

9586sc OXYGEN SCAVENGER ANALYZER



Applications

- Power

Simple to Integrate. Simple to Operate.

An integral part of the most complete water analytics system for the Power industry. Hach provides a broad range of product options designed to work together into flexible solutions to meet your unique needs. Hach's comprehensive approach saves you time on design, installation, training, maintenance, and operation.

Save Time on Design

A single design source and one product platform means you spend less time searching for design files or configuring components. Create and reuse your optimal design templates.

Accelerate Your Installation

One source, interchangeable components, a common user interface, and one support team make installation faster and less complicated. Quickly and easily transfer user settings between Oxygen Scavenger analyzers.

Reduce Training Complexity

A single platform minimizes time required to teach and learn product operations, getting new systems in use faster.

Simplify Maintenance and Operation

Common menu guides reduce variability and provide step-by-step procedures for maintenance and calibration. Standard visual alerts across parameters notify operators when troubleshooting is required. The Hach 9586sc Oxygen sensor has a fast response time of less than 60 seconds.

Unlike traditional amperometric techniques that use two electrodes, the Hach 9586sc Oxygen Scavenger Analyzer uses a three-electrode design; eliminating voltage drift due to the composition of the water. Self-cleaning electrodes reduce maintenance costs and analyzer downtime via Teflon® beads that prevent deposits on the electrode surfaces.

Specifications*

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| Range | 0 to 500 ppb hydrazine; programmable 0 to 100 ppb carbohydrazide; programmable |
| Repeatability | ± 2 % or 1 ppb whichever is greater |
| Response Time T90 | < 60 s |
| Lower Limit of Detection (LOD) | Drift is Negligible; 1 ppb |
| Calibration Method | a) Zero: electrically, with hydrazine-free water or with optional zero cartridge b) Slope: using a laboratory reference value (e.g. LCW025) |
| Operating Temperature Range | 5 to 45 °C at 0 to 95% RH (non-condensing) |
| Sample Requirements | Sample needs to be free of undissolved matter. |
| Sample Temperature | 5 to 45 °C |
| Pressure Limit | 0.5 to 6 bar (7.2-87 psi) or 12 L/h |
| Flow | 166 to 250 mL/min (10 to 15 L/h) recommended |
| Connection Drain Line | 6 x 8 mm (Tubing must not exceed 4 feet and must drain straight down) |
| Connections | 4 x 6 mm stainless steel tubing |
| Analogue Outputs | Two (Five with optional expansion module) 0/4 to 20 mA isolated current outputs, max 550 Ω , Accuracy: ±0.1% of FS (20mA) at 25°C, ±0.5% of FS over -20°C to 60°C range |

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|---|---|
| Power Requirements (Voltage) | 100 - 240 V AC, 24 V DC |
| Power Requirements (Hz) | 50 - 60 Hz |
| Electrical Certifications | EMC CE compliant for conducted and radiated emissions: - CISPR 11 (Class A limits) - EMC Immunity EN 61326-1 (Industrial limits) Safety CAN/CSA C22.2 No. 61010-1 cETLus safety mark for: - General Locations per ANSI/UL 61010-1 & CAN/CSA C22.2. No. 61010-1 |
| Enclosure Rating | NEMA 4X/IP66 |
| Relays | Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A |
| Maintenance Interval | Monthly: Calibration and reagent refill |
| Weight | 32.15 lbs. (14.5824 kg) |

**Subject to change without notice.*

Principle of Operation

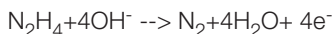
The Hach 9586sc Analyzer continuously measures the amount of oxygen scavengers, dissolved hydrazine, and carbonylhydrazide in water. The measuring principle is based on the electrochemical method of 3-electrode amperometry.

A polarization voltage (+480 mV) is applied between a platinum anode (working electrode) and a stainless steel cathode (counter-electrode). The oxygen scavenger is oxidized at the surface of the working electrode and the resulting current is directly proportional to the oxygen scavenger concentration in the range of 0 to 500 ppb hydrazine.

The reaction is enhanced in an alkaline environment, and the sample is conditioned before it enters the measuring cell. The

