



## Thermo Scientific Orion Star A323 & Star A223 RDO/Dissolved Oxygen Portable Meters

### Orion Star A323

The Thermo Scientific Orion Star A323 RDO/Dissolved Oxygen Portable Meter is the top choice for ensuring proper oxygen levels for maximum process control on location. Get the information you need quickly and easily from the large, backlit graphic LCD display. Informative display shows dissolved oxygen in percent saturation or concentration with temperature and 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
- No need to worry about DO probe compatibility – the meter accepts and automatically recognizes Orion polarographic and RDO optical/luminescence-based 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, ready indicator alerts when readings are stable and timed reading gathers data in specific time intervals
- Calibrate using water-saturated air, air-saturated water, a Winkler titration or zero point calibration
- 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



### Orion Star A223

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 calibration points.

#### 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
- No need to worry about DO probe compatibility – the meter accepts and automatically recognizes Orion polarographic and RDO optical/luminescence-based 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 readings are stable
- Calibrate using water-saturated air, air-saturated water, 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 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 (Orion Star A323 & Star A223)

		CE   TUV   FCC
Dissolved Oxygen	<b>Concentration - Polarographic</b>	
	Range	0 to 90 mg/L
	Resolution	0.01, 0.1
	Relative Accuracy	±0.2
	<b>% Saturation - Polarographic</b>	
	Range	0 to 600
	Resolution	0.1, 1
	Relative Accuracy	±2 %
	<b>Concentration - RDO</b>	
	Range	0 to 50 mg/L
	Resolution	0.01, 0.1
	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
	<b>% Saturation - RDO</b>	
	Range	0 to 500
Resolution	0.1, 1	
Relative Accuracy	±2 %	
Manual Barometric Pressure Correction	450.0 to 850.0 mm Hg	
Manual Salinity Factor Correction	0 to 45 ppt	
Calibration Features	Water saturated air, air saturated water, manual (Winkler) and zero point	
Probe Characteristics	Polarographic or RDO	
Temperature	Range	0 to 50 °C, 32 to 122 °F
	Resolution	0.1
	Relative Accuracy	±0.1
	Offset Calibration	1 point
Datalogging	Number of Datalogs	Orion Star A323: 5000 with time and date stamp Orion Star A223: 1000 with time and date stamp
	Log Function	Orion Star A323: Manual, automatic (with Auto-Read™), timed Orion Star A223: Manual, automatic (with Auto-Read™)
Inputs	DO with Temperature Probe	9-pin mini-DIN
Output		RS232, USB
Power	Power Cord	Optional – universal, 100-240 VAC
	Battery Power	Included – 4 AAs
	Battery Life	800 hrs

### Meter Ordering Information

Cat. No.	Description
STARA3230	<b>Orion Star A323 Dissolved Oxygen Portable Meter</b> - Four AA batteries (installed)
STARA3235	<b>Orion Star A323 Dissolved Oxygen Portable Meter Kit</b> - 087010MD Orion RDO optical/luminescence-based probe with 3m cable, stainless steel guard, calibration sleeve and optical/luminescence-based cap - Protective armor with electrode holder - Hard carrying case - Four AA batteries (installed)
STARA2230	<b>Orion Star A223 RDO/Dissolved Oxygen Portable Meter</b> - Four AA batteries (installed)
STARA2235	<b>Orion Star A223 RDO/Dissolved Oxygen Portable Meter Kit</b> - 087010MD Orion RDO optical/luminescence-based probe with 3m cable, stainless steel guard, calibration sleeve and optical/luminescence-based cap - 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
STARA-AR	Armor for Orion Star A-series portable meters, includes electrode holders for pH, conductivity and DO probes
STARA-ESCD	Conductivity and DO probe holder for Orion Star A-series armor
STARA-ESPH	pH electrode holder for Orion Star A-series armor
1010003	Optional universal power adapter, 100-240 V, 50/60 Hz
087010MD	Orion RDO optical DO probe, 3m cable with stainless steel guard and calibration sleeve
087020MD	Orion RDO optical DO probe, 6m cable with stainless steel guard and calibration sleeve
087030MD	Orion RDO optical DO probe, 10m cable with stainless steel guard and calibration sleeve
087050MD	Orion RDO optical DO probe, 15m cable with stainless steel guard and calibration sleeve
087100MD	Orion RDO optical DO probe, 30m cable with stainless steel guard and calibration sleeve
083005MD	Orion polarographic DO probe, 1.5m cable
080513	Orion polarographic DO probe maintenance kit
080514	Orion polarographic DO probe electrolyte solution, 60 mL
080017	Calibration sleeve for Orion polarographic DO probes
087003	Replacement calibration sleeve for Orion RDO optical probes
087001	Replacement optical cap for Orion RDO probes



- pH ■
- ISE ■
- ORP ■
- Cond ■
- RDO ■
- DO ■
- Temp ■