Thermo Scientific Orion Dual Star pH/ISE Meter

Two channel meter with simultaneous measurement display

Measure and display your pH and ion-specific concentration measurements at the same time.

Markets:

- Wastewater
- Drinking Water
- Industrial and Chemical
- Food and Beverage
- Agriculture and Environmental
- Academic
- Pharmaceutical

Applications:

- Discharge Permits
- Chemical or Reagent Manufacturing
- Process and Quality Checks
- Product Development
- Final Product Release
- Environmental Monitoring

Improve your sample measurement with the Thermo Scientific™ Orion™ Dual Star™ pH/ISE dual channel benchtop meter. The Orion Dual Star meter allows you to view the results of two channels simultaneously or display large individual measurements on a large, backlit graphic display.

Measure pH, ion concentration (ISE), mV, relative mV or ORP with temperature using the meter's two BNC, reference pin-tip and ATC temperature inputs. Collect your critical measurements, and know when your readings are ready with an onscreen stability indicator designed to alert you when readings are fluctuating or stable.

Features and Benefits

- Quickly toggle to show both channels simultaneously or each channel separately
- Easy to follow onscreen text prompts for calibration and setup menus available in a multi-language user interface with English, Spanish, French, German or Italian options
- Enjoy quick meter set up and data entry with a numeric keypad and menu-specific function keys
- Perform up to a 6 point pH calibration with automatic recognition for USA/NIST and EURO/DIN buffers with option to manually input custom buffer values
- Perform up to a 6 point ion concentration (ISE) calibration with non-linear auto-blank and low-concentration stability options or use incremental methods for single/double known addition and single/double known subtraction
- Smart Stability and Smart Averaging functions designed to automatically compensate for measurement conditions
- EZ Startup™ menu helps to facilitates quick and easy first time meter setup

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Display shows results, electrode status, temperature and channel settings

Single channel display shows electrode serial number, sample ID, date and time

Turns on/off the meter and the backlighting

Shortcut keys for direct access to commonly used functions, numeric keypad for select data entry

Selectable read modes include Auto-Read, On-Ready, At Timed Intervals, Continuous, Value Change in Measurement and Timed for a variety of measurement collection methods for different analytical methods

Toggles display to show both channels simultaneously or each channel separately on a full screen display

Function keys update according to the menu for easy selection

Designed to easily transfer data via USB and RS232 to a compatible printer or computer with free Thermo Scientific™ Orion™ Dual Star Com™ communication software

Measure pH, ion concentration (ISE), mV, relative mV or ORP with temperature using the meter's two BNC, reference pin-tip and ATC temperature inputs

Additional Orion Dual Star Meter Features

- Non-volatile meter memory holds up to 1000 data points with time and date stamp
- Stir samples using the meter-controlled Orion Star stirrer probe
- Meter-attachable electrode stand assists with moving and maintaining electrodes
- IP54-rated housing designed to handle splashes and is wall-mountable to save space
- 3 year meter replacement warranty*

*See manufacturer's standard limited warranty for details and limitations.

Product Specifications		
pH	Range	- 2.000 to 19.999
	Resolution	0.1, 0.01, 0.001
	Relative Accuracy	± 0.002
	Calibration Points	1 to 6
	Calibration Editing	Yes
	Buffer Recognition	USA/NIST, EURO/DIN or manual entry of custom values
ISE	Range	0.0001 to 19900
	Resolution	0.0001 minimum, auto ranging, up to 3 significant digits (user selectable)
	Relative Accuracy	± 0.2 mV or 0.05 %, whichever is greater
	Units	ppm, ppb, M, % or unitless
	Incremental Techniques	Single known addition and subtraction Double known addition and subtraction
	Calibration Points	2 to 6
	Calibration Editing	Yes
	Calibration Options	Linear point to point, non-linear selectable auto-blank, low concentration range stability
mV/Rel mV/ORP	Range	± 1999.9
	Resolution	0.1
	Relative Accuracy	± 0.2 mV or 0.05 %, whichever is greater
	E_H ORP Mode	Yes
Temperature	Range	- 5 to 105 ˚C
	Resolution	0.1 ˚C
	Relative Accuracy	± 0.1 ˚C
	Offset Calibration	1 point
Datalogging	Memory	1000 data points with time and date stamp
	Log Function	Manual (continuous), when stable (Auto-Read, on ready), timed (at timed intervals, timed reading) or value change in measurement
	Method Storage	20 (10 per channel with calibration data and password protection)
Inputs	pH Electrode or ISE	BNC (2), reference pin-tip (2)
	ATC Probe	8-pin mini-DIN (2)
	Stirrer Probe	Stirrer jack
Output	Ports	RS232, USB
Power	AC Adapter	Included - universal, 100-240 VAC, 50-60 Hz

Product Features	
LCD Display Type	Simultaneous dual channel or individual channel
Backlight (On/Off)	5 adjustable levels
Regulatory and Safety	CE, TUV 3-1, FCC Class A Enclosure (designed to meet) IP-54
Ambient Operating Temperature	5 to 45 ˚C
Ambient Operating Relative Humidity	5 to 85 %, non-condensing
Warranty	3 year*

Electrodes designed to deliver accurate, reproducible pH measurements

Choose from a variety of Thermo Scientific™ Orion™ ROSS™ glass or epoxy body electrodes, such as: Thermo Scientific™ Orion™ Sure-Flow™, Thermo Scientific™ Orion™ Triode™, refillable, gel-filled, semi-micro, micro, flat bulb, spear tipped, and Thermo Scientific™ Orion™ ROSS Ultra™ for extended warranty (18 months for gel / 24 months for refillable).

