

2586sc Oxygen Scavenger Analyzer



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.

Easy Adoption

The familiar experience with a modern touchscreen, the ability to use your current Hach sensor, and the same footprint as the 9500 Polymetron, make installation and integration of the SC4500 Controller seamless.

The Connectivity Options You Need

The Controller provides local communication to SCADA or a PLC. From analog, to advanced digital protocols, to wi-fi, cellular or LAN, the SC4500 gives you the flexibility to adapt in a rapidly changing world.

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 Polymetron 2586sc has a fast response time of less than 60 seconds.

Unlike traditional amperometric techniques that use two electrodes, the Hach Polymetron 2586sc 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 analyser downtime via PTFE beads that prevent deposits on the electrode surfaces.

Technical Data*

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 T90	< 60 s
Lower Limit of Detection (LOD)	Drift is negligible; 1 ppb
Calibration Method	Slope: using a laboratory reference value (e.g. LCW025)
Operating Temperature Range	5 - 45 °C (41 - 113 °F) at 0 - 95% relative humidity (non-condensing)
Sample Requirements	Sample needs to be free of undissolved matter.
Sample Temperature	5 - 45 °C (41 - 113 °F)
Pressure Range	0.5 - 6 bar (7.2 - 87 psi) 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 4 feet and must drain straight down)
Connections	4 x 6 mm stainless steel tubing
Communication (optional)	Analog: Five 0-20 mA or 4-20 mA analog outputs on each analog output module Up to two analog Input modules (0-20 mA or 4-20 mA). Each input module replaces a digital sensor input. Digital: Profibus DPV1 module Modbus TCP Profinet IO module Ethernet IP module
Power Requirements (Voltage)	AC controller: 100-240 VAC ±10%, 50/60 Hz; 1 A (28 W sensor load) DC controller: 24 VDC +15% -20%; 2.5 A (20 W sensor load)
Compliance Certifications	CE, ETL certified to UL and CSA safety standards (with all sensor types), FCC, ISED, KC, RCM, EAC, UKCA, SABS, C (Morocco)
Enclosure Rating	UL50E type 4X, IEC/EN 60529-IP 66, NEMA 250 type 4X Metal enclosure with a corrosion-resistant finish
Relays	Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A
Maintenance Interval	Monthly: Calibration and reagent refill
Weight	14.6 kg (32.2 lb)

*Subject to change without notice.

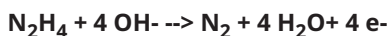
Principle of Operation

Hach Polymetron 2586sc analyzer 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.

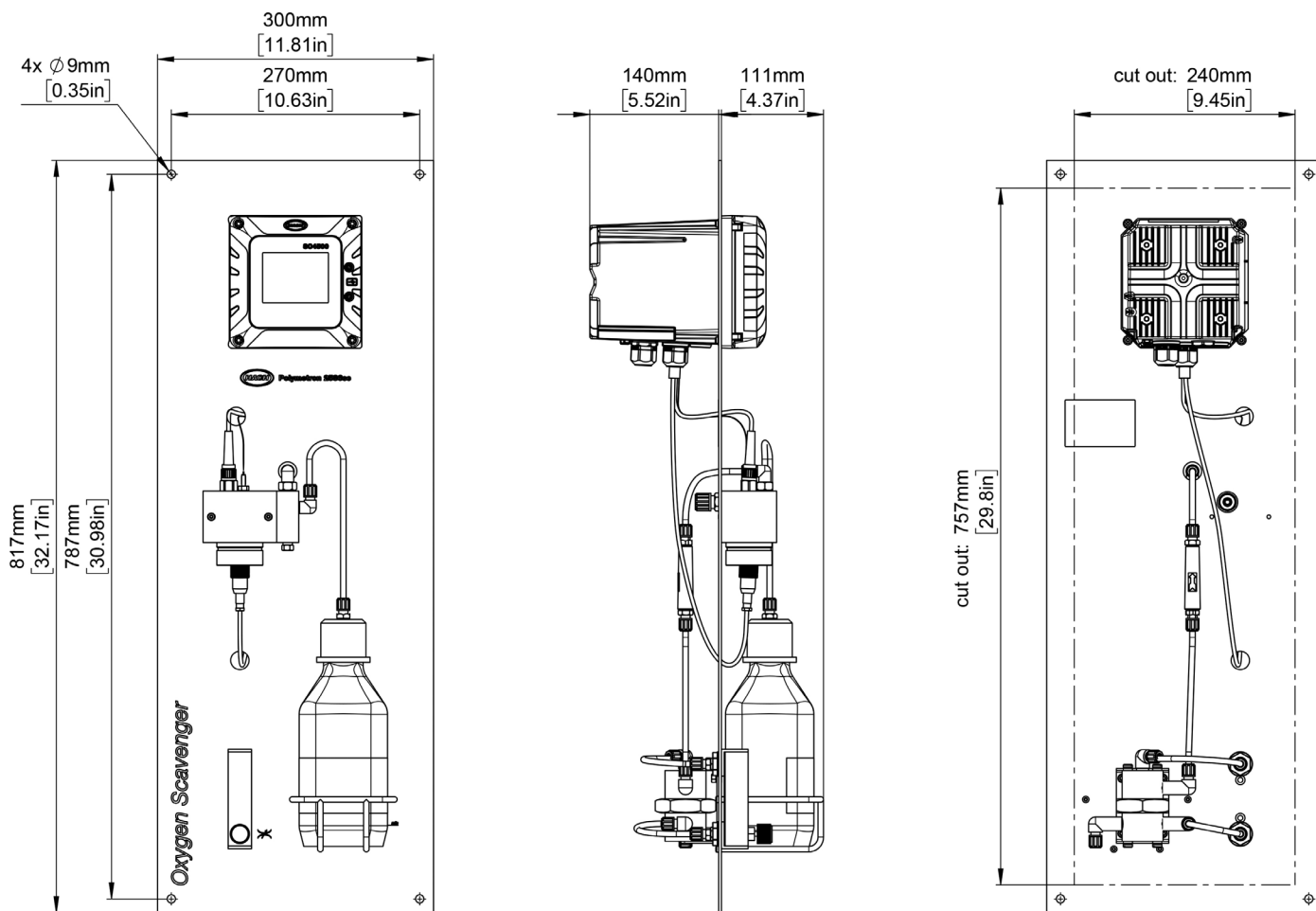
The reaction is enhanced in an alkaline environment, and the sample is conditioned before it enters the measuring cell. The sample is conditioned to pH ≥ 10.2 by adding diethylamine, monoethylamine, ammonia, or diisopropylamine through a Venturi tube. A sensor integrated to the measuring cell provides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

