## Thermo Scientific Orion Star A321

Premium pH portable meter

The Thermo Scientific<sup>™</sup> Orion<sup>™</sup> Star A321 pH Portable Meter is the top choice for testing samples anywhere. It is rugged and dependable, making it ideal for every sample, every day, everywhere.







The Thermo Scientific Orion Star A321 pH Portable Meter is the top choice for advanced measurements on location. Get the information you need quickly and easily from the large, backlit graphic LCD display. Informative display shows pH/mV/RmV and temperature along with electrode status, time, date, sample ID, user ID and calibration points.

## **Features and Benefits**

- Easy meter operation assured with on-screen text prompts, menu-specific function keys and a multi-language interface for English, Spanish, French, Italian, German and Chinese
- Don't miss a reading—AUTO-READ™
   locks in the stable reading on your screen, ready indicator alerts when readings are stable and timed reading gathers data in specific time intervals
- Up to 5 point pH calibration with automatic recognition for USA/NIST and DIN buffers or manual option for custom buffer values and calibration editing to fix individual points without a full recalibration

- Non-volatile memory holds up to 5000 data points with time and date stamp
- Easily transfer data and keep meter software up-to-date with the USB and RS232 ports and complimentary Orion Star Com computer software
- Four AA batteries (included) provide over 800 hours of operation or purchase the universal power adapter (sold separately)
- Perfectly portable, waterproof and protected to take anywhere with a IP67-rated housing
- 3 year meter replacement warranty



## **Thermo Scientific Orion Star A321 pH Portable Meter**

<b>Specifications</b>		
pH	Range: -2.000 to 20.000	
	<b>Resolution:</b> 0.1, 0.01, 0.001	
	Relative Accuracy: ±0.002	
	Calibration Points: Up to 5	
	Calibration Editing: Yes	
mV/RmV	Range: ±2000.0 mV	
	Resolution: 0.1 mV	
	Relative Accuracy: ±0.2 mV or ±0.05 % of	
	reading whichever is greater	
	E <sub>H</sub> ORP Mode: Yes	
Temperature	Range: -5 to 105 °C, 23 to 221 °F	
	Resolution: 0.1 °C, 0.1 °F	
	Relative Accuracy: ±0.1 °C, ±0.1 °F	
	Offset Calibration: 1 point	
Datalogging	Memory: 5000 with time and date stamp	
	Log Function: Manual, ready	
	(includes AUTO-READ), timed	
Inputs	pH Electrode: BNC, reference pin	
	ATC Probe: 8-pin mini-DIN	
Output	RS232, USB	
Power	AC Adapter: Optional—universal,	
	100-240 VAC	
	Battery Power: Included—4 AAs	
	Battery Life: 800 hrs	



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Meter Ordering Information		
Part No.	Description	
STARA3210	Orion Star A321 pH Portable Meter - Four AA batteries (installed) - Printed quick start guide and literature CD - USB computer cable	
STARA3215	Orion Star A321 pH Portable Meter Kit  - 8107UWMMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 3 m cable  - 910410-WA Orion pH 4.01 buffer pouches - 910710 Orion pH 7.00 buffer pouches - 911010 Orion pH 10.01 buffer pouches - 810001 Orion ROSS electrode storage solution, 475 mL - 911110 Orion rinse solution pouches - Protective armor with electrode holder and storage sleeve - Hard-sided field case - Four AA batteries (installed) - Printed quick start guide and literature CD - USB computer cable	

