

Modern design,  
advanced  
performance

Thermo Scientific Orion  
Pro Star Electrochemistry  
Bench Meter Series



Discover the Thermo Scientific™ Orion™ Pro Star electrochemistry bench meter series. Designed to provide accurate and reliable electrochemistry testing, the Orion Pro Star supports the way you work. Part of the industry-leading family of Orion electrochemistry products, the Orion Pro Star helps you unlock modern design and advanced performance.



Experience  
**accurate, reliable**  
electrochemistry testing

## Key benefits



Large 7-inch, high-resolution color touchscreen display for optimized viewing and operation



Enhanced user interface featuring guided navigation, troubleshooting assistance and helpful icons/prompts



Small footprint with vertical meter orientation and freestanding electrode holder to facilitate flexible bench placement



Durable construction with dust- and water-resistant housing (IP-54 rated)



Stores up to 10000 data log sets, plus 20 calibration logs per parameter with dates and times to support GLP compliance

High resolution touchscreen

Intuitive user interface

Robust data and calibration log storage

Dust- and water-resistant housing

Reduced bench footprint



## Featured models

The Orion Pro Star series offers a comprehensive selection of models to help support your testing requirements.

- Thermo Scientific Orion Pro Star **PH211 pH/ORP Bench Meter**
- Thermo Scientific Orion Pro Star **EC212 Conductivity Bench Meter**
- Thermo Scientific Orion Pro Star **DO213 Dissolved Oxygen Bench Meter**
- Thermo Scientific Orion Pro Star **PI214 pH/Ion Bench Meter**
- Thermo Scientific Orion Pro Star **PC215 pH/Ion & Conductivity Bench Meter**
- Thermo Scientific Orion Pro Star **PD216 pH/Ion & Dissolved Oxygen Bench Meter**
- Thermo Scientific Orion Pro Star **PI217 Dual Channel pH/Ion Bench Meter**
- Thermo Scientific Orion Pro Star **MP218 pH/Ion, Conductivity & Dissolved Oxygen Bench Meter**





## Advanced analysis

**Designed to deliver fast, reliable results,** the Orion Pro Star was built with efficiency and precision in mind. Featuring pH, conductivity, dissolved oxygen, ion concentration and multi-parameter models, a robust offering provides you with the right tools to help address a variety of analytical challenges. With up to three measurement channels, the Orion Pro Star streamlines your workflow and enhances productivity. Adapt to a range of testing scenarios with three measurement modes—continuous, auto-read and timed read. Additionally, get quick access to preferred settings. The Orion Pro Star saves up to 10 methods per channel to help optimize throughput and convenience



## Practical design

**Featuring a large 7-inch color touchscreen display,** the Orion Pro Star offers a visually immersive interface. Thanks to its vertical meter orientation, it delivers a small footprint that requires minimal bench space. An ergonomic angled screen with anti-glare technology provides optimal visibility and comfort. A freestanding and smooth-moving electrode holder facilitates flexible placement to assist with performing measurements. Wires are also neatly tucked away with embedded cable clips on the electrode holder for improved organization. Designed to withstand your most demanding conditions, the Orion Pro Star is constructed from durable materials and contains dust- and water-resistant housing (IP-54 rated).





## Intuitive interface

Every detail of the Orion Pro Star was **thoughtfully designed** to help make your job easier. From the moment you first power on your meter, innovative features await, like the setup wizard, which guides you through important settings and configurations. The home screen acts as a centralized hub to view measurements, complete calibrations, export data and more. You can even customize the way your data is displayed—simply select basic, advanced or custom layouts. The Orion Pro Star boasts an intuitive interface that's easy for technical and non-technical users to operate. Helpful features, such as a measurement stability indicator and calibration guidance, help ensure accurate and reliable measurements. Should an error occur, the Orion Pro Star is ready to help by providing on-screen troubleshooting assistance.



