

# Thermo Scientific Orion Star A213

Advanced RDO/dissolved oxygen benchtop meter

The Thermo Scientific™ Orion™ Star A213 RDO/Dissolved Oxygen Benchtop Meter works for any lab or application. Its durability and dependability make it ideal for every BOD sample, every day.



The Thermo Scientific Orion Star A213 RDO/Dissolved Oxygen (DO) Benchtop Meter is the ideal choice for any lab. 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 and temperature with time, date, sample ID, user ID and compensation settings.

## Features and Benefits

- Easy meter operation assured with on-screen text prompts, menu-specific function keys and a multi-language interface
- 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 the stable reading on screen, ready indicator alerts when reading is stable and timed setting logs data at set intervals

- Calibrate using water-saturated air, air-saturated water, custom value using a Winkler titration or zero point calibration
- Non-volatile memory holds up to 2000 data points with time and date stamp
- Easily transfer data with the USB and RS232 ports and complimentary Orion Star Com computer software
- For faster BOD readings, control the Thermo Scientific™ Orion™ AUTO-STIR™ DO/BOD probe (086030MD) directly from the meter
- Included electrode arm and holder make it easier to maintain and place probes into samples
- IP54-rated housing handles splashes and is wall-mountable to save space
- 3 year meter replacement warranty

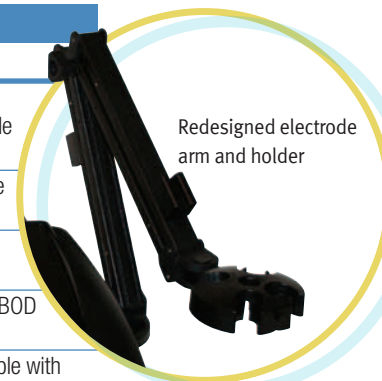
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## Thermo Scientific Orion Star A213 RDO/Dissolved Oxygen Benchtop Meter

| Specifications          |  |
|-------------------------|--|
| <b>Dissolved Oxygen</b> | <p><b>Concentration—Polarographic</b><br/> <b>Range:</b> 0 to 90 mg/L<br/> <b>Resolution:</b> 0.01, 0.1 mg/L<br/> <b>Relative Accuracy:</b> <math>\pm 0.2</math> mg/L or <math>\pm 2</math> % of reading, whichever is greater</p> <p><b>% Saturation—Polarographic</b><br/> <b>Range:</b> 0 to 600 % saturation<br/> <b>Resolution:</b> 0.1, 1 % saturation<br/> <b>Relative Accuracy:</b> <math>\pm 2</math> % saturation or <math>\pm 2</math> % of reading, whichever is greater</p> <p><b>Concentration—RDO</b><br/> <b>Range:</b> 0 to 50 mg/L<br/> <b>Resolution:</b> 0.01, 0.1 mg/L<br/> <b>Relative Accuracy:</b> <math>\pm 0.1</math> mg/L up to 8 mg/L; <math>\pm 0.2</math> mg/L from 8 to 20 mg/L; 10 % of reading from 20 to 50 mg/L</p> <p><b>% Saturation—RDO</b><br/> <b>Range:</b> 0 to 500 % saturation<br/> <b>Resolution:</b> 0.1, 1 % saturation<br/> <b>Relative Accuracy:</b> <math>\pm 2</math> % sat. <math>\leq 200</math> % sat., <math>\pm 10</math> % sat. <math>&gt; 200</math> % sat.</p> <p><b>Barometric Pressure Correction:</b><br/>           400 to 850 mmHg, automatic or manual</p> <p><b>Manual Salinity Factor Correction:</b> 0 to 45 ppt</p> <p><b>Calibration Features:</b> Water-saturated air, air saturated water, manual (Winkler) and zero point</p> |
| <b>Temperature</b>      | <p><b>Range:</b> 0 to 50 °C, 32 to 122 °F<br/> <b>Resolution:</b> 0.1 °C, 0.1 °F<br/> <b>Relative Accuracy:</b> <math>\pm 0.1</math> °C, <math>\pm 0.1</math> °F<br/> <b>Offset Calibration:</b> 1 point</p>   |
| <b>Datalogging</b>      | <p><b>Memory:</b> 2000 with time and date stamp<br/> <b>Log Function:</b> Manual, ready (includes AUTO-READ), timed</p>  |
| <b>Inputs</b>           | <p><b>DO Probe with Built-in Temperature:</b><br/>           9-pin mini-DIN</p>  |
| <b>Output</b>           | <p>RS232, USB</p>  |
| <b>Power</b>            | <p><b>AC Adapter:</b> Included—universal, 100-240 VAC<br/> <b>Battery Power:</b> Optional—4 AAs<br/> <b>Battery Life:</b> 800 hrs</p>  |

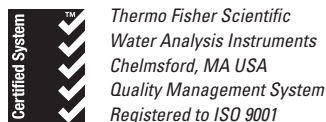
| Meter Ordering Information |   |
|----------------------------|---|
| <b>Part No.</b>            | <b>Description</b>  |
| <b>STARA2130</b>           | <p><b>Orion Star A213 Dissolved Oxygen Benchtop Meter</b></p> <ul style="list-style-type: none"> <li>- Attached electrode stand and holder</li> <li>- Universal power adapter</li> <li>- Printed quick start guide and literature CD</li> <li>- USB computer cable</li> </ul>   |
| <b>STARA2135</b>           | <p><b>Orion Star A213 Dissolved Oxygen Benchtop Meter Kit</b></p> <ul style="list-style-type: none"> <li>- 083005MD Orion polarographic DO probe with calibration sleeve</li> <li>- 080513 DO probe maintenance kit</li> <li>- BOD adapter, funnel and stirrer</li> <li>- Attached electrode stand and holder</li> <li>- Universal power adapter</li> <li>- Printed quick start guide and literature CD</li> <li>- USB computer cable</li> </ul>            |
| <b>STARA2136</b>           | <p><b>Orion Star A213 Dissolved Oxygen Benchtop Meter Kit with Self-Stirring Probe</b></p> <ul style="list-style-type: none"> <li>- 086030MD Orion polarographic AUTO-STIR DO/BOD probe</li> <li>- 080513 DO probe maintenance kit</li> <li>- 080514 DO probe electrolyte</li> <li>- Attached electrode stand and holder</li> <li>- Universal power adapter</li> <li>- Printed quick start guide and literature CD</li> <li>- USB computer cable</li> </ul> |

| Accessories Ordering Information |   |
|----------------------------------|---|
| <b>Part No.</b>                  | <b>Description</b>  |
| <b>STARA-BEA</b>                 | Orion Star A series electrode arm, holder and benchtop meter-attachable base plate      |
| <b>STARA-HB</b>                  | Orion Star A series freestanding base for electrode arm and holder                      |
| <b>083005MD</b>                  | Orion polarographic DO probe, 1.5 m cable   |
| <b>086030MD</b>                  | Orion polarographic AUTO-STIR DO/BOD probe, 1.5 m cable                                 |
| <b>087010MD</b>                  | Orion RDO optical DO probe, 3 m cable with stainless steel guard and calibration sleeve |
| <b>080513</b>                    | Orion polarographic DO probe maintenance kit  |
| <b>080514</b>                    | Orion polarographic DO probe electrolyte solution, 60 mL                                |
| <b>087003</b>                    | Replacement calibration sleeve for Orion RDO optical probes                             |
| <b>087001</b>                    | Replacement optical cap for Orion RDO probes  |



Redesigned electrode arm and holder

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](http://www.thermoscientific.com/water).



[thermoscientific.com/water](http://thermoscientific.com/water)

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