holder, stand and adjustable hand-strap  STARA-ESPH Orion pH electrode holder for portable Star A series meter armor  Orion pH electrode storage sleeve for pH electrode holder  8107UWMMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 3 m cable  8107BNUMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 1 m cable  1010003 Universal power adapter, 100-240 V, 50/60 Hz  910410-WA Orion pH 4.01 buffer pouches, 10 pack  910710 Orion pH 7.00 buffer pouches, 10 pack  911010 Orion pH rione solution pouches, 10 pack  9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	Accessories Ordering Information		
hard-sided field case  Orion Star A series portable meter soft-sided field case  STARA-AR Orion Star A series portable meter armor with pH electrode holder, conductivity and DO probe holder, stand and adjustable hand-strap  STARA-ESPH Orion pH electrode holder for portable Star A series meter armor  810017 Orion pH electrode storage sleeve for pH electrode holder  8107UWMMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 3 m cable  8107BNUMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 1 m cable  1010003 Universal power adapter, 100-240 V, 50/60 Hz  910410-WA Orion pH 4.01 buffer pouches, 10 pack 910710 Orion pH 7.00 buffer pouches, 10 pack 911010 Orion pH 10.01 buffer pouches, 10 pack 911110 Orion pH rinse solution pouches, 10 pack 9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	Part No.	Description	
STARA-AR Orion Star A series portable meter armor with pH electrode holder, conductivity and DO probe holder, stand and adjustable hand-strap  STARA-ESPH Orion pH electrode holder for portable Star A series meter armor  810017 Orion pH electrode storage sleeve for pH electrode holder  8107UWMMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 3 m cable  8107BNUMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 1 m cable  1010003 Universal power adapter, 100-240 V, 50/60 Hz  910410-WA Orion pH 4.01 buffer pouches, 10 pack 910710 Orion pH 7.00 buffer pouches, 10 pack 911010 Orion pH inse solution pouches, 10 pack 911110 Orion Triode gel-filled epoxy-body ORP/ATC electrode	STARA-CS		
pH electrode holder, conductivity and DO probe holder, stand and adjustable hand-strap  STARA-ESPH Orion pH electrode holder for portable Star A series meter armor  810017 Orion pH electrode storage sleeve for pH electrode holder  8107UWMMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 3 m cable  8107BNUMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 1 m cable  1010003 Universal power adapter, 100-240 V, 50/60 Hz  910410-WA Orion pH 4.01 buffer pouches, 10 pack  910710 Orion pH 7.00 buffer pouches, 10 pack  911010 Orion pH ino orion purione solution pouches, 10 pack  9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	1210005		
series meter armor  Orion pH electrode storage sleeve for pH electrode holder  8107UWMMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 3 m cable  8107BNUMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 1 m cable  1010003 Universal power adapter, 100-240 V, 50/60 Hz  910410-WA Orion pH 4.01 buffer pouches, 10 pack  910710 Orion pH 7.00 buffer pouches, 10 pack  911010 Orion pH 10.01 buffer pouches, 10 pack  911110 Orion pH rinse solution pouches, 10 pack  9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	STARA-AR	pH electrode holder, conductivity and DO probe	
electrode holder  8107UWMMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 3 m cable  8107BNUMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 1 m cable  1010003 Universal power adapter, 100-240 V, 50/60 Hz  910410-WA Orion pH 4.01 buffer pouches, 10 pack  910710 Orion pH 7.00 buffer pouches, 10 pack  911010 Orion pH 10.01 buffer pouches, 10 pack  911110 Orion pH rinse solution pouches, 10 pack  9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	STARA-ESPH	·	
pH/ATC electrode, 3 m cable  8107BNUMD Orion ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode, 1 m cable  1010003 Universal power adapter, 100-240 V, 50/60 Hz  910410-WA Orion pH 4.01 buffer pouches, 10 pack  910710 Orion pH 7.00 buffer pouches, 10 pack  911010 Orion pH 10.01 buffer pouches, 10 pack  911110 Orion pH rinse solution pouches, 10 pack  9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	810017		
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911010 Orion pH 10.01 buffer pouches, 10 pack 911110 Orion pH rinse solution pouches, 10 pack 9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	910410-WA	Orion pH 4.01 buffer pouches, 10 pack	
911110 Orion pH rinse solution pouches, 10 pack 9179BNMD Orion Triode gel-filled epoxy-body ORP/ATC electrode	910710	Orion pH 7.00 buffer pouches, 10 pack	
<b>9179BNMD</b> Orion Triode gel-filled epoxy-body ORP/ATC electrode	911010	Orion pH 10.01 buffer pouches, 10 pack	
electrode	911110	Orion pH rinse solution pouches, 10 pack	
007004	9179BNMD		
96/961 Urion UKP standard solution, 5 x 60 mL	967961	Orion ORP standard solution, 5 x 60 mL	

For more information, contact your local Thermo Scientific products dealer or call our customer and technical service experts at 1-800-225-1480 (for the US and Canada) or visit www.thermoscientific.com/water.



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