

Thermo Scientific Orion Star A121 & Star A221 Portable pH/ORP Meters

- Durable and dependable—take measurements every day, anywhere
- Waterproof IP67-rated housing
- Choose from the value-priced A121 meter or the advanced A221 meter

thermo scientific

These portable meters feature Thermo Scientific Orion quality. Choose from the economical A121 meter or the advanced A221 meter. Both have a large informative screen that lets you simultaneously view the pH or mV reading, temperature, battery life and calibration status. Simple button layout and onscreen messages make calibration and setup easy and fast.

Measure in either Continuous mode or AUTO-READ mode that locks in the stable reading on your screen. You can record up to 50 data points. When recording data points in AUTO-READ mode, measurements are automatically stored whenever the "READY" appears.

Three-point calibration is simplified with automatic buffer recognition of USA/NIST and DIN buffers. When taking readings, the meter displays the buffer values that were used to calibrate. The most recent calibration slope is also stored for procedure checks. Meter runs for up to 2000 hours on included four AA batteries, or purchase optional AC power adapter separately. 3-year meter warranty for both meters.

Star A221 meters offer the above and more

The Star A221 features five-point calibration. Calibration date, values and slopes are stored in the Calibration Log for later review. Download up to 1000 data points with time/date stamp to your computer or printer using RS-232 or USB. Selectable visual and audible alarms signal measurements outside your set points. The A221 has a backlight display that shows the time and date. Plain-language screen prompts are available in six languages.

Meters include: four AA batteries, manual, and CD with user reference guide. Order pH electrode separately. **Meter kits also include:** a pH electrode, pH 4, 7 and 10 buffers, storage solution, cleaning solution, protective armor with electrode holder and hard carrying case.

MFR #	DESCRIPTION	STOCK #	EACH
STARA1210	Star A121 pH Meter	44821	\$
STARA1215	Star A121 pH Meter Kit with 9107BNMD Electrode	44823	
STARA2210	Star A221 pH Meter	44829	
STARA2215	Star A221 pH Meter Kit with 8107UWMMMD Electrode	44831	

pH ELECTRODES, EPOXY BODY

9107BNMD	Triode, Single Junction, Gel-Filled	35566	\$
9157BNMD	Triode, Single Junction, Refillable	35567	
8107UWMMMD	Ross Ultra™ Triode, Double Junction, Gel-Filled	36992	

USABOOK pH ELECTRODES WITH BUILT-IN ATC, POLYCARBONATE BODY

—	Single Junction, Gel-Filled, 3'L Cable	86314	\$
—	Single Junction, Gel-Filled, 10'L Cable	86313	
—	Double Junction, Gel-Filled, 3'L Cable	86304	

REPLACEMENT ITEMS & ACCESSORIES

900011	Fill Solution, (5) 60-mL Bottles	40393	\$
1010003	Power Adapter for Star A Portable Meters	44889	
STARA-CS	Hard Carry Case for Star A Portable Meters	44891	
STAR-AR	Armor for Star A Portable Meters	44943	
—	Duracell® Coppertop Batteries, AA, Pack of 8	63187	
—	Rayovac® Ultra Pro Alkaline Batteries, AA, Pack of 24	13430	



A221 Meter



A121 Meter



pH

Range:	Star A121: -2.00 to 16.00 pH; Star A221: -2.000 to 20.000
Resolution:	Star A121: 0.1, 0.01 pH; Star A221: 0.1, 0.01, 0.001
Accuracy:	Star A121: ±0.01 pH; Star A221: ±0.002

mV

Range:	Star A121: ±1600.0 mV or 1999.9 RmV; Star A221: ±2000.0 mV
Resolution:	0.1 mV
Accuracy:	±0.2 mV or 0.05% of reading, whichever is greater

Temperature

Range:	-5 to 105°C
Resolution:	0.1
Accuracy:	±0.1

Ready indicator:

yes

Slope calculation & display:

yes

Hold function:

yes

Memory function:

Star A121: 50 points; Star A221: 1000 points

Data output:

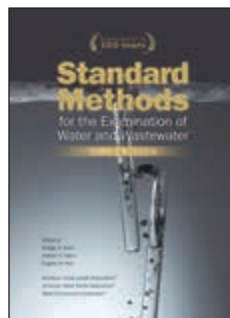
Star A121: no; Star A221: USB and RS-232

We also RECOMMEND...

Standard Methods for the Examination of Water and Wastewater

- AWWA, APHA and WEF
- The worldwide standard text for water analysis since 1905
- The most widely used publication in the water industry

23rd edition; 1504 pages, 2017.



DESCRIPTION	STOCK #	EACH
Standard Methods, 23 rd Edition	68700	\$

Thermo Electrode Fill Solutions

For Orion Electrodes (3M KCl)

Use with: 80-03, 80-05, 80-05U, 81-02, 81-02U, 81-03, 81-03U, 81-04, 81-04U, 81-15, 81-15U, 81-35, 81-35U, 81-55, 81-56, 81-56U, 81-57, 81-62, 81-63, 81-65, 81-66, 81-72, 81-75, 82-02, 82-03, 82-35, 82-56, 82-63, 83-02, 98-30

MFR/REFILL #	SIZE	STOCK #	EACH
810007	(5) 60-mL Bottles	40386	\$

For Orion Electrodes (4M KCl sat. with Ag)

Use with: 91-02, 91-03, 91-04, 91-55, 91-56, 91-57, 91-62, 91-63, 91-64, 91-65, 91-66, 91-67, 91-72, 91-80, 96-78

MFR/REFILL #	SIZE	STOCK #	EACH
900011	(5) 60-mL Bottles	40393	\$

For Orion Electrodes (2M KCl sat. with Ag)

Use with: 92-02, 92-03, 92-56, 92-72, 90-04

MFR/REFILL #	SIZE	STOCK #	EACH
900004	(5) 60-mL Bottles	40369	\$