9240 MULTI-CHANNEL SODIUM ANALYZER

Applications

- Industrial Water
- Power

Low level sodium measurement in high purity water.

Detection limit of 0.01 ppb—0 to 10,000 ppb.

Low Maintenance

Maintenance of the 9240 analyzer requires reagent replenishment only every 100 days and annual replacement of reagent tubing and the sodium electrode. Clear step-by-step instructions are provided to simplify maintenance operations.

Automatic Electrode Reactivation Optimizes Operation and Response Time

To maintain optimum response time, even in systems of continuous low sodium concentration, the 9240 analyzer provides automatic electrode reactivation. Reactivation uses non-hazardous chemicals and eliminates the need for manual reactivation or electrode etching.

Easy to Operate and Maintain with Automatic Calibration

Fully automatic calibration of the 9240 analyzer avoids risk of contamination or human error. The system follows a multiple calibration step cycle to eliminate user variability and possible sample contamination. A convenient grab sample feature allows the user to check operation or measurement of a one-off process sample to reduce laboratory time. Unlike other analyzers, a manual sample (250 mL) can be introduced without disconnecting any tubes. After sampling, the analyzer automatically returns to on-line monitoring.

Data and Diagnostics

The system displays comprehensive information for each sample stream. A built-in data logger captures measurement readings, calibration results and alarm information for future access. A step-by-step menu and submenu guides the user through all configuration, maintenance, and troubleshooting.

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Specifications*

Measuring Range	0 to 10,000 ppb, freely programmable 0 to 200 ppm with Cation Kit option
Repeatability	Less than 0.02 ppb or 1.5% reading, whichever is greater, within 10°C variation
Detection Limit	0.01 ppb
Response Time	1 cycle, minimum 10 minutes (t=90%)
Calibration	Automatic with known addition: 3 points Manual: 1 or 2 points
Sample Conditioner	Di-isopropylamine (1 L/100 days) Concentrated ammonia, sample >1 ppb (2.5 L/90 days)
Number of Sample Streams	Integrated 1 to 4 channels
Insoluble Limits	Less than 10 ppm No oil or grease For boiler sample type, install ~100 µm filter (see Accessories on page 4)
Suspended Solids	< 2 NTU, no oil, no grease
Total Acidity (equivalent $CaCO_3$)	Standard: < 50 ppm Optional Cation Kit: < 250 ppm
Sample Temperature	5 to 45°C (41 to 113°F)
Ambient Temperature	5 to 50°C (41 to 122°F)
Sample Pressure/ Flow Rate	0.2 to 6 bar (3 to 87 psi)
Sample Flow Rate	5 L/h during sampling phase
Sample Line(s) Connections	Simple fittings for 6-mm O.D. tubing or 1/4-inch O.D. in PE-low density For 1/4-inch O.D. in PEHD-PTFE-SS, request imperial kit
Drain Connection	Barbed stem for 12-mm (1/2-inch I.D.) hose
Power Supply	100 to 240 Vac, ±10%, 50/60 Hz, 80 VA
Protection Rating	Transmitter: IP65 (NEMA 4) Panel: IP50 (dust protection) Enclosure: IP54 (splash water proof)
Compliance/ Certifications	Conform EN61326-1:2006, EN61010-1:2001, U.L. and GOST Metrology (contact us for QSIQ of PR of China)
Digital Display	75 x 75 mm graphic with LED backlighting Concentration, trend curves, diagnostics, alarm status, calibration constants, historical data
Programming	Menu driven operation and clear messages in 5 languages
Analog Outputs	6 x (0 or 4)/20 mA [800 Ohms] / linear, dual, logarithmic / Smart
Relay Outputs	30 Vdc, 0.5 A maximum 4 programmable assignable contacts: concentration or temperature limits including direction, delay, hysteresis and normal relay status, minimum sample flow rate detection. 2 extra programmable relays allocated to warning messages
Accessories	Cation Kit Static heat exchanger Filtration system Wall enclosure
RS485	300 to 9600 baud, 32 stations max., JBUS/MODBUS
Profibus	DP 9.6 Kbit/s to 12 Mbit/s, 127 stations max. with repeater
Materials	Panel: ABS with SS frame Enclosure: ABS
Dimensions	Panel: 850 x 450 x 252.5 mm (33.46 x 17.71 x 9.94 in.) Enclosure: 850 x 450 x 331.5 mm (33.5 x 17.74 x 13.05 in.)
Weight (Empty Canisters)	Panel: 18 kg (40 lbs.) Enclosure: 23 kg (51 lbs.)
Weight (Full Canisters)	Panel: 20 kg (44 lbs.) Enclosure: 25 kg (55 lbs.)
Maintenance	Every 100 days: refill electrolyte, reagents, and calibration solution

