9586 sc OXYGEN SCAVENGER ANALYSER

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. The 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 analysers.

Reduce training complexity

A single platform minimises 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 9586 sc oxygen sensor has a fast response time of less than 60 seconds.

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

HACH®
Be Right™

Technical Data*

Measuring range	0 - 500 ppb hydrazine; programmable 0 - 100 ppb carbohydrazide (also known as ELIMIN-OX); programmable ELIMIN-OX is a registered trademark of Nalco Chemical Co., Naperville, IL.
Repeatability	± 2 % or 1 ppb (whichever is greater)
Response time	< 60 s
Detection limit	Drift is negligible; 1 ppb
Calibration method	Zero: electrically, with hydrazine-free water or with optional zero cartridge Slope: using a laboratory reference value (e.g. LCW025)
Operating temperature range	5 - 45 °C at 0 - 95% relative humidity (non-condensing)
Sample requirements	Sample needs to be free of undissolved matter.
Sample temperature	5 - 45 °C
Pressure range	0.5 - 6 bar or 12 L/h
Flow	166 - 250 mL/min (10 - 15 L/h) recommended
Connection drain line	6 x 8 mm (tubing must not exceed 1.22 m 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 (20 mA) at 25 °C, ±0.5% of FS over -20 to 60 °C
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 waterproof rating	IP66 / NEMA 4X
Relays	Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A
Maintenance interval	Monthly: Calibration and reagent refill
Weight	14.6 kg

**Subject to change without notice.*

Principle of Operation

The Hach 9586 sc analyser continuously measures the amount of oxygen scavengers, dissolved hydrazine, and carbohydrazide 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.

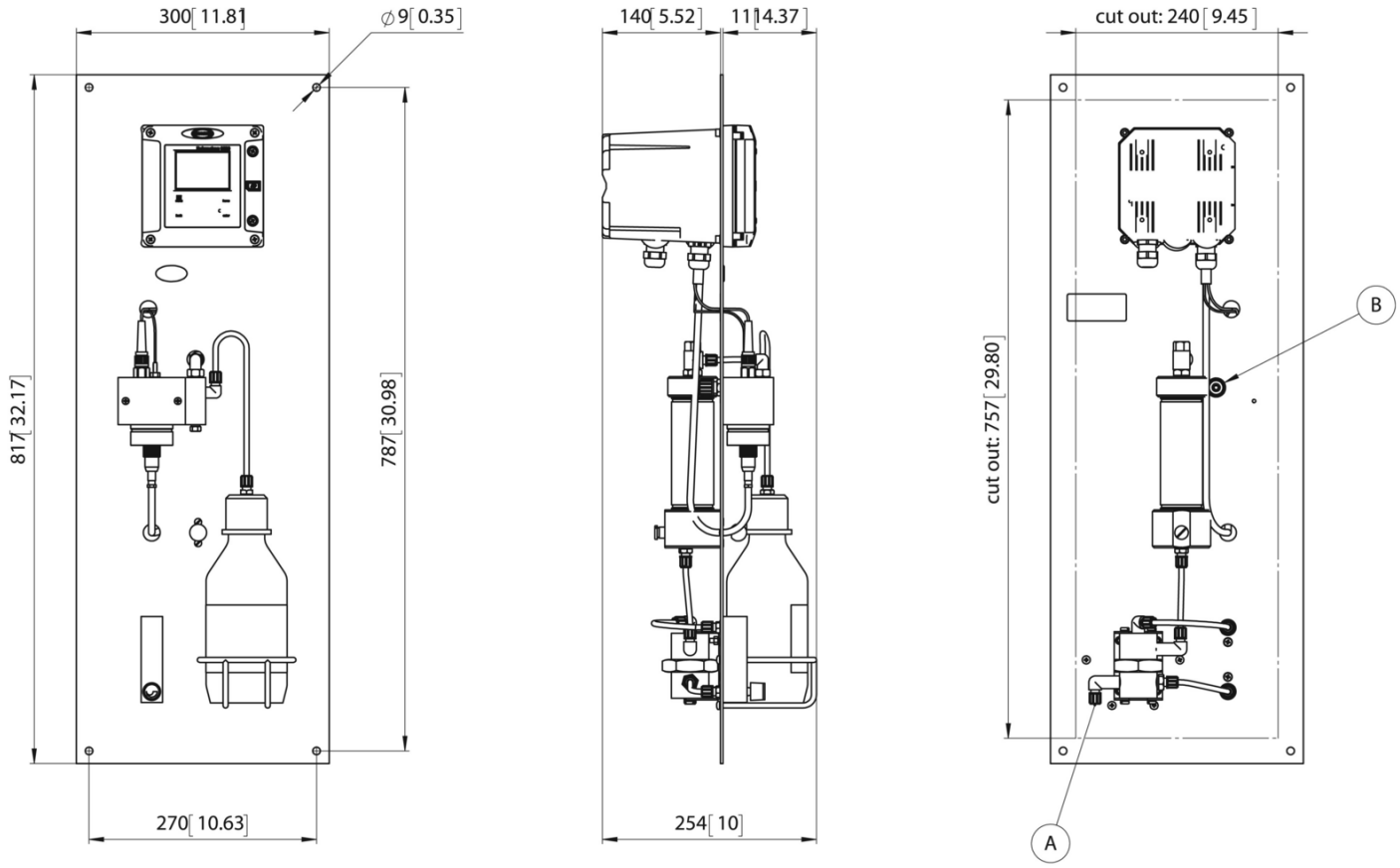
The reaction is enhanced in an alkaline environment, and the sample is conditioned before it enters the measuring cell. The sample is conditioned to pH ≥ 10.2 by adding diethylamine, monoethylamine, ammonia, or diisopropylamine through a Venturi tube. A sensor integrated to the measuring cell provides temperature compensation.

