SP510 Hardness Monitor

Maximize your softener cycle time and minimize your regeneration cost.

The Hach SP510 Hardness Monitor is reliable, accurate, and virtually maintenance free. It can operate unattended for two months and still promptly and immediately signal hardness breakthrough to activate regeneration. Use it to make water softening systems more efficient and less costly.

Continuous hardness detection

The SP510 monitor detects hardness breakthrough when the capacity of a water softener is exhausted, immediately signaling the need for regeneration. Alarm points are 0.3, 1, 2, 5, 10, 20, 50, and 100 ppm (expressed as mg/L of $CaCO_3$) and are selected by choosing the appropriate model. Easy to read LED indicators show a simple "HARD" or "SOFT" sample status. You can also use SP510's built-in alarm relay to actuate an external annunciator.

Low maintenance requirements

The SP510 samples water every two minutes, operating automatically for up to 60 days. It is virtually maintenancefree, requiring only about 15 minutes every two months to replenish and standardise the reagents. Replace tubing in the pump system every six months.

Convenient, trouble-free operation

The SP510 monitor makes your water softening system more eBcient and less costly. It eliminates the guesswork so your softener is regenerated only when needed. Regeneration based on calculation or set times can be replaced with continuous monitoring and automatic control, lowering reagent consumption.

Rugged, lightweight, and self-contained

The SP510 case is made of ABS plastic which is lightweight, corrosion-resistant, and shatterproof. This sealed case is IP62-rated and has a hinged door for easy access to internal components.

Order Information

Instrument

5410003	SP510 Hardness Monitor with 0.3 mg/L trip point
5410001	SP510 Hardness Monitor with 1 mg/L trip point
5410002	SP510 Hardness Monitor with 2 mg/L trip point
5410005	SP510 Hardness Monitor with 5 mg/L trip point
5410010	SP510 Hardness Monitor with 10 mg/L trip point
5410020	SP510 Hardness Monitor with 20 mg/L trip point
5410050	SP510 Hardness Monitor with 50 mg/L trip point
5410099	SP510 Hardness Monitor with 100 mg/L trip point

The Hach SP510 Hardness Monitor includes: installation kit, maintenance kit (stirring bar, strainer, spare tube assemblies, shut-off valve) and two-month supply of reagents.
NOTE: When choosing the appropriate model/trip point, the alarm trip point selected should be 40 to 50% higher than the normal effluent hardness. Please contact Hach for assistance in ordering the SP510 Hardness Monitor that is appropriate for your application.

Accessories and Reagents are available on hach.com

Learn More

Technical Data*

Range	Hardness levels: 0.3, 1, 2, 5, 10, 20, 50, 100 ppm (expressed as mg/L $CaCO_3$)
Accuracy	±25% of set point value
Measurement Method	Colorimetric
Light Source	LED with peak wavelength of 610 nm
Cycle Time	1.9 minutes (60 Hz) or 2.3 minutes (50 Hz), selectable
Sample Flow Rate	50 - 500 mL/min
Sample Pressure	0.07 - 0.34 bar (0.10 bar is optimum) Sample conditioning: 0.10 - 5.17 bar
Reagent Consumption	500 mL each indicator and buffer every two months
Outputs	1 SPDT relay
Material Enclosures	ABS plastic, large plastic windows to view alarm and reagents level
Enclosure Rating	IP62
Mounting	Wall mount
Power Requirements	115/230 VAC; 50/60 Hz
Certifications	NRTL certified to UL and CSA standards, and CE approved
Dimensions (H x W x D)	419 x 318 x 178 mm (16.5 x 15.5 x 7.0 in.)
Weight	11.3 kg (25 lbs)

**Subject to change without notice.*