



"a better solution.."

Instruments and Capabilities (Panel Mount and Standalone)

By:

Thornton

Leading Pure Water Analytics

Table of Thornton Instrument Models and Capabilities.

Instrument System	Resistivity	Conductivity	pH & ORP	Dissolved Oxygen	Flow	Pressure & Tank Level	Organic Carbon (TOC)
770MAX Multiparameter Analyzer/Transmitter	✓	✓	✓		✓	✓	
2000 2-Channel Measurement System Replaces the 200pH/CR	✓	✓	✓	✓			
200CR Conductivity / Resistivity System	✓	✓					
200CRS Conductivity / Resistivity System NEW!	✓	✓					
200FLOW 4-Channel Measurement System					✓		
200pH - pH/ORP System			✓				
502P Total Organic Carbon Analyzer	✓						✓
1885 Portable Conductivity/Resistivity Calibration System	✓	✓					
7100 Inductive Conductivity Meter		✓					
PFA Vortex Flowmeter					✓		
Pure Light® Quality Indicator	✓	✓					
822 & 832 Resistivity Controllers	✓						

For More Information Please Call
1(800) CAL- WATER - (800) 225-9283



770MAX Multiparameter Calibration Kit

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Calibration Kit:

For verification or calibration of in-line sensors and meters, the Model 1885 Calibration System (pictured above) is especially convenient. It includes a 770MAX instrument, conductivity sensor with flow chamber, Model 1875 Smart Calibrator and carrying case, with full calibration documentation. The 770MAX can act as a Standalone Calibration instrument to verify and calibrate other instruments of any manufacturer.

If you add the optional compliment of NIST traceable and ASTM standard solutions, 770MAX can be used to maintain high accuracy performance of all applicable instruments.

Since the 770MAX has an RS232 port the 20 channels of data accumulated in its re-writable memory can be downloaded and used for printing of calibration certificates.

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200CRS Conductivity/Resistivity Monitor/Controller

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The **200CRS** is the ideal instrument for precise measurement of the water quality of Reverse Osmosis and Ion Exchange water purification systems.

The **200CRS**, as a stand-alone or panel mounted instrument, provides a high quality, accurate and cost effective single channel monitoring package for such pure water applications as semiconductor rinsing, critical power/steam makeup, pharmaceutical, cosmetic and the precise and accurate monitoring of the water in any critical application.

200CRS Conductivity/Resistivity System

Features:

- Easy operation with text-based menus
- One instrument model for:
 - Conductivity/Resistivity
 - Temperature
 - Total Dissolved Solids (TDS) (ppm/ppb)
- Calibration with NIST traceability. Wide rangeability enables high purity sensor calibration in ASTM standard solutions.
- Field-selectable, application-specific temperature compensation.
- Backlit LCD alphanumeric display
- Two powered current outputs plus RS232
- Two relays with individually selectable parameter, setpoint, hysteresis and delay
- Selectable function security
- Sealed, IP65 enclosure with back cover.
- Meets CSA/NRTL and CE requirements, UL listed
- Available in 118 and 220 (24 VDC)



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1(800) CAL-WATER - (800) 225-9283**

Warranty: All Thornton instruments are backed by a 1-year warranty, for parts and factory labor only, barring misuse or abuse. Warranties are specifically limited to the repair or replacement of the equipment.

Cal-Water has been selling, installing and servicing water purification equipment since **1946**

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200CRS Conductivity/Resistivity
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770MAX Multiparameter Analyzer/Transmitter

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The **770MAX** is the top-of-the-line. panel mount or stand-alone instrument sold by Cal Water. In the **770MAX**, Thornton has brought 21st Century technology to the marketplace.

The Thornton 770MAX is the most advanced and cost effective instrument on the market today for on-line measurement and control in water treatment, process, and wastewater applications. In the 770MAX Multiparameter Analyzer/Transmitter, Thornton applies innovative technology to provide high accuracy, exceptional ease of use and multipoint, Multiparameter capabilities.