## Functional features

Built with efficiency and practicality in **mind**, the Orion Pro Star supports the way you work. A meter-controlled and meter-powered stirrer probe provides uniform sample mixing.<sup>1</sup> For multi-parameter meters, one temperature sensor can be used across multiple channels. When it's time for routine maintenance, the Orion Pro Star can notify you via a friendly alert. To assist with security, the Orion Pro Star supports up to three administrators with full access and up to 30 users with customizable access, all secured with individual password protection for precise control over account permissions. Additionally, software updates are seamlessly installed via a USB flash drive, making it easy to keep your meter current with the latest features and advancements.

1. Stirrer probe not included as standard accessory with all Orion Pro Star electrochemistry bench meters. Check instrument ordering information on [thermofisher.com](https://thermofisher.com) for more details.







## Dependable data

**Effortlessly save and export measurements for long-term data retention** with the Orion Pro Star. Store, display and manage up to 10000 data sets and 20 calibration logs per parameter, each complete with date and time stamps. Tailor reports to meet your specific needs by selecting data fields and including methods and calibration logs. Each entry provides comprehensive measurement information, neatly organized in an easy-to-read onscreen list, and can be integrated with your Laboratory Information Management System (LIMS) software. Filter data logs by user, date, time or log number, and export them using specific date and time ranges, log number ranges, or all at once. With the Orion Pro Star, easily export data to a printer, computer or USB flash drive for seamless data management and accessibility.





# Applications

From source water to **wastewater** and everything in between, the Orion Pro Star is well equipped to **address your toughest analytical challenges.**

Drinking water



Food and beverage



Industrial



Wastewater



Environmental



Chemical



Petrochemical





# Selection guide

Find the right Orion Pro Star electrochemistry bench meter for your needs. Browse parameter capabilities and instrument features to select the right fit for your measurement requirements.



|                                          | Orion Pro Star<br>PH211 | Orion Pro Star<br>EC212 | Orion Pro Star<br>DO213 | Orion Pro Star<br>PI214 | Orion Pro Star<br>PC215 | Orion Pro Star<br>PD216 | Orion Pro Star<br>PI217 | Orion Pro Star<br>MP218 |
|------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Parameters                               |                         |                         |                         |                         |                         |                         |                         |                         |
| pH                                       | ✓                       |                         |                         | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |
| mV                                       | ✓                       |                         |                         | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |
| ORP                                      | ✓                       |                         |                         | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |
| Ion Concentration                        |                         |                         |                         | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |
| Conductivity                             |                         | ✓                       |                         |                         | ✓                       |                         |                         | ✓                       |
| Total Dissolved Solids<br>(TDS)          |                         | ✓                       |                         |                         | ✓                       |                         |                         | ✓                       |
| Salinity                                 |                         | ✓                       |                         |                         | ✓                       |                         |                         | ✓                       |
| Resistivity                              |                         | ✓                       |                         |                         | ✓                       |                         |                         | ✓                       |
| Dissolved Oxygen (DO)<br>as % Saturation |                         |                         | ✓                       |                         |                         | ✓                       |                         | ✓                       |
| Dissolved Oxygen (DO)<br>as mg/L         |                         |                         | ✓                       |                         |                         | ✓                       |                         | ✓                       |
| Dissolved Oxygen (DO)<br>as ppm          |                         |                         | ✓                       |                         |                         | ✓                       |                         | ✓                       |
| Temperature                              | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |
| Features                                 |                         |                         |                         |                         |                         |                         |                         |                         |
| Color Touchscreen<br>Display             | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |
| Freestanding Electrode<br>Holder         | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |
| Stirrer Probe*                           | ✓                       | ✓                       | ✓                       | ✓                       | ✓✓                      | ✓✓                      | ✓✓                      | ✓✓                      |
| USB Flash Drive                          | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       | ✓                       |

\*Stirrer probe not included as standard accessory with all Orion Pro Star electrochemistry bench meters. Meters with one checkmark contain one stirrer probe input; meters with two checkmarks contain two stirrer probe inputs. Check instrument ordering information on [thermofisher.com](http://thermofisher.com) for more details.



