## Thermo Scientific Orion Star A223

Advanced RDO/dissolved oxygen portable meter

The Thermo Scientific™ Orion™ Star A223 RD0/Dissolved Oxygen Portable Meter makes necessary testing easier. Its durability and dependability make it a great choice for samples every day, anywhere.









Get the readings that you need where you need them with the Thermo Scientific Orion Star A223 RDO/Dissolved Oxygen Portable Meter. The large, backlit graphic LCD display shows dissolved oxygen in percent saturation or concentration with temperature and electrode status, time, date and compensation settings.

## **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
- Compatible with Orion RDO optical and Orion polarographic DO probes
- Accurate results are easy with automatic temperature, manual salinity and automatic/manual barometric pressure compensation
- Don't miss a reading—AUTO-READ™ locks in the stable reading on your screen and ready indicator alerts when continuous readings are stable

- Calibrate using water-saturated air, air-saturated water, custom value using a Winkler titration or zero point calibration
- Non-volatile memory holds up to 1000 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



STARA-AR

STARA-CS

## **Thermo Scientific Orion Star A223 RDO/Dissolved Oxygen Portable Meter**

	Specifications
Dissolved	Concentration—Polarographic
Oxygen	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
	<b>Relative Accuracy:</b> ±0.1 mg/L up to 8 mg/L;
	$\pm 0.2$ 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
	<b>Relative Accuracy:</b> $\pm 2$ % sat. $\leq 200$ % sat.,
	±10 % sat. > 200 % sat.
	<b>Barometric Pressure Correction:</b>
	400 to 850 mmHg, automatic or manual
	Manual Salinity Factor Correction:
	0 to 45 ppt
	Calibration Features: Water-saturated air,
	air saturated water, manual (Winkler) and
	zero point
Temperature	<b>Range:</b> 0 to 50 °C, 32 to 122 °F
	Resolution: 0.1 °C, 0.1 °F
	<b>Relative Accuracy:</b> $\pm 0.1$ °C, $\pm 0.1$ °F
	Offset Calibration: 1 point
Datalogging	<b>Memory:</b> 1000 with time and date stamp
	<b>Log Function:</b> Manual, Automatic with
	AUTO-READ
Inputs	DO Probe with Built-in Temperature:
-	9-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
STARA2230	Orion Star A223 RDO/Dissolved Oxygen Portable Meter - Four AA batteries (installed) - Printed quick start guide and literature CD - USB computer cable
STARA2235	Orion Star A223 RDO/Dissolved Oxygen Portable Meter Kit  - 087010MD Orion RDO optical probe with 3 m cable, stainless steel guard, calibration sleeve and optical cap  - Protective armor with electrode holder  - Hard-sided field case  - Four AA batteries (installed)  - Printed quick start guide and literature CD  - USB computer cable

Accessories Ordering Information	
Description	
Orion Star A series portable meter hard-sided field case	
Orion Star A series portable meter soft-sided field case	
Orion Star A series portable meter armor with pH electrode holder, conductivity and DO probe holder, stand and adjustable hand-strap	
Orion conductivity and DO probe holder for portable Star A series meter armor	
Universal power adapter, 100-240 V, 50/60 Hz	
Orion RDO optical DO probe, 3 m cable with stainless steel guard and calibration sleeve	
Orion RDO optical DO probe, 6 m cable with stainless steel guard and calibration sleeve	
Orion RDO optical DO probe, 10 m cable with stainless steel guard and calibration sleeve	
Orion RDO optical DO probe, 15 m cable with stainless steel guard and calibration sleeve	
Orion RDO optical DO probe, 30 m cable with stainless steel guard and calibration sleeve	
Orion polarographic DO probe, 1.5 m cable	
Orion polarographic DO probe maintenance kit	
Replacement optical cap for Orion RDO probes	

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.



Thermo Fisher Scientific Water Analysis Instruments Chelmsford, MA USA Quality Management System Registered to ISO 9001

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