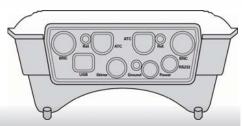




# Thermo Scientific Orion DUAL STAR<sup>™</sup>

Dual Channel pH/ISE Benchtop Meter





## Features and Benefits

- Dual channel with simultaneously displayed measurements
- Low concentration range reading stability
- Known addition and subtraction incremental methods
- 5 language choices: English, Spanish, French, German and Italian
- Meter prompts and shortcut keys
- Thermo Scientific Orion EZ Startup<sup>™</sup> for quick and easy meter set-up
- Thermo Scientific Orion SMART STABILITY<sup>™</sup> and SMART AVERAGING<sup>™</sup> for accurate and fast results

- $E_H$  ORP calibration capability
- 10 methods stored per channel

   retains calibrations among multiple electrodes
- 1000 point datalogging with time and date stamping
- Calibration, high point and low point alarms
- Calibration graph with slope data for on-screen viewing
- Star stirrer probe controlled directly from the meter
- Autosampler compatibility
- 3 year meter replacement warranty



### **Product Specifications**

	CE   TUV   EPA	Cat.
Range	-2.000 to 19.999	
Resolution	0.1, 0.01, 0.001	
Relative Accuracy	±0.002	211
Calibration Points	1 to 6	
Auto-Buffer Recognition	USA/NIST and EURO/DIN	
Range	0 to 19999	211
Resolution	1,2 or 3 significant digits	
Relative Accuracy	$\pm$ 0.2 mV or 0.05 %, whichever is greater	
Units	ppm, ppb, M, % or unitless	
Technique Options	Single known addition and subtraction Double known addition and subtraction	211
Calibration Points	2 to 6	
Calibration Options	Linear, point to point, non-linear selectable auto-bank	
Range	±1999.9	
Resolution	0.1	
Relative Accuracy	±0.2 or 0.05 %, whichever is greater	211
$E_{\text{H}}$ Calibration Capability	Yes	
Range	-5 to 105 °C	
Resolution	0.1	
Relative Accuracy	±0.1 °C	Acc
	Resolution Relative Accuracy Calibration Points Auto-Buffer Recognition Range Resolution Relative Accuracy Units Technique Options Calibration Options Range Resolution Relative Accuracy E <sub>H</sub> Calibration Capability Range Resolution Relative Resolution Range	Range-2.000 to 19.999Resolution0.1, 0.01, 0.001Relative Accuracy±0.002Calibration Points1 to 6Auto-Buffer RecognitionUSA/NIST and EURO/DINRange0 to 19999Resolution1,2 or 3 significant digitsRelative Accuracy±0.2 mV or 0.05 %, whichever is greaterUnitsppm, ppb, M, % or unitlessTechnique OptionsSingle known addition and subtraction Double known addition and subtractionCalibration Options2 to 6Calibration Points2 to 6Range Esolution0.1Resolution0.1Relative Accuracy±0.2 or 0.05 %, whichever is greaterJunear, point to point, non-linear selectable auto-bank1999.9Resolution Resolution0.1Relative apabilityYesRange-5 to 105 °CResolution Relative +0.1 °C0.1 °C

#### Features

Backlight	5 adjustable levels
Method Storage	20 (10 per channel with calibration data)
Password Protection	Yes
Datalog Points	1000 with time/date stamp
Data Transfer	RS232, USB
IP Rating	IP54
Power	Universal AC adapter (110V/220V/240V) included with meter
Warranty	36 months replacement