# Meter model overview

## Orion Pro Star PH211 pH/ORP Bench Meter

- Measure pH, mV or ORP with temperature
- ±0.002 pH relative accuracy across -2 to 20 pH range
- Obtain temperature measurements automatically using an ATC sensor, manually or using ambient air temperature



## Orion Pro Star DO213 Dissolved Oxygen Bench Meter

- Measure dissolved oxygen as % saturation, concentration as mg/L or concentration as ppm with barometric pressure and temperature
- ±2% saturation, mg/L or ppm relative accuracy across 0.0 to 600.0% saturation or 0.01 to 90.0 mg/L or ppm range
- Automatically compensate dissolved oxygen readings for barometric pressure, using the built-in barometer or manual entry, and salinity, using manual entry



## Orion Pro Star EC212 Conductivity Bench Meter

- Measure conductivity, total dissolved solids (TDS), salinity or resistivity with temperature
- ±0.5% reading relative accuracy across 0.010 µS/cm to 3000 mS/cm range
- Perform temperature-compensated conductivity readings using linear, non-linear, EP/USP or off-compensation options and reference temperature options of 5, 10, 15, 20, 25 or 30°C



## Orion Pro Star PI214 pH/Ion Bench Meter

- Measure pH, mV, ORP or ion concentration with temperature
- ±0.2 mV or ±0.05% of the reading relative accuracy across 0.0001 to 19999 ion concentration range
- Utilize selectable ion concentration units of ppt, ppm, ppb, mg/L, M, mM, %, none or user-defined



# Ordering information

Choose from a selection of Orion Pro Star electrochemistry bench meters and meter kits offering different parameter capabilities and testing options for various application requirements.

| Description                                                       | Cat. No.  |
|-------------------------------------------------------------------|-----------|
| Orion Pro Star PH211 pH/ORP bench meter with stand                | PSTAR2110 |
| Orion Pro Star PH211 pH/ORP bench meter difficult sample kit      | PSTAR2114 |
| Orion Pro Star PH211 pH/ORP bench meter standard kit              | PSTAR2115 |
| Orion Pro Star PH211 pH/ORP bench meter durable kit               | PSTAR2116 |
| Orion Pro Star PH211 pH/ORP bench meter low maintenance kit       | PSTAR2117 |
| Orion Pro Star PH211 pH/ORP bench meter micro kit                 | PSTAR2118 |
| Orion Pro Star PH211 pH/ORP bench meter ORP kit                   | PSTAR2119 |
| Orion Pro Star EC212 conductivity bench meter with stand          | PSTAR2120 |
| Orion Pro Star EC212 conductivity bench meter standard kit        | PSTAR2125 |
| Orion Pro Star EC212 conductivity bench meter pure water kit      | PSTAR2126 |
| Orion Pro Star DO213 dissolved oxygen bench meter with stand      | PSTAR2130 |
| Orion Pro Star DO213 dissolved oxygen bench meter standard DO kit | PSTAR2135 |
| Orion Pro Star DO213 dissolved oxygen bench meter BOD kit         | PSTAR2136 |
| Orion Pro Star DO213 dissolved oxygen bench meter optical DO kit  | PSTAR2137 |
| Orion Pro Star PI214 pH/ion bench meter with stand                | PSTAR2140 |
| Orion Pro Star PI214 pH/ion bench meter pH kit                    | PSTAR2145 |
| Orion Pro Star PI214 pH/ion bench meter ammonia kit               | PSTAR2146 |
| Orion Pro Star PI214 pH/ion bench meter fluoride kit              | PSTAR2147 |
| Orion Pro Star PI214 pH/ion bench meter sodium kit                | PSTAR2148 |





