 ppm or 5 Pa - 200 kPa	
<b>Accuracy</b>	Accuracy = Trueness (ISO 57251) 2935A-A: The greater of ±1% of reading or ± 10 ppb, or ± 20 Pa 2952A-A: The greater of ±1% of reading or ± 2 ppb, or ± 5 Pa 2956A-A: The greater of ±1% of reading or ± 0.1 ppb <sup>1</sup> , or ± 1 ppb <sup>2</sup> , or ± 0.25 Pa 29552A-A: The greater of ±1% of reading or ± 2 ppb, or ± 5 Pa  <sup>1</sup> Accuracy is ± 0.1 ppb for 410, 510, 362x, 360x and 3655 instruments <sup>2</sup> Accuracy is ± 1 ppb for 366x and 3650 instruments	
<b>Response Time</b>	Response time at 25 °C (77 °F) for a 90% signal change 2935A-A: 2.5 min 2952A-A: 38 s 2956A-A: 7.2 s 29552A-A: 90 s	
<b>Temperature Compensation</b>	-5 - 60 °C (23 - 140 °F)	
<b>Weight</b>	0.3 kg (0.66 lbs)	

\*Subject to change without notice.

## Dimensions



## Order Information

### GA2400 Oxygen Sensors

<b>GA2400-S00</b>	Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC), 40 bar, EPDM O-rings
<b>GA2400-S00T</b>	Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC) for 6110 TPO Analyser, 40 bar, EPDM O-rings
<b>GA2400-S0S</b>	Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC), 100 bar, EPDM O-rings

### GA2800 ATEX Oxygen Sensors

<b>GA280E-HKS</b>	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Hastelloy, 100 bar, Kalrez O-rings
<b>GA280E-HVS</b>	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Hastelloy, 100 bar, FKM/FPM O-rings
<b>GA280E-SKS</b>	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Stainless Steel, 100 bar, Kalrez O-rings
<b>GA280E-SVS</b>	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Stainless Steel, 100 bar, FKM/FPM O-rings

### Accessories

<b>33051-S0</b>	Protection cap for GA2400 oxygen sensors, stainless steel, 28 mm, without grille
<b>33051-SP</b>	Protection cap for GA2400 oxygen sensors, stainless steel, 28 mm, with grille
<b>32001.011</b>	Flow chamber in stainless steel (316) with ¼" fittings. Supplied with EPDM O-rings.
<b>32001.010</b>	Flow chamber in stainless steel (316) with 6 mm fittings. Supplied with EPDM O-rings.
<b>2952A-A</b>	Recharge kit of 4 pre-filled cartridges with premounted 2952A membranes
<b>29552A-A</b>	Recharge kit of 4 pre-filled cartridges with premounted 29552A membranes
<b>29552A-AV</b>	Recharge kit, 29552A membranes (4x), FKM/FPM O-rings
<b>2956A-A</b>	Recharge kit of 4 pre-filled cartridges with premounted 2956A membranes
<b>2956A-AV</b>	Recharge kit, 2956A membranes (4x), FKM/FPM O-rings
<b>29781</b>	Polishing kit for O <sub>3</sub> and H <sub>2</sub> sensors, incl. 3 µm powder (29331) and cloth
<b>32301.A</b>	Electrochemical sensor cleaning and regeneration unit, 115 VAC



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