**Subject to change without notice.*

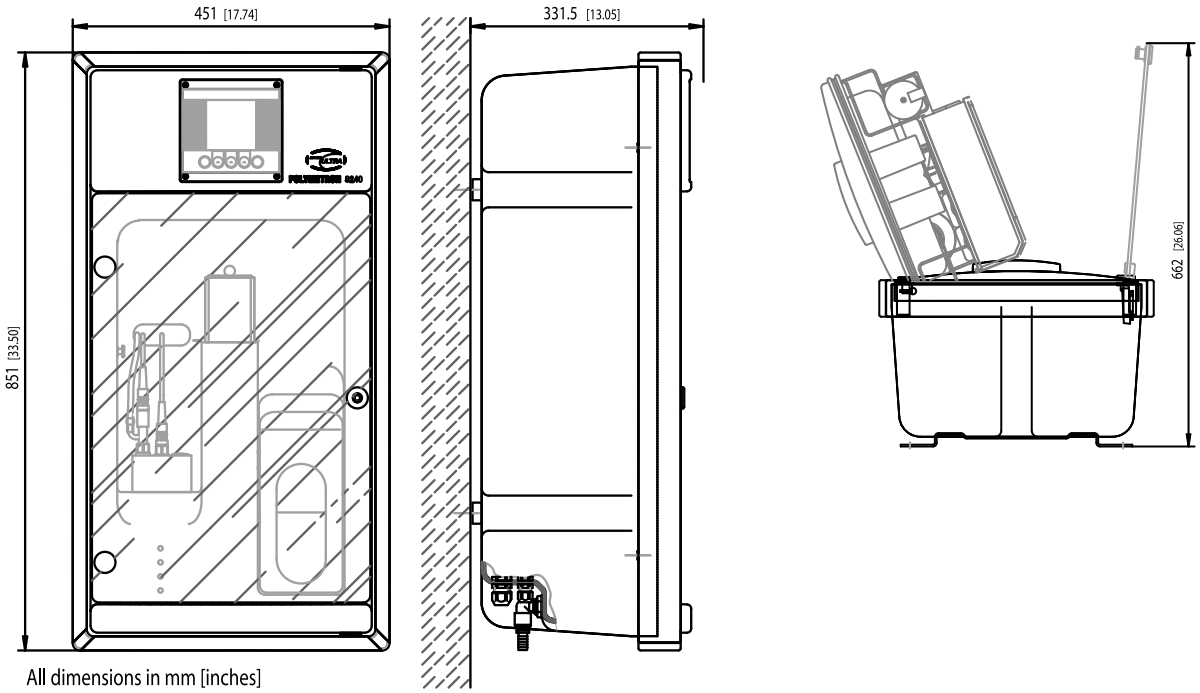
Principle of Operation

The Hach 9240 Multi-channel Sodium Analyzer uses an ion-selective electrode measurement after pH conditioning. Sample pH conditioning is essential for limiting the interference of temperature or other ions on sodium measurement. Constant, temperature-compensated buffering is assured using regulated reagent addition across sample pH and temperature changes. The “smart” rinsing sequence between channels ensures a minimum cycle time of 10 minutes and no carry-over effect.