# Meter model overview

## Orion Pro Star PC215 pH/Ion & Conductivity Bench Meter

- Measure pH, mV, ORP or ion concentration with temperature on channel 1
- Measure conductivity, total dissolved solids (TDS), salinity or resistivity with temperature on channel 2
- View channels simultaneously or individually



## Orion Pro Star PD216 pH/Ion & Dissolved Oxygen Bench Meter

- Measure pH, mV, ORP or ion concentration with temperature on channel 1
- Measure dissolved oxygen as % saturation, concentration as mg/L or concentration as ppm with barometric pressure and temperature on channel 2
- View channels simultaneously or individually



## Orion Pro Star PI217 Dual Channel pH/Ion Bench Meter

- Measure pH, mV, ORP or ion concentration with temperature on channel 1 and channel 2
- Perform 1- to 5-point pH calibrations, 1-point ORP calibrations, 1- to 5-point ion concentration calibrations and 1- to 2-point temperature calibrations
- View channels simultaneously or individually



## Orion Pro Star MP218 pH/Ion, Conductivity & Dissolved Oxygen Bench Meter

- Measure pH, mV, ORP or ion concentration with temperature on channel 1
- Measure conductivity, total dissolved solids (TDS), salinity or resistivity with temperature on channel 2
- Measure dissolved oxygen as % saturation, concentration as mg/L or concentration as ppm with barometric pressure and temperature on channel 3
- View channels simultaneously or individually



# Ordering information

Choose from a selection of Orion Pro Star electrochemistry bench meters and meter kits offering different parameter capabilities and testing options for various application requirements.

| Description                                                                                      | Cat. No.  |
|--------------------------------------------------------------------------------------------------|-----------|
| Orion Pro Star PC215 pH/ion and conductivity bench meter with stand                              | PSTAR2150 |
| Orion Pro Star PC215 pH/ion and conductivity bench meter standard kit                            | PSTAR2155 |
| Orion Pro Star PC215 pH/ion and conductivity bench meter pure water kit                          | PSTAR2156 |
| Orion Pro Star PD216 pH/ion and DO bench meter with stand                                        | PSTAR2160 |
| Orion Pro Star PD216 pH/ion and DO bench meter standard pH and DO kit                            | PSTAR2165 |
| Orion Pro Star PD216 pH/ion and DO bench meter pH and BOD kit                                    | PSTAR2166 |
| Orion Pro Star PD216 pH/ion and DO bench meter pH and optical DO kit                             | PSTAR2167 |
| Orion Pro Star PI217 dual channel pH/ion bench meter with stand                                  | PSTAR2170 |
| Orion Pro Star PI217 dual channel pH/ion bench meter standard pH kit                             | PSTAR2175 |
| Orion Pro Star PI217 dual channel pH/ion bench meter durable pH kit                              | PSTAR2176 |
| Orion Pro Star PI217 dual channel pH/ion bench meter pH and ammonia kit                          | PSTAR2177 |
| Orion Pro Star PI217 dual channel pH/ion bench meter pH and fluoride kit                         | PSTAR2178 |
| Orion Pro Star PI217 dual channel pH/ion bench meter pH and sodium kit                           | PSTAR2179 |
| Orion Pro Star MP218 pH/ion, conductivity and DO bench meter with stand                          | PSTAR2180 |
| Orion Pro Star MP218 pH/ion, conductivity and DO bench meter pH, conductivity and DO kit         | PSTAR2185 |
| Orion Pro Star MP218 pH/ion, conductivity and DO bench meter pH, conductivity and optical DO kit | PSTAR2186 |
| Orion Pro Star MP218 pH/ion, conductivity and DO bench meter pH and conductivity kit             | PSTAR2187 |





# Orion electrodes

Unlock the power and precision of Thermo Scientific™ Orion™ ROSS Ultra™, Thermo Scientific™ Orion™ ROSS™ SureFlow™, Thermo Scientific™ Orion™ ROSS™ and Thermo Scientific™ Orion™ electrodes. Choose from a wide variety of body materials, designs and features to find the right electrode for your application.