Orion DUAL STAR pH/ISE meter     Stainless steel ATC probe (927007MD)     Swing arm electrode stand (090043)     RS232 cable (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     Stainless steel ATC probe (927007MD)     Stainless steel ATC probe (927007MD)     Stainless steel ATC probe (927007MD)     RS232 cable (1010053)     Swing arm electrode stand (090043)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     Stainless ateel ATC probe (927007MD)     RS232 cable (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     Stainless ateel ATC probe (927007MD)     RS232 cable (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     StairBit (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     StairBit (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     StairBit (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     StairBit (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     StairBit (1010053)     Universal power adapter     User guide     Orion DUAL STAR pH/ISE meter     StairBit (1010053)     Universal power adapter     StairBit (1010053)     Universal power adapter     StairBit (1010053)     Universal power adapter     StairBit (1010053)     StairBit (1010054)     StairBi		
<ul> <li>Stainless steel ATC probe (927007MD)</li> <li>Swing arm electrode stand (090043)</li> <li>RS232 cable (1010053)</li> <li>Universal power adapter</li> <li>User guide</li> <li>Orion DUAL STAR pH/ISE meter</li> <li>8102BNUWP ROSS Ultra® pH electrode</li> <li>Stainless steel ATC probe (927007MD)</li> <li>RS232 cable (1010053)</li> <li>Swing arm electrode stand (090043)</li> <li>Universal power adapter</li> <li>User guide</li> <li>Orion DUAL STAR pH/ISE meter</li> <li>8232 cable (1010053)</li> <li>Universal power adapter</li> <li>User guide</li> <li>Orion DUAL STAR pH/ISE meter</li> <li>8157BNUMD ROSS Ultra PH/ATC Triode™ refillable electrode</li> <li>RS232 cable (1010053)</li> <li>Universal power adapter</li> <li>User guide</li> <li>Orion DUAL STAR pH/ISE meter</li> <li>8157BNUMD ROSS Ultra pH/ATC Triode™ refillable electrode</li> <li>RS232 cable (1010053)</li> <li>Universal power adapter</li> <li>User guide</li> <li>Orion DUAL STAR pH/ISE meter</li> <li>8102BNUWP ROSS Ultra pH electrode</li> <li>Stainless steel ATC probe (927007MD)</li> <li>RS232 cable (1010053)</li> <li>Swing arm electrode stand (090043)</li> <li>Pint of pH 4.01 buffer (910104)</li> <li>Pint of pH 4.01 buffer (910107)</li> <li>Pint of pH 7.00 buffer (910107)</li> <li>Pint of pH 7.00 buffer (910110)</li> <li>Pint of PCSS® electrode storage solution (810001)</li> <li>Universal power adapter</li> </ul>	at. No.	Description
- 8102BNUWP ROSS Ultra® pH electrode         - Stainless steel ATC probe (927007MD)         - RS232 cable (1010053)         - Swing arm electrode stand (090043)         - Universal power adapter         - User guide         * Orion DUAL STAR pH/ISE meter         - 8157BNUMD ROSS Ultra pH/ATC Triode™         refillable electrode         - RS232 cable (1010053)         - Universal power adapter         - User guide         * Orion DUAL STAR pH/ISE meter         - 8157BNUMD ROSS Ultra pH/ATC Triode™         refillable electrode         - RS232 cable (1010053)         - Universal power adapter         - User guide         * Orion DUAL STAR pH/ISE meter         - 8102BNUWP ROSS Ultra pH electrode         - Stainless steel ATC probe (927007MD)         - RS232 cable (1010053)         - Swing arm electrode stand (090043)         - Pint of pH 4.01 buffer (910104)         - Pint of pH 7.00 buffer (910107)         - Pint of pH 7.00 buffer (910107)         - Pint of PCOSS electrode storage solution (810001)         - Universal power adapter	115000	<ul> <li>Stainless steel ATC probe (927007MD)</li> <li>Swing arm electrode stand (090043)</li> <li>RS232 cable (1010053)</li> <li>Universal power adapter</li> </ul>
I15102       - 8157BNUMD ROSS Ultra pH/ATC Triode™         refillable electrode       - RS232 cable (1010053)         Universal power adapter       - User guide         Orion DUAL STAR pH/ISE meter       - 8102BNUWP ROSS Ultra pH electrode         Stainless steel ATC probe (927007MD)       - RS232 cable (1010053)         Swing arm electrode stand (090043)       - Pint of pH 4.01 buffer (910104)         Pint of pH 7.00 buffer (910107)       - Pint of pH 7.00 buffer (910107)         Pint of PH 7.00 buffer (910110)       - Pint of ROSS® electrode storade solution (810001)         Universal power adapter       - Universal power adapter	115101	<ul> <li>8102BNUWP ROSS Ultra® pH electrode</li> <li>Stainless steel ATC probe (927007MD)</li> <li>RS232 cable (1010053)</li> <li>Swing arm electrode stand (090043)</li> <li>Universal power adapter</li> </ul>
<ul> <li>8102BNUWP ROSS Ultra pH electrode</li> <li>Stainless steel ATC probe (927007MD)</li> <li>RS232 cable (1010053)</li> <li>Swing arm electrode stand (090043)</li> <li>Pint of pH 4.01 buffer (910104)</li> <li>Pint of pH 7.00 buffer (910107)</li> <li>Pint of pH 10.01 buffer (910110)</li> <li>Pint of ROSS® electrode storage solution (810001)</li> <li>Universal power adapter</li> </ul>	115102	<ul> <li>8157BNUMD ROSS Ultra pH/ATC Triode™</li> <li>refillable electrode</li> <li>RS232 cable (1010053)</li> <li>Universal power adapter</li> </ul>
	115001	<ul> <li>8102BNUWP ROSS Ultra pH electrode</li> <li>Stainless steel ATC probe (927007MD)</li> <li>RS232 cable (1010053)</li> <li>Swing arm electrode stand (090043)</li> <li>Pint of pH 4.01 buffer (910104)</li> <li>Pint of pH 7.00 buffer (910107)</li> <li>Pint of pH 10.01 buffer (910110)</li> <li>Pint of ROSS<sup>®</sup> electrode storage solution (810001)</li> <li>Universal power adapter</li> </ul>

#### Accessories

Cat. No.	Description
096019	Thermo Scientific Orion stirrer probe with paddle
910104	pH 4.01 buffer, 475 mL
910107	pH 7.00 buffer, 475 mL
910110	pH 10.01 buffer, 475 mL

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