



Orion 8030cX Silica Analyzer

Accurate, effortless online water analysis

The Orion 8030cX specializes in measuring reactive silica and contains an analysis range of 0-5000 µg/L.

Markets & Applications

- Power & Steam
- Semiconductor Manufacturing
- Oil & Gas
- Pulp & Paper
- Chemical Production

Discover the Thermo Scientific™ Orion™ 8030cX Silica Analyzer. Designed to provide accurate, effortless water analysis, the Orion 8030cX specializes in online measurement of reactive silica. Powered by advanced colorimetric technology, the Orion 8030cX offers premium precision, greater productivity and enhanced durability. Unleash the possibilities and conquer the freedom of fast, confident decision making.

Analytical performance

Engineered with a patented fluid delivery and quantification system, paired with our custom reagent formula, the Orion 8030cX is optimized specifically for the measurement of silica. With the ability to reach detection limits as low as 0.5 µg/L, and a wide analysis range (0-5000 µg/L), the Orion 8030cX provides the flexibility and precision required to address a variety of applications. Our team of experts designed every detail of the Orion 8030cX to enable premium analytical performance. Our auto-switching feature recognizes the silica levels in your sample and intuitively chooses the best range to deliver optimal accuracy (0-1000 µg/L, 1000-5000 µg/L). Even the material selected for our tubing system helps reduce residual contaminants, while our reagent formulation minimizes phosphate interferences.

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Reduced maintenance

Advanced software functions such as automated calibration and validation, scheduled measurements, system diagnostics and alert notifications help decrease manual intervention. Minimal supervision to the Orion 8030cX frees up time for personnel to focus on other critical tasks. Should an incident occur that requires intervention, the Orion 8030cX will display an alarm and provide troubleshooting guidance. When it's time for routine maintenance, the Orion 8030cX notifies you via a friendly alert. Best of all, a built-in auto clean function boosts productivity by reducing cleaning procedures, but doubles to also enhance instrument accuracy.

Increased efficiency

Unlock high-speed performance paired with low cost operation. Reagents last twice as long using the Orion 8030cX.¹ Users can opt to collect measurements via continuous or interval mode to help regulate the flow of reagent consumption and reduce operating costs. With minimal training, the Orion 8030cX is easily operated even by non-technical users. Vivid icons and an intuitive application interface ease navigation and system management. Utilize swipe and touchscreen functionality, even with a gloved hand to quickly make instrument selections. Flexible data and alarm transmission via Modbus, analog outputs, or USB drive eliminate time-consuming configuration. Relays provide access to external pumps, valves and system controls for additional operation. An optional 2, 4, or 6 channel sequencer empowers you to monitor multiple sources in various locations without the need for additional instrumentation.

Purpose built

Maximizing form and function, the Orion 8030cX was developed to conquer your toughest environments. Measuring at 450 mm x 791 mm x 320 mm, its compact size is easy to install and accommodates a variety of layout options (wall-mounted, panel-mounted and flat surface). Its durable design was rigorously stress tested to validate instrument longevity. Backed by a certified IP65 rating, the Orion 8030cX is sealed against moisture and dust, enabling uninterrupted operation even in the harshest of industrial environments. Should any liquid make its way inside the enclosure, a leak detector offers additional protection and alerts of fluid build-up.



Product Specifications

Auto Range	Accuracy	Repeatability	Limit of Detection (LOD)
0-5000 µg/L (ppb)	≤ 1% or ± 1 µg/L (range 0-500 ppb) ≤ 5% (range 500-5000 ppb)	≤ 1% or ± 0.6 µg/L	0.5 µg/L
Resolution	0.01 µg/L for reading < 10 µg/L 0.1 µg/L for reading ≥ 10 µg/L		
Measurement Frequency	Continuous or interval (5 - 720 minutes)		
Measurement Cycle	10 minutes (fast mode) or 15 minutes (standard mode)		
Analysis Principle	Heteropoly-molybdenum blue colorimetric method		
Operating parameters			
Temperature	5°C - 45°C (41°F - 113°F)		
Humidity	5% - 95% relative humidity, non-condensing		
Sampling condition			
Sample Flow	50 - 300 mL/ minute		
Sample Pressure	0.2 - 5.0 bar (2.9 - 72.5 psi)		
Sample Temperature	0°C - 65°C (32°F - 149°F), no ice present		
Sample Inlet Connector	Flow cell inlet OD (outer diameter) 8mm/ OD 6mm (1/4 inch)		
Water Sample Requirements	Clean water with no particles over 0.2µm (prefilter 7070FLT can be used if large particles exist)		
Installation			
Enclosure Protection Class	IP65 (splash and dust proof)		
Enclosure Dimensions (W x H x D)	450 mm x 791 mm x 320 mm (17.7 in x 31.1 in x 12.6 in)		
Shipping Weight	41 kg (90 lbs)		
Instrument Weight	26.8 kg (59.1lbs)		
Electrical			
Power Requirements	100 - 240 VAC, 100 W, 50/60 Hz		
Data and control			
Current Loops/ Analog Output	Two (2) isolated 0/4-20 mA, maximum load 900 Ω		
Relay	Three (3) relays, 8A @ 250 VAC		
Digital Communication/ Output	RS485, MODBUS RTU/TCP/IP, PROFIBUS (optional)		
Regulatory			
Regulatory Disclaimers	cTUVus, CE, UKCA, KC, RCM, FCC, ISED		
Reagent lifecycle			
Reagents 1, 2, 3	100 days each (15 min. measurement frequency)		
Monthly Chemical Waste	1.87L (2 hr. measurement frequency)		
Analysis Waste Volume	< 5.5 mL		

Ordering Information

Description	Catalogue Number
Orion 8030cX Silica Analyzer	8030cX
Orion 8030cX Silica Reagent Kit (including Reagents 1, 2, 3)	8030REX
Orion 8030cX Silica Standard Solution, 20µg/L (20 ppb)	803002
Orion 8030cX Silica Standard Solution, 200µg/L (200 ppb)	803020
Orion 8030cX Silica Standard Solution, 1000µg/L (1000 ppb)	803030
Orion 8030cX Silica Standard Solution, 4000µg/L (4000 ppb)	803040
Orion 8030cX, Cleaning Solution	8030CL
Accessories	
Orion 8000 Sample Sequencer, 2 Channel	8000SEQ2
Orion 8000 Sample Sequencer, 4 Channel	8000SEQ4
Orion 8000 Sample Sequencer, 6 Channel	8000SEQ6
Y-Strainer Prefilter (optional)	7070FLT
Profibus Communication Card (optional)	8030PCM
Maintenance	
Orion 8030cX Maintenance Kit	8030MK



1. Reagents on the Thermo Scientific™ Orion™ 8030cX Silica Analyzer last 100 days using a 15-minute measurement frequency.
 Reagents on the Thermo Scientific™ Orion™ 2230XP Silica Analyzer last 45 days using a 15-minute measurement frequency.

Learn more at thermofisher.com/orion8030

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