The chemical reaction is as follows:



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



All dimensions are in mm [inches]

Order Information

Analyzer

2586.99.A01801	Polymetron 2586sc Oxygen Scavenger Analyzer, 5x mA Output, 110-240 VAC, without power cord
2586.99.A02801	Polymetron 2586sc Oxygen Scavenger Analyzer, Profibus DP, 110-240 VAC, without power cord
2586.99.A06801	Polymetron 2586sc Oxygen Scavenger Analyzer, Profinet IO, 110-240 VAC, without power cord
2586.99.A07801	Polymetron 2586sc Oxygen Scavenger Analyzer, Ethernet IP, 110-240 VAC, without power cord
2586.99.AA1801	Polymetron 2586sc Oxygen Scavenger Analyzer, Claros-enabled, 5x mA Output, 110-240 VAC, without power cord
2586.99.AA2801	Polymetron 2586sc Oxygen Scavenger Analyzer, Claros-enabled, Profibus DP, 110-240 VAC, without power cord
2586.99.AA6801	Polymetron 2586sc Oxygen Scavenger Analyzer, Claros-enabled, Profinet IO, 110-240 VAC, without power cord
2586.99.AA7801	Polymetron 2586sc Oxygen Scavenger Analyzer, Claros-enabled, Ethernet IP, 110-240 VAC, without power cord
2586.99.Z01801	Polymetron 2586sc Oxygen Scavenger Analyzer, 5x mA Output, 24 VDC
2586.99.Z02801	Polymetron 2586sc Oxygen Scavenger Analyzer, Profibus DP, 24 VDC
2586.99.Z07801	Polymetron 2586sc Oxygen Scavenger Analyzer, Ethernet IP, 24 VDC
2586.99.ZA1801	Polymetron 2586sc Oxygen Scavenger Analyzer, Claros-enabled, 5x mA Output, 24 VDC
2586.99.ZA2801	Polymetron 2586sc Oxygen Scavenger Analyzer, Claros-enabled, Profibus DP, 24 VDC
2586.99.ZA7801	Polymetron 2586sc Oxygen Scavenger Analyzer, Claros-enabled, Ethernet IP, 24 VDC

Communications and Module Options

LXZ525.99.D0002	SC4x00 mA Output Module (5 Outputs)
LXZ525.99.D0008	SC4500 Modbus RS232/RS485 Module EU
LXZ524.99.00007	SC4x00 Profibus DP Network Module
LXZ525.99.D0003	SC4500 pH/ORP Module
LXZ525.99.D0004	SC4500 Conductivity Module

Accessories and Consumables

2834453	Di-isopropylamine (DIPA), 1 L
09186=C=0360	Oxygen Scavenger reagents cap adapter
09186=A=8000	Spare parts kit for 2586sc analyser Includes 6 filters, 1 reference electrode, 1 Venturi injection nozzle, 7 plastic beads, 2 meters of 4 x 6 mm PE tubing

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With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.



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