

Thermo Scientific Orion Star A329

Premium pH/ISE/conductivity/RDO/dissolved oxygen portable meter

The Thermo Scientific™ Orion™ Star A329 pH/ISE/Conductivity/RDO/Dissolved Oxygen Portable Meter is the top choice for complete sample testing anywhere. It is rugged and dependable, making it ideal for every sample, every day, everywhere.



The Thermo Scientific Orion Star A329 pH/ISE/Conductivity/RDO/Dissolved Oxygen Portable Meter is the top choice for advanced multiparameter measurements on location. Get the information you need quickly and easily from the large, backlit graphic LCD display.

Informative display shows one, two or all three measurement channels with temperature. The displayed measurement channels are selectable to show only the measurement channels you need or all measurement channels at once.

- Measure pH, concentration (ISE), mV or ORP on channel one
- Measure conductivity, TDS, salinity or resistivity on channel two
- Measure dissolved oxygen in percent saturation or concentration on channel three

Helpful measurement display icons include electrode status, time, date, sample ID, user ID and calibration information.

Advanced features allow for laboratory accuracy everywhere you need it.

A comprehensive keypad allows navigation to the setup, calibration and data log modes with ease directly from the measurement mode.



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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 complete recalibration
- Whether you use ISE infrequently or have multiple samples every day—up to 5 point ISE calibration with optional non-linear selectable auto-blank and low-concentration range stability
- Automatic or manual conductivity calibration
- Auto-ranging conductivity measurements for high accuracy across all conductivity ranges
- Selectable reference temperatures of 5, 10, 15, 20 or 25 °C with linear, non-linear or EP curve options for temperature compensated conductivity readings
- Choice of practical salinity or natural sea water curves for salinity readings
- No need to worry about DO probe compatibility—the meter accepts and automatically recognizes Orion polarographic and RDO optical probes
- It's easy to get accurate DO results with automatic temperature, automatic/manual barometric pressure and manual or automatic salinity compensation when used with simultaneously with a conductivity probe
- Calibrate for DO using water-saturated air, air-saturated water, custom value using a Winkler titration or zero point calibration
- 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 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

Description



Keep the Orion Star A329 multiparameter meter where you need it. The kit (cat. no. STARA3295) includes armor for a non-slip grip and pH, conductivity and DO probe holders to keep your probes in place and ready to use.



For hands-free use, the armor (included in the kit or available separately) includes a stand for flat surfaces and strap to wrap around a belt or fixture.

**Thermo Scientific Orion Star A329 pH/ISE/
Conductivity/RDO/Dissolved Oxygen Portable Meter**

Specifications	
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/RmV	Range: ± 2000.0 mV Resolution: 0.1 mV Relative Accuracy: ± 0.2 mV or ± 0.05 % of reading whichever is greater E_H ORP Mode: Yes
ISE	Range: 0.0001 to 19900 Resolution: 0.0001 minimum, auto ranging, up to 3 significant digits (user selectable) 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: Linear point to point, non-linear selectable auto-blank, low concentration range stability
Conductivity	Range: 0.001 μ S to 3000 mS Resolution: 0.001 μ S minimum, auto ranging, up to 4 significant digits Relative Accuracy: ± 0.5 % of reading ± 1 digit for conductivity > 3 μ S ± 0.5 % of reading ± 0.01 μ S for conductivity ≤ 3 μ S Reference Temperature: 5, 10, 15, 20, 25 °C Temperature Compensation: Linear (0 to 10.0 %/°C), nonlinear nLFn & nLFu, EP (USP), off Compatible Cell Constants: 0.001 to 199.9 Calibration Points: Up to 5 points Calibration Editing: Yes
Resistivity	Range: 2 ohm to 100 meg-ohm Resolution: 1 ohm or 0.1 meg-ohm, auto-ranging Relative Accuracy: 0.5 % reading ± 1 digit
Salinity	Type: Practical salinity or natural sea water Range: 0.06 to 80.00 psu, 0.05 to 42.00 ppt Resolution: 0.01 psu, 0.01 ppt Relative Accuracy: 0.5 % reading ± 1 digit
TDS	Range: 0.001 to 200.0 ppt Resolution: 0.001 ppt minimum, auto ranging, up to 4 significant digits Relative Accuracy: ± 0.5 % reading ± 1 digit TDS Factor Range: Linear 0.02 to 9.99