*See manufacturer's standard limited warranty for details and limitations.

Product Ordering Information

Thermo Scientific Orion Dual Star Meter and Accessories

Cat. No.	Description
2115000	**Orion Dual Star pH/ISE benchtop meter** Includes meter, 927007MD Orion stainless steel ATC probe, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115001	**Orion Dual Star pH/ISE benchtop meter pH kit** Includes meter, 8102BNUWP ROSS Ultra glass-body pH electrode, 927007MD Orion stainless steel ATC probe, 910104 Orion pH 4 buffer (475 mL), 910107 Orion pH 7 buffer (475 mL), 910110 Orion pH 10 buffer (475 mL), 810001 ROSS pH electrode storage solution (475 mL), electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115101	**Orion Dual Star pH/ISE benchtop meter & pH electrode set** Includes meter, 8102BNUWP ROSS Ultra glass-body pH electrode, 927007MD Orion stainless steel ATC probe, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115102	**Orion Dual Star pH/ISE benchtop meter & pH/ATC Triode set** Includes meter, 8157BNUMD ROSS Ultra Triode epoxy-body pH/ATC electrode, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115201	**Orion Dual Star pH/ISE benchtop meter pH & ammonia kit** Includes meter, 9512BNWP Orion ammonia ion selective electrode, 8172BNWP Orion ROSS Sure-Flow glass-body pH electrode, 927007MD Orion stainless steel ATC probe, 096019 Orion Star stirrer probe, 951207 Orion 100 ppm ammonia standard (475 mL), 951211 Orion ammonia ISA ionic strength adjuster (475 mL), 810199 ROSS pH buffer and solution kit, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115202	**Orion Dual Star pH/ISE benchtop meter pH & chloride kit** Includes meter, 9617BNWP Orion chloride ion selective electrode, 8172BNWP ROSS Sure-Flow glass-body pH electrode, 927007MD Orion stainless steel ATC probe, 096019 Orion Star stirrer probe, 941708 Orion 1000 ppm chloride standard (475 mL), 940011 Orion chloride ISA ionic strength adjuster (475 mL), 810199 ROSS pH buffer and solution kit, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115203	**Orion Dual Star pH/ISE benchtop meter pH & fluoride kit** Includes meter, 9609BNWP Orion fluoride ion selective electrode, 8172BNWP ROSS Sure-Flow glass-body pH electrode, 927007MD Orion stainless steel ATC probe, 096019 Orion Star stirrer probe, 040908 Orion 10 ppm fluoride standard with TISAB II (475 mL), 040906 Orion 1 ppm fluoride standard with TISAB II (475 mL), 940909 Orion TISAB II total ionic strength adjustment buffer (3.8 L), 810199 ROSS pH buffer and solution kit, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115204	**Orion Dual Star pH/ISE benchtop meter pH & nitrate kit** Includes meter, 9707BNWP Orion nitrate ion selective electrode, 8172BNWP ROSS Sure-Flow glass-body pH electrode, 927007MD Orion stainless steel ATC probe, 096019 Orion Star stirrer probe, 930707 Orion 100 ppm nitrate standard (475 mL), 930711 Orion nitrate ISA ionic strength adjuster (475 mL), 810199 ROSS pH buffer and solution kit, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate
2115205	**Orion Dual Star pH/ISE benchtop meter pH & sodium kit** Includes meter, 8611BNWP ROSS sodium ion selective electrode, 8172BNWP ROSS Sure-Flow glass-body pH electrode, 927007MD Orion stainless steel ATC probe, 096019 Orion Star stirrer probe, 841108 Orion 1000 ppm sodium standard (475 mL), 841109 Orion KAP sodium standard & ISA solution (475 mL), 841111 Orion sodium ISA ionic strength adjuster (475 mL), 841113 Orion sodium electrode conditioning solution (475 mL), 841101 Orion sodium electrode storage solution (475 mL), 810199 ROSS pH buffer and solution kit, electrode stand, computer interface cable, universal power supply, literature and calibration test certificate

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Water and Lab Products

North America
Toll Free: 1-800-225-1480
Tel: 1-978-232-6000
info.water@thermofisher.com

Germany
Tel: (49) 6184-90-6000
info.water.uk@thermofisher.com

India
Tel: (91) 22-4157-8800
wai.asia@thermofisher.com

Japan
Tel: (81) 045-453-9175
wai.asia@thermofisher.com

China
Tel: (86) 21-68654588
wai.asia@thermofisher.com

Singapore
Tel: (65) 6778-6876
wai.asia@thermofisher.com

Australia
Tel: (613) 9757-4300
In Australia: (1300) 735-295
InfoWaterAU@thermofisher.com

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