



## Thermo Scientific Orion Star A324 pH/ISE Portable Meter

The Thermo Scientific Orion Star A324 pH/ISE Portable Meter is the top choice for advanced pH/ISE 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. Advanced features such as stability and averaging options provide additional options allowing for laboratory accuracy everywhere you need it.



### Features and Benefits

- Anyone can use this meter with its plain language screen prompts, soft keys that update for easy selection and a multilanguage interface that supports 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
- Whether you use ISE infrequently or have multiple samples every day – up to 5 point ISE calibration with advanced features such as timed end point, linear point-to-point, non-linear selectable auto-blank and low-concentration range stability
- Fix errors without a complete recalibration with the calibration editing function
- Non-volatile memory holds up to 5000 data points with time and date stamp
- User and sample ID fields for additional data accuracy
- Stores up to 10 methods allow for customized procedures to differentiate between tests and/or users
- Easily transfer data and keep meter software up-to-date with the USB and RS232 ports and complimentary data analysis software
- Four AA batteries (included) provide over 800 hours of operation or purchase the universal power adapter (sold separately) to use AC power
- Perfectly portable, waterproof and protected to take anywhere with a IP67-rated housing
- 3 year meter replacement warranty



## Product Specifications

CE   TUV   FCC		
pH	Range	-2.000 to 20.000
	Resolution	0.1, 0.01, 0.001
	Relative Accuracy	±0.002
	Calibration Points	Up to 5
	Calibration Editing	Yes
mV/Rel mV/ ORP	Range	±2000.0 mV
	Resolution	0.1
	Relative Accuracy	±0.2 mV or ±0.05 % of reading whichever is greater
	E <sub>r</sub> ORP Mode	Yes
ISE	Range	0 to 19999
	Resolution	Up to 3 significant digits
	Relative Accuracy	±0.2 mV or ±0.05 % of reading whichever is greater
	Units	ppm, M, mg/L, %, ppb, none
	Calibration Points	Up to 5
	Calibration Editing	Yes
	Calibration Features	Timed end point, linear point to point, non-linear selectable auto-blank, low concentration range stability
Temperature	Range	-5 to 105 °C, 23 to 221 °F
	Resolution	0.1
	Relative Accuracy	±0.1
	Offset Calibration	1 point
Datalogging	Number of Datalogs	5000 with time and date stamp
	Log Function	Manual, ready (include 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

## Meter Ordering Information

Cat. No.	Description
STARA3240	<b>Orion Star A324 pH/ISE Portable Meter</b> - Four AA batteries (installed)
STARA3245	<b>Orion Star A324 pH/ISE Portable Meter Kit</b> - 8107UWMMMD Orion ROSS Triode 3-in-1 pH/ATC Probe - Orion pH 4, 7 and 10 buffers, 10 pouches of each value - 810001 Orion ROSS electrode storage solution - 911110 Rinse solution, 10 pouches - Protective armor with electrode holder - Hard carrying case - Four AA batteries (installed)

## Accessories

Cat. No.	Description
STARA-CS	Hard carrying case for Orion Star A-series portable meters
1210005	Soft carrying case for Orion Star, Star Plus and Star A-series portable meters
STARA-AR	Armor for Orion Star A-series portable meters, includes electrode holders for pH, conductivity and DO probes
STARA-ESPH	pH electrode holder for Orion Star A-series armor
STARA-ESCD	Conductivity and DO probe holder for Orion Star A-series armor
8107UWMMMD	Orion ROSS Triode 3-in-1 pH/ATC probe, gel-filled, 3m cable
1010003	Optional universal power adapter, 100-240 V, 50/60 Hz
910410	Orion pH 4.01 buffer pouches, 10/pk
910710	Orion pH 7.00 buffer pouches, 10/pk
911010	Orion pH 10.01 buffer pouches, 10/pk
911110	Orion pH rinse solution pouches, 10/pk
9512HPBNWP	Orion high-performance ammonia ISE
9512BNWP	Orion standard ammonia ISE
951007	Ammonia standard, 1000 ppm, 475 mL
951210	Low-level ammonia ISA
951211	Ammonia ISA, 475 mL
951209	Fill solution for Orion high-performance ammonia ISE, 60 mL
951202	Fill Solution for standard ammonia ISE, 60 mL
951213	Ammonia ISE storage solution
9609BNWP	Orion fluoride combination ISE
040906	Fluoride standard, 1 ppm with TISAB II, 475 mL
040907	Fluoride standard, 2 ppm with TISAB II, 475 mL
040908	Fluoride standard, 10 ppm with TISAB II, 475 mL
940909	TISAB II, 1 gallon
8611BNWP	Orion ROSS sodium combination ISE

pH ■

ISE ■

ORP ■

Cond ■

RDO ■

DO ■

Temp ■