| Description                                                            | Cat. No.  |
|------------------------------------------------------------------------|-----------|
| ROSS Ultra Triode refillable glass-body pH/ATC electrode               | 8302BNUMD |
| ROSS Ultra Triode refillable epoxy-body pH/ATC electrode               | 8157BNUMD |
| ROSS Ultra Triode gel-filled epoxy-body pH/ATC electrode               | 8107BNUMD |
| ROSS Ultra combination refillable glass-body pH electrode              | 8102BNUWP |
| ROSS Ultra combination refillable epoxy-body pH electrode              | 8156BNUWP |
| ROSS Ultra semi-micro combination refillable glass-body pH electrode   | 8103BNUWP |
| ROSS Ultra semi-micro combination refillable epoxy-body pH electrode   | 8115BNUWP |
| ROSS micro combination refillable glass-body pH electrode              | 8220BNWP  |
| ROSS Ultra flat surface combination refillable epoxy-body pH electrode | 8135BNUWP |
| ROSS spear tip combination refillable glass-body pH electrode          | 8163BNWP  |
| ROSS Sure-Flow combination refillable epoxy-body pH electrode          | 8165BNWP  |
| ROSS Sure-Flow combination refillable glass-body pH electrode          | 8172BNWP  |
| ATC temperature probe with epoxy body                                  | 927005MD  |
| ATC temperature probe with stainless steel body                        | 927007MD  |
| ATC micro temperature probe with stainless steel body                  | 928007MD  |
| ORP/ATC Triode refillable epoxy-body electrode                         | 9180BNMD  |
| ORP Sure-Flow combination refillable epoxy-body electrode              | 9678BNWP  |
| Ammonia combination ion selective electrode                            | 9512BNWP  |
| Ammonia high-performance combination ion selective electrode           | 9512BNWP  |
| Chloride combination ion selective electrode                           | 9617BNWP  |
| Fluoride combination ion selective electrode                           | 9609BNWP  |
| Sodium combination ion selective electrode                             | 8611BNWP  |
| Conductivity/ATC epoxy/graphite body electrode (4-cell, K=0.475)       | 013005MD  |
| Conductivity/ATC stainless steel electrode (2-cell, K=0.1)             | 013016MD  |
| Polarographic DO/ATC electrode with calibration sleeve                 | 083005MD  |
| Polarographic AUTO-STIR DO/ATC electrode with calibration sleeve       | 086030MD  |
| Optical DO/ATC electrode with calibration sleeve and protective sleeve | 087010MD  |



# Orion solutions

Achieve accurate and reproducible results with Thermo Scientific™ Orion™ solutions. Explore our extensive selection of buffers, standards, storage solutions and more.