The chemical reaction is as follows:

$N_2H_4 + 4\ OH^- \rightarrow N_2 + 4\ H_2O + 4\ e^-$

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 Ø4x6 mm orØ1/6"x1/4" (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 Ø6x8 mm orØ1/4"x3/ 8" (US version), atmospheric pressure

All dimensions are in mm [inches]

Order Information

Analyser

9586.99.00P4	Polymetron 9586 sc Oxygen Scavenger Analyser, 100 - 240 V AC
9586.99.01P4	Polymetron 9586 sc Oxygen Scavenger Analyser, Modbus, 100 - 240 V AC
9586.99.03P4	Polymetron 9586 sc Oxygen Scavenger Analyser, Profibus, 100 - 240 V AC
9586.99.05P4	Polymetron 9586 sc Oxygen Scavenger Analyser, Hart, 100 - 240 V AC
9586.99.09P4	Polymetron 9586 sc Oxygen Scavenger Analyser, 5x 4-20 mA Output, 100 - 240 V AC
9586.99.70P4	Polymetron 9586 sc Oxygen Scavenger Analyser, 24 V DC
9586.99.71P4	Polymetron 9586 sc Oxygen Scavenger Analyser, Modbus, 24 V DC
9586.99.73P4	Polymetron 9586 sc Oxygen Scavenger Analyser, Profibus, 24 V DC
9586.99.75P4	Polymetron 9586 sc Oxygen Scavenger Analyser, Hart, 24 V DC
9586.99.79P4	Polymetron 9586 sc Oxygen Scavenger Analyser, 5x 4-20 mA Outputs, 24 V DC

Communications and Module Options

9334605	4-20 mA Output Module (provides 3 additional mA Outputs)
9013205	Modbus RS232/485 Module
9173900	Profibus DP Module (SC200)
9328105	Hart Module
9525700	Analogue pH/ORP Module for Polymetron Sensors
9525800	Analogue Conductivity Module for Polymetron Sensors

Accessories and Consumables

2834453	Diisopropylamine, 99%, 1 L
Z09186=C=0360	Oxygen scavenger reagents cap adapter
Z09186=A=8000	Spare parts kit for 9586 sc analyser Includes 6 filters, 1 reference electrode, 1 Venturi injection nozzle, 7 plastic beads, 2 meters of 4 x 6 mm PE tubing

Service Agreements

Hach offers a wide range of service agreements that can be tailored to you to help maximise your measurement reliability and instrument uptime.

Contact us to get a service offering designed for you.

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