Dissolved Oxygen

Concentration—Polarographic

Range: 0 to 90 mg/L

Resolution: 0.01, 0.1 mg/L

Relative Accuracy: ± 0.2 mg/L or ± 2 % of reading, whichever is greater

% Saturation—Polarographic

Range: 0 to 600 % saturation

Resolution: 0.1, 1 % saturation

Relative Accuracy: ± 2 % saturation or ± 2 % of reading, whichever is greater

Concentration—RDO

Range: 0 to 50 mg/L

Resolution: 0.01, 0.1 mg/L

Relative Accuracy: ± 0.1 mg/L up to 8 mg/L; ± 0.2 mg/L from 8 to 20 mg/L; 10 % of reading from 20 to 50 mg/L

% Saturation—RDO

Range: 0 to 500 % saturation

Resolution: 0.1, 1 % saturation

Relative Accuracy: ± 2 % sat. ≤ 200 % sat., ± 10 % sat. > 200 % sat.

Barometric Pressure Correction:

400 to 850 mmHg, automatic or manual

Salinity Factor Correction: Automatic with

separate conductivity probe or manual; 0 to 45 ppt

Calibration Features: Water saturated air, air saturated water, manual (Winkler) and zero point

Sensor Type: Polarographic or RDO

Temperature

Range: -5 to 105 °C, 23 to 221 °F (RDO/DO: 0 to 50 °C, 32 to 122 °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 or ISE: BNC, reference pin

Conductivity or ATC Probe: 8-pin mini-DIN

DO Probe: 9-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

Part No.	Description
STARA3290	Orion Star A329 pH/ISE/Conductivity/Dissolved Oxygen Portable Meter - Four AA batteries (installed) - Printed quick start guide and literature CD - USB computer cable
STARA3295	Orion Star A329 pH/ISE/Conductivity/Dissolved Oxygen Portable Meter Kit - 8107UWMMMD Orion ROSS Triode 3-in-1 pH/ATC probe, 3 m cable - 013010MD Orion DuraProbe conductivity probe, 3 m cable - 087010MD Orion RDO optical DO probe with 3 m cable, stainless steel guard, calibration sleeve and optical cap - 910410 Orion pH 4.01 buffer, 10 pouches - 910710 Orion pH 7.00 buffer, 10 pouches - 911010 Orion pH 10.01 buffer, 10 pouches - 810001 Orion ROSS electrode storage solution, 475 mL - 01100710 Orion 1413 µS conductivity standard, 10 pouches - 911110 rinse solution, 10 pouches - Protective armor with probe holders - Hard carrying case - Four AA batteries (installed) - Printed quick start guide and literature CD - USB computer cable

Accessories Ordering Information

Part No.	Description
STARA-CS	Orion Star A series portable meter hard-sided field case
1210005	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
STARA-ESCD	Orion conductivity and DO probe holder for portable Star A series meter armor

1010003	Universal power adapter, 100-240 V, 50/60 Hz
8107BNUMD	Orion ROSS Ultra Triode, 1.5 m cable
8107UWMMMD	Orion ROSS Ultra Triode, 3 m cable
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 rinse solution pouches, 10 pack
013005MD	Orion DuraProbe conductivity probe with 1.5 m cable, 4-cell, K=0.475
013010MD	Orion DuraProbe conductivity probe with 3 m cable, 4-cell, K=0.475
013020MD	Orion DuraProbe conductivity probe with 6 m cable, 4-cell, K=0.475
013025MD	Orion DuraProbe conductivity probe with 10 m cable, 4-cell, K=0.475
011008	Orion 100 µS conductivity standard, 5 x 60 mL
01100710	Orion 1413 µS conductivity standard, 10 pack
01100610	Orion 12.9 mS conductivity standard, 10 pack
1010001	Orion conductivity calibration resistor kit
087010MD	Orion RDO optical DO probe, 3 m cable with stainless steel guard and calibration sleeve
087020MD	Orion RDO optical DO probe, 6 m cable with stainless steel guard and calibration sleeve
087030MD	Orion RDO optical DO probe, 10 m cable with stainless steel guard and calibration sleeve
083005MD	Orion polarographic DO probe, 1.5 m cable
080513	Orion polarographic DO probe maintenance kit
087001	Replacement optical cap for Orion RDO probes
9512HPBNWP	Orion high-performance ammonia ISE
9512BNWP	Orion standard ammonia ISE
951007	Ammonia standard, 1000 ppm, 475 mL
951210	Low-level ammonia ISA, 475 mL
951211	Ammonia ISA, 475 mL
951213	Ammonia ISE storage solution, 475 mL
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 with solutions

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.

STARA-CS



STARA-AR



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