| Description                                                                                                                                       | Cat. No.  |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Standard all-in-one pH buffer kit: pH 4.01, 7.00 and 10.01 buffers (475 mL each) and pH electrode storage solution                                | 910199    |
| ROSS all-in-one pH buffer kit: pH 4.01, 7.00 and 10.01 buffers (475 mL each), ROSS pH electrode storage, and 60 mL of electrode cleaning solution | 810199    |
| pH 1.68 buffer, 475 mL                                                                                                                            | 910168    |
| pH 4.01 buffer, 475 mL                                                                                                                            | 910104    |
| pH 6.86 buffer, 475 mL                                                                                                                            | 910686    |
| pH 7.00 buffer, 475 mL                                                                                                                            | 910107    |
| pH 9.18 buffer, 475 mL                                                                                                                            | 910918    |
| pH 10.01 buffer, 475 mL                                                                                                                           | 910110    |
| pH 12.46 buffer, 475 mL                                                                                                                           | 910112    |
| pH 4.01 buffer, 25 individual-use pouches                                                                                                         | 910425    |
| pH 7.00 buffer, 25 individual-use pouches                                                                                                         | 910725    |
| pH 10.01 buffer, 25 individual-use pouches                                                                                                        | 911025-WA |
| Electrode storage solution, 475 mL                                                                                                                | 910001    |
| ROSS electrode storage solution, 475 mL                                                                                                           | 810001    |
| ORP standard, +420 mV standard hydrogen electrode, 475 mL                                                                                         | 967901    |
| 100 ppm ammonia as nitrogen standard, 475 mL                                                                                                      | 951207    |
| Ammonia ionic strength adjuster (ISA) with pH-indicating blue dye, 475 mL                                                                         | 951211    |
| 100 ppm chloride standard, 475 mL                                                                                                                 | 941707    |
| Chloride ionic strength adjuster (ISA), 475 mL                                                                                                    | 940011    |
| 100 ppm fluoride standard, 475 mL                                                                                                                 | 940907    |
| 10 ppm fluoride standard premixed with TISAB II, 475 mL                                                                                           | 040908    |
| 5 ppm fluoride standard premixed with TISAB II5, 475 mL                                                                                           | F40905    |
| 2 ppm fluoride standard premixed with TISAB II, 475 mL                                                                                            | 040907    |
| 1 ppm fluoride standard premixed with TISAB II, 475 mL                                                                                            | 040906    |
| 0.5 ppm fluoride standard premixed with TISAB II, 475 mL                                                                                          | F40904    |
| Fluoride TISAB II solution, 1 gallon                                                                                                              | 940909    |
| 100 ppm sodium standard, 475 mL                                                                                                                   | 941107    |
| Sodium ionic strength adjuster (ISA), 475 mL                                                                                                      | 841111    |
| 100 µS/cm conductivity/TDS standard, 5 x 60 mL                                                                                                    | 011008    |
| 1413 µS/cm conductivity/TDS standard, 5 x 60 mL                                                                                                   | 011007    |
| 12.9 mS/cm conductivity/TDS standard, 5 x 60 mL                                                                                                   | 011006    |
| 111.9 mS/cm conductivity standard, 5 x 60 mL                                                                                                      | 011005    |
| 1413 µS/cm conductivity/TDS standard, 10 individual-use pouches                                                                                   | 01100710  |
| 12.9 mS/cm conductivity/TDS standard, 10 individual-use pouches                                                                                   | 01100610  |
| 111.9 mS/cm conductivity standard, 10 individual-use pouches                                                                                      | 01100510  |



# Orion Pro Star accessories

Enhance your Orion Pro Star experience with a range of premium accessories designed to maximize functionality and convenience. From protective covers to barcode scanners, each accessory supports optimal performance and efficiency for your workflow.

| Description                                                                                        | Cat. No.  |
|----------------------------------------------------------------------------------------------------|-----------|
| Orion bench meter stirrer probe                                                                    | 096019-WA |
| Orion compact ink printer, includes meter cable, paper, ink ribbon, 100-240V 50/60Hz power adapter | STARA-106 |
| Orion Pro Star series USB flash drive                                                              | PSTAR-UFD |
| Orion Pro Star series USB mouse                                                                    | PSTAR-UMS |
| Orion Pro Star series USB keyboard                                                                 | PSTAR-UKB |
| Orion Pro Star series USB barcode scanner                                                          | PSTAR-UBS |
| Orion Pro Star series electrode stand with base                                                    | PSTAR-ARM |
| Orion Pro Star series universal power supply, 100-240V, 50/60Hz                                    | PSTAR-PWR |
| Orion Pro Star series USB computer cable                                                           | PSTAR-USB |
| Orion Pro Star series standard protective display cover                                            | PSTAR-PCS |
| Orion Pro Star series rugged protective display cover                                              | PSTAR-PCR |



Learn more at [thermofisher.com/orionprostar](https://thermofisher.com/orionprostar)

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