Dimensions

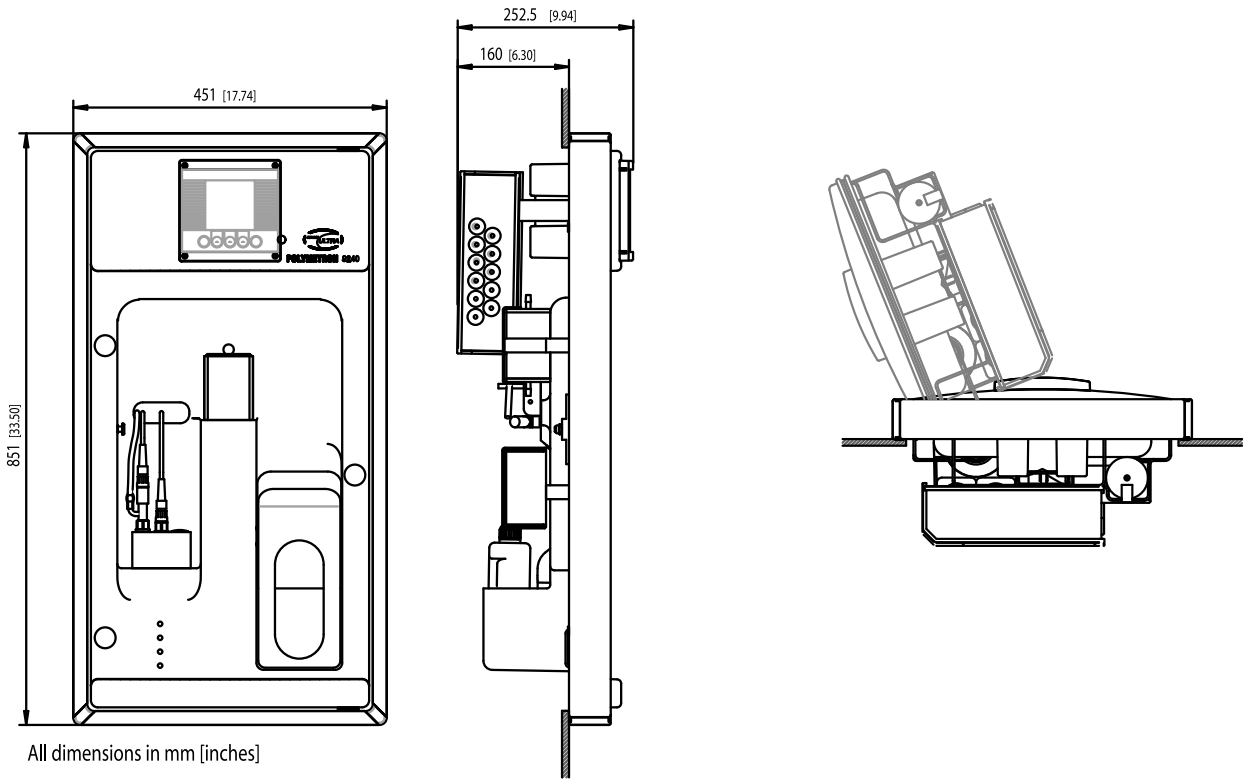
Place the Hach 9240 Multi-channel Sodium Analyzer close to the sample point to minimize the response time. The sample should be homogenous, representative and free of particles. The location should be dry, dust-free, and without a corrosive atmosphere or subject to liquid spills.

Enclosure Mount



All dimensions in mm [inches]

Panel Mount



All dimensions in mm [inches]

Ordering Information

The Hach 9240 Multi-channel Sodium Analyzer includes reagents, installation kit, and user manual. Power cord sold separately.

Panel-mount Unit

9001600	9240 Sodium Analyzer, 1-channel
9001700	9240 Sodium Analyzer, 2-channel
9000200	9240 Sodium Analyzer, 3-channel
9000300	9240 Sodium Analyzer, 4-channel
9000800	9240 Sodium Analyzer, 1-channel with Cation Kit
9000900	9240 Sodium Analyzer, 2-channel with Cation Kit
9001000	9240 Sodium Analyzer, 3-channel with Cation Kit
9001900	9240 Sodium Analyzer, 4-channel with Cation Kit

Unit with Enclosure

9000400	9240 Sodium Analyzer, 1-channel
9000500	9240 Sodium Analyzer, 2-channel
9000600	9240 Sodium Analyzer, 3-channel
9000700	9240 Sodium Analyzer, 4-channel
9001200	9240 Sodium Analyzer, 1-channel with Cation Kit
9001300	9240 Sodium Analyzer, 2-channel with Cation Kit
9001400	9240 Sodium Analyzer, 3-channel with Cation Kit
9001500	9240 Sodium Analyzer, 4-channel with Cation Kit

Upgrade Options

09125=A=1485	Profibus DP, with board
09125=A=2485	RS485 JBUS/MODBUS, with board
09240=A=8315	Cation Kit

Accessories

595=010=000	Sample Filter; 100 micron, metric fittings
595=010=005	Sample Filter; 100 micron, imperial fittings
09240=A=8405	Static Heat Exchanger System, imperial fittings

Consumables

09240=A=8000	1-year Spare Part Kit
363140,00500	Reference Electrolyte, KCl, 3 M, 500 mL
2834453	Di-isopropylamine (DIPA), 1 L
2835153	Sodium Standard, 10ppm, 1 L
2834253	Sodium Standard, 100ppm, 1 L
2507149	Sodium Nitrate, 0.5 M, 500 mL
595=010=906	Replacement Filter Cartridges; 6/pkg.

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