Versatile:

A true multiparameter analyzer/transmitter, 770MAX provides concurrent monitoring of as many as six (6) individual sensors and transmits analog and digital data, when connected to separate system controllers and acquisition devices.

Measurement capabilities include:

- Conductivity
 - Resistivity
 - pH/ORP
 - Flow
 - Tank Level
 - Pressure
 - Temperature
- (Sensors Sold Separately)



Features:

- 6 Sensor Channel Inputs (5 Smart Sensors, 2 Pulse Flow)
- Up to 16 Measurements
- Backlit LCD alphanumeric display Easy operation with text-based menus
- Calibration with NIST traceability. Wide rangeability enables high purity sensor calibration in ASTM standard solutions.
- Field-selectable, application-specific temperature compensation.
- Non-compensated measurement also standard
- Four or eight Analog Outputs (0/4 – 20mA)
- RS232 Serial Output
- Four relays with individually selectable parameter, setpoint, hysteresis and delay
- Selectable function security
- Sealed, IP65 enclosure with back cover.
- Meets CSA/NRTL and CE requirements, UL listed
- Available in 118 and 220 (24 VDC)

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Accurate:

Since 1990, Series 7 multiparameter instruments have monitored thousands of pure water and fluid processing systems in semiconductor and pharmaceutical manufacturing, power/steam generation, research, and general industry. As with all Series 7 products, 770MAX utilizes patented Smart Sensor technology. Every Thornton Smart Sensor contains a non-volatile memory chip (NVRAM) embedded in its electronic circuitry which stores identification and calibration information specific to that sensor.

Upon connecting a Smart Sensor to 770MAX, the instrument automatically recognizes its type and becomes the "meter" for that parameter. The sensor is ready to transmit data from the fluid system to 770MAX for processing, sending updated information once every second.

A more specific example of Thornton's commitment to accuracy is the instrument's industry-leading 4-wire resistivity measurement technology, which delivers the highest accuracy and lowest limit of contamination detection. 770MAX achieves this level of performance through unique sensor calibration techniques in its manufacturing process and cutting-edge temperature compensation methods.

Cost Effective:

770MAX sets a new standard for instrumentation value by enabling maximum use of its

- Reduced system design & installation cost
- Single instrument with more inputs/outputs
- Reduced panel area & cut-outs
- Fast, plug-in wiring
- Very low cost per measurement & data acquisition point
- Internal computations to eliminate external modules

Convenient & Compact:

770MAX was designed from the bottom up for simplified specification, installation, startup, calibration, operation and maintenance. This design includes:

- Custom names for measurement identification
- Clear menu format assisted by 'help' key
- Smart Sensors for automated start up
- Plug-in connectors for all inputs & outputs
- Universal power supply: 100-240 V, 50-60 Hz
- Single 1/4 DIN case houses all options
- Sealed rear cover accessory
- Automatic calibrator accessory

770MAX accepts input from eight sensor-types from which it computes values in any of 35 different units. This extensive variety is supported by a multi-line scrolling display and the instrument's "custom names" feature, which allows labeling of each measurement.



Measurement Parameters			
Conductivity Resistivity	Flow	Comparison	Pressure
• ohm-cm • S/cm • S/m • TDS • % HCl • % H2SO4 • % NaOH	• GPM • Gallons • L/min • Liters • m3/hr • m3 • Hz • ft/sec	• % Rejection • % Recovery • Ratio • Difference • Total Grains	• psi • Bars • kPa • kg/cm2 • mmHg
pH	ORP	Temperature	Tank Level
• pH	• mV	• Degrees Celsius • Degrees Farenheit • RTD ohms	• Inches/feet • Gallons • Liters • % Full

Calibration:

To maintain high accuracy performance and meet QA requirements, the optional 770MAX Calibrator (Part No. 1875) verifies and calibrates all measurement ranges with NIST traceability.

Connect the calibrator's cable to the sensor port on the back panel of 770MAX, and then, with just the push of a button, calibrate or verify that channel. As information is transmitted and received, an internal clock automatically assigns time and date values to the data. The 770MAX Calibrator retains 20 channels of data in its re-writable memory for eventual downloading and printing of calibration certificates.



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