



# MARTEK<sup>®</sup> MARK 24

## CATION CONDUCTIVITY SYSTEM

MARTEK INSTRUMENTS INC. MANUFACTURERS OF WATER QUALITY INSTRUMENTATION

*...for accurate, continuous, in situ monitoring of specific, cation conductivity and pH in ultrapure water*

- Measures and displays Specific, Cation, Conductivities, and Calculated pH
- Large, colorful screen displays up to four sample points simultaneously
- User-friendly interface and easy-to-use menus in seven languages
- Up to eight analog current outputs
- Up to six alarm and control relays
- Multiple digital communication protocols
- NEMA 4X, IP66 waterproof rated analyzer case allows field-compatible upgrades via USB data port
- Portable stand available

The Martek Mark 24 Cation Conductivity System provides accurate, on-line determination of specific and cation conductivity values as well as calculated pH measurements in ultrapure water processes. Calibrated to ASTM and NIST standards, the Martek Mark 24 Cation Conductivity System displays data in direct engineering units on a large colorful display while offering both digital and analog output signals for external recorders and other data acquisition equipment.

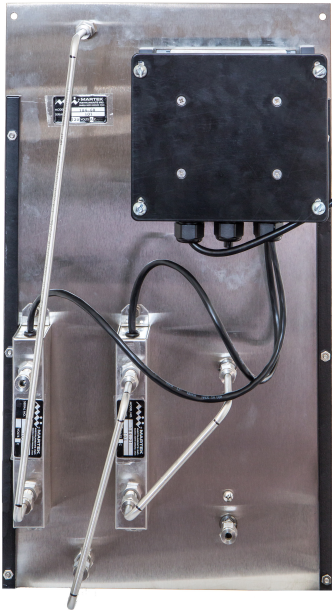
While specific conductivity provides measurement of total impurities, cation conductivity further refines the conductivity measurement to yield invaluable data. Utilizing a strong acid hydrogen cation exchange resin column, cationic species and amines such as



ammonia and sodium are removed while mineral salts such as chloride and sulfate are converted into more conductive acids. Utilizing a well-proven algorithm, a pH measurement can also be determined from specific and cation conductivity values for systems utilizing ammoniated chemistry.

The Martek Mark 24 Cation Conductivity System's ability to provide real-time data make it the ideal analytical tool for monitoring high purity processes in nuclear and high-performance fossil fuel power plants; condensate polishing systems and demineralizers; semiconductor and pharmaceutical manufacturing plants; and other industrial applications.

			<b>Accuracy</b>
<b>Temperature</b>	<b>0 - 100° C</b>	<b>0.01° C</b>	<b>±0.1° C</b>
<b>Conductivity</b>	<b>0 - 1.000 μS/cm</b> <b>0 - 10.00 μS/cm</b> <b>0 - 100.0 μS/cm</b>	<b>0.001 μS/cm</b> <b>0.01 μS/cm</b> <b>0.1 μS/cm</b>	<b>±0.01 μS/cm</b> <b>±0.1 μS/cm</b> <b>±1.0 μS/cm</b>
<b>Calculated pH</b>	<b>0-14 pH</b>	<b>0.01 pH</b>	<b>±0.1 pH</b>



A cooled condensate sample stream is fed to the Martek Mark 24 Cation Conductivity System. The sample flow is controlled by a flow meter and directed to a conductivity sensor that measures the specific conductivity of the inlet stream. Next, the sample passes through a cation exchange column then is fed through a second conductivity sensor that measures the cation conductivity before exiting to drain. In addition, the specific and cation conductivity measurements can be used to provide a calculated pH measurement eliminating the need for additional, costly instrumentation.

<b>Power</b>	100-240 VAC, 50/60 Hz, 0.4A Max @ 25° C. Optional 24VDC
<b>Recorder Output</b>	Two isolated, assignable, current loops per sensor (standard). Full featured PID control for conductivity or pH.
<b>Digital Protocol</b>	MODBUS RTU, DeviceNet, Profibus DP/V1, Ethernet/IP
<b>Alarm Output</b>	Three Form C Relays (standard): 5A, 250 V. Additional three Form C Relays optional
<b>Environmental</b>	Ambient operating temperature range: -20 to 60 °C
<b>Approvals</b>	Analyzer: CE: EN6100 -4-2, -4-3, -4-4, -4-5, -4-6, -4-11
<b>Warranty</b>	Analyzer: Two years
<b>Panel Dimensions</b>	12.0 inches (30.5 cm) x 21.0 inches (53.3 cm) x 6.0 inches (15.2 cm) WHD
<b>Weight</b>	15 lbs (6.8 kg)
<b>Mounting</b>	Panel (a stand is available allowing for portable applications)
<b>Wetted Parts</b>	Type 316 Stainless Steel, Teflon, Delrin, Acrylic
<b>Connections</b>	All inlets use 0.25 inch Type 316 Stainless Steel Swagelock fittings

**P/N 184-60                      Mark 24 Cation Conductivity System**

**NOTE:** All prices FOB Factory. Specifications and prices subject to change without prior notice.

Warranty subject to certain conditions. For complete warranty information, contact the factory.



**MARTEK INSTRUMENTS, INC.**

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