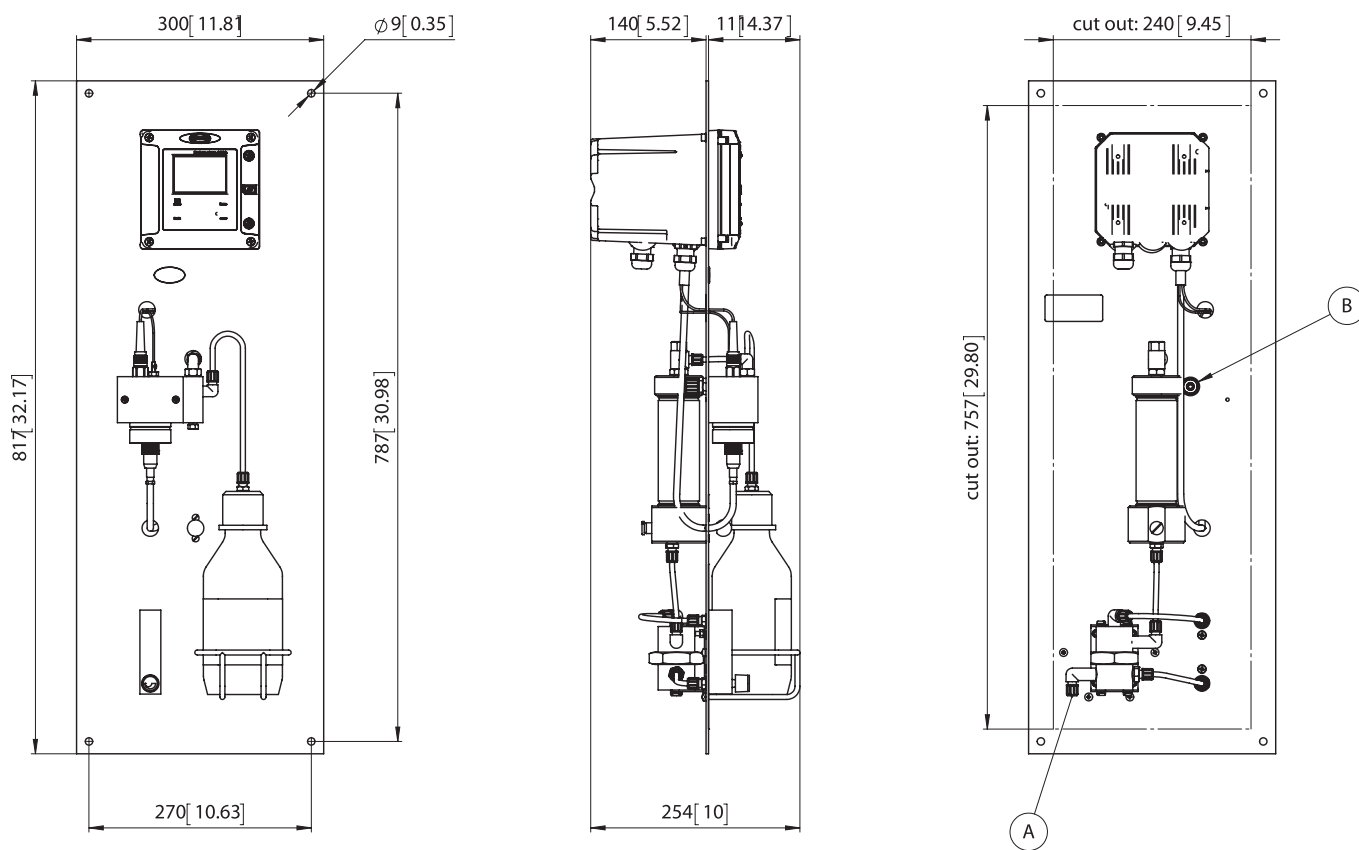
sample is conditioned to pH \approx 10.2 by adding diethylamine, monoethylamine, ammonia, or diisopropylamine through a Venturi tube. A sensor integrated to the measuring cell provides temperature compensation.

The chemical reaction is as follows:



The anode-cathode potential is kept constant with respect to a third electrode (reference electrode, Ag/AgCl). This avoids interference effects resulting from variations in water composition that appear when using the 2-electrode system. At 480 mV, the cell current is linearly proportional to the hydrazine concentration

Dimensions



A: Sample inlet PE tube $\phi 4 \times 6$ mm or $\phi 1/6 \times 1/4$ " (US version) 5° to 45°C (40° to 115°F), pressure 0.5 to 6 bar (7 to 90 PSI), flow 12L/h

B: Drain, tube $\phi 6 \times 8$ mm or $\phi 1/4 \times 3/8$ " (US version), atmospheric pressure

All dimensions are in mm [inches]

Ordering Information

Complete Analyzer

| | |
|---------------------|--|
| 9586.99.00P2 | Hach 9586sc Oxygen Scavenger Analyzer, AC-DC |
| 9586.99.01P2 | Hach 9586sc Oxygen Scavenger Analyzer, Modbus, AC-DC |
| 9586.99.03P2 | Hach 9586sc Oxygen Scavenger Analyzer, Profibus, AC-DC |
| 9586.99.05P2 | Hach 9586sc Oxygen Scavenger Analyzer, HART, AC-DC |

Communication and Module Options

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|----------------|--|
| 9334600 | 4-20 mA Output Module (Provides 3 additional mA Outputs) |
| 9013200 | Modbus 232/485 Module |
| 9173900 | Profibus DP Module |
| 9328100 | HART Module |
| 9525700 | Analog pH/ORP Module for Polymetron Sensors |
| 9525800 | Analog Conductivity Module for Polymetron Sensors |

Accessories and Consumables

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|---------------------|---------------------------------------|
| 2834453 | Diisopropylamine, 99%, 1L |
| 09186=C=0360 | Oxygen Scavenger Reagents Cap Adapter |
| 09186=A=8000 | Spare Parts Kit for 9586 Analyzer |

Maintenance kit includes 6 filters, 1 reference electrode, 1 Venturi injection nozzle, 7 plastic beads, 2 meters of 4x 6mm PE tubing.

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|------------------------|------------------|------------------|-----------------|
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