

# Star Series Specifications



## Orion 4-Star pH/DO

Benchtop Meter (Cat. No. 1116000)  
Benchtop Meter Kit (Cat. No. 1116001)

- Dual measurement capabilities at a favorable price
- Salinity correction and automatic barometric pressure compensation
- SMART STABILITY™ and SMART AVERAGING™ functions for automatically optimized accuracy, precision and response time
- Storage of up to 10 password protected methods for easy retrieval of operation procedures
- Dissolved oxygen calibration to the Winkler Titration for BOD
- Simultaneous display of pH, DO and temperature measurements
- Stirrer & AUTO-STIR™ probe control

Specifications	
<b>pH</b>	
Readout Range / Resolution	-2.000 to 19.999 or 0 to 14 in aqueous solutions / 0.1,0.01,0.001
Relative Accuracy	± 0.002
SMART STABILITY™ and SMART AVERAGING™	Resolution dependent / automatic
AUTO-CAL™ and/or Manual Calibration	1 to 5 points; US/NIST, DIN, and custom buffers recognized
<b>mV</b>	
Range – mV / RmV	± 1999.9
ORP	E <sub>H</sub> autocalibration to standard hydrogen electrode
Resolution	0.1
Relative Accuracy	± 0.2 mV or 0.05%, whichever is greater
<b>DO</b>	
Range / Resolution Concentration	0.00 to 90.0 mg/L / 0.0/0.00
Range / Resolution % Saturation	0.0 to 600% / 0/0.0
Relative Accuracy Concentration / % Saturation	± 0.5% ±1 digit
SMART STABILITY™ and SMART AVERAGING™	Resolution dependent / automatic
Auto Calibration or Manual Input	Water Saturated Air and Air Saturated Water, Winkler
Calibration to Winkler Titration for BOD	Available as needed
Salinity Factor	0 to 45 ppt
Barometric Pressure Range	450 to 850 mm Hg
Probe Type	Polarographic
<b>Temperature</b>	
Range / Resolution	-5 to 105 °C / 0.1 up to 99.9 °C, 1.0 over 99.9 °C
Relative Accuracy	± 0.1 °C
Temperature Compensation	DO (auto); pH (auto/manual)
<b>Display</b>	Custom backlit LCD, for easy viewing
<b>Inputs/Outputs</b>	
Sensor Inputs	DO-miniDIN - Locking; ATC-miniDIN-Locking; pH - BNC; Reference-Pin tip; Stirrer-Phono-jack
Communications	Bi-directional RS232 - Stereo jack, optional USB interface Cable
<b>Special GLP Software Features</b>	
# Of Data Logging Points	200 points by time, stability or manual read with time/date stamp
Calibration Log	Last 10 Calibrations
User Method Storage	10 Saved
Advanced Self-test and Diagnostics	YES
GLP Electrode Verification	YES
Password Protection	YES
Internet Software Updates / Downloadable Methods	YES
21 CFR Part 11 Software Package	Optional
<b>Power</b>	Universal power adapter and battery power 4 x AA batteries
<b>Regulatory and Safety</b>	CE, CSA, UL, TÜV, FCC Class A limits
<b>Environmental Operating Conditions</b>	
Ambient Operating Temperature	5 to 45 °C
Relative Humidity	5 to 85% Non-Condensing
IP Rating	IP54, splashproof and dustproof
<b>Warranty</b>	36 months (from date of purchase)

Above data generated under optimal/controlled circumstances.

**Note:** ISFET capability available in Fall 2005

**pH/DO Benchtop Meter Kit (1116001) Includes:**

<b>Cat. No.</b>	<b>Description</b>
1116000	4-Star pH/DO benchtop meter
8102BNU	ROSS Ultra® glass pH electrode
917005	A series meter epoxy ATC probe
081010MD	DO probe 3m cable
970802	Overflow funnel with stir box
080113	Probe service kit
080017	DO calibration sleeve, A series probes
810001	ROSS™ pH electrode storage solution, 475 mL
1110001	Electrode stand
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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(page 2 of 2)