

The Thermo Scientific Orion  
5-Star Plus multi-parameter meter  
offers advanced meter functions for  
accurate measurements in the lab.

## Thermo Scientific Orion 5-Star Plus

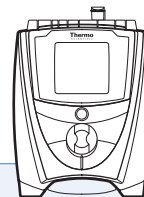
pH/ORP/ISE/Cond/DO Benchtop Meter



### Features and Benefits

- Simultaneous display of pH, mV, ORP or ISE; conductivity; dissolved oxygen and temperature measurement on the backlit LCD
- The Thermo Scientific Orion SMART STABILITY™ and SMART AVERAGING™ functions for automatically optimized accuracy, precision and response time
- Temperature calibration capability
- pH calibration of up to 5 points with calibration alarm and automatic buffer recognition of USA, NIST and DIN buffers
- ISE calibration of up to 5 points with automatic blank correction feature
- Conductivity / TDS / salinity / resistivity calibration of up to 5 points and reading reference temperatures of 5 °C, 10 °C, 15 °C, 20 °C or 25 °C
- Built-in barometer for automatic pressure correction with option of manual correction for dissolved oxygen measurements
- Automatic salinity correction for dissolved oxygen measurements from the conductivity cell reading
- Separate dissolved oxygen membrane and solution temperature displays and calibrations
- Autosampler compatibility
- Full complement of GLP-related features including Star Navigator 21 software
- Storage of up to 10 individually password-protected methods for easy retrieval of operation procedures
- Data storage for 500 data sets with time and date stamping
- RS232 port for easy data downloading and software updates
- IP54-rated housing for dust and liquid splash protection
- Includes universal power adapter, operates on four AA batteries (not included)
- 3 year meter warranty

## Thermo Scientific Orion 5-Star Plus pH/ORP/ISE/Conductivity/DO Benchtop Meter



<b>pH</b>	Range	- 2.000 to 19.999
	Resolution	0.1, 0.01, 0.001
	Relative Accuracy	± 0.002
<b>ISE</b>	Range	0 to 19999
	Resolution	1, 2, or 3 significant digits
	Relative Accuracy	± 0.2 mV or 0.05%, whichever is greater
	Units	M, mg/L, %, ppb, or no units
	Calibration Features	Linear point to point, non-linear selectable auto-blank, low concentration range stability
<b>mV</b>	Range	± 1999.9
	Resolution	0.1
	Relative Accuracy	± 0.2 or 0.05%, whichever is greater
<b>Conductivity</b>	Range	0.000 to 3000 mS/cm, auto resolution with cell constant dependence
	Resolution	4 significant digits down to 0.001 µS/cm, cell constant dependent
		0.5% ± 1 digit or 0.01 µS/cm, whichever is greater
	Cell Constants	0.001 to 199.9
<b>Resistivity</b>	Range	0.0001 to 100 Megohm
	Resolution	Automatic
	Relative Accuracy	0.5 % ± 1 digit
<b>Salinity</b>	Range	0.1 to 80.0 ppt NaCl equivalent, 0.1 to 42 ppt practical salinity
	Resolution	0.1
	Relative Accuracy	± 0.1 ± 1 digit
<b>TDS</b>	Range	0 to 19999
	Resolution	1 mg/L
	Relative Accuracy	± 0.5 % ± 1 digit
<b>DO</b>	Concentration Range	0.00 to 90.0 mg/L
	Resolution	0.1, 0.01 mg/L
	Relative Accuracy	± 0.2 mg/L
	% Saturation Range	0.0 to 600 %
	Resolution	0.1, 1 %
	Relative Accuracy	± 2 %
	Barometric Pressure Correction	450 to 850 mm Hg, Automatic or Manual
Calibration Features	Water Saturated Air, Air Saturated Water, Manual (Winkler), and Zero Point	
	Probe Type	Polarographic
<b>Temperature</b>	Range	- 5 to 105 °C
	Resolution	0.1 up to 99.9 °C, 1.0 over 99.9 °C
	Relative Accuracy	± 0.1 °C

### Benchtop Meter Only

#### Cat. No. Package

**1219000** Includes meter, universal power and user guide

### Benchtop Meter Kits

#### Cat. No. / Sensor (s)

#### Application

#### Accessories and Solutions

<b>1119001 / TRIS Fresh Water</b>	<ul style="list-style-type: none"> <li>8102BNUWP ROSS Ultra refillable glass pH electrode</li> <li>927005MD epoxy ATC probe</li> <li>081010MD DO probe with 3 meter cable</li> <li>013605MD DuraProbe conductivity cell, K = 0.55, 10 µS/cm to 200 mS/cm</li> </ul>	<ul style="list-style-type: none"> <li>Star Navigator 21 software with RS232 computer cable</li> <li>Swing arm electrode stand</li> <li>pH 4.01, 7.00, and 10.01 buffers and pH electrode storage solution (pint bottles)</li> <li>DO calibration sleeve</li> <li>BOD reservoir, stirrer and adapter</li> <li>DO probe maintenance kit - 080113</li> <li>1413 µS/cm conductivity standard (5 x 60 mL bottles)</li> </ul>
<b>1010152 / USP 645 TRIS Fresh Water</b>	<ul style="list-style-type: none"> <li>8102BNUWP ROSS Ultra refillable glass pH electrode</li> <li>013016MD Conductivity cell, K = 0.1, includes flow cell, 0.01 µS/cm to 300 µS/cm</li> <li>096019 Stirrer probe</li> </ul>	<ul style="list-style-type: none"> <li>Conductivity calibration resistor kit</li> <li>Star Navigator 21 software with RS232 computer cable</li> <li>Swing arm electrode stand</li> <li>pH electrode storage solution (5 x 60 mL bottles)</li> <li>ROSS electrode filling solution (5 x 60 mL bottles)</li> <li>pH 4.01, 7.00, and 10.01 buffers (pint bottles)</li> <li>100 µS/cm conductivity standard (5 x 60 mL bottles)</li> <li>Method Note - Water Conductivity USP 645</li> </ul>
<b>1119201 / TRIS Fresh Water</b>	<ul style="list-style-type: none"> <li>8102BNUWP ROSS Ultra refillable glass pH electrode</li> <li>927005MD Epoxy ATC probe</li> <li>081010MD DO probe with 3 meter cable</li> <li>013005MD DuraProbe Conductivity cell, K = 0.475, 1 µS/cm to 200 mS/cm</li> </ul>	<ul style="list-style-type: none"> <li>Star Navigator 21 software with RS232 computer cable</li> <li>Swing arm electrode stand</li> <li>DO calibration sleeve</li> <li>BOD reservoir, stirrer and adapter</li> <li>DO probe maintenance kit - 080113</li> </ul>

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