

### Introducing the latest Thermo Scientific Orion Star Meters

Orion VERSA STAR and Star A Meters

The new Orion Star<sup>™</sup> A and VERSA STAR<sup>™</sup> meters are built on the quality and expertise you've come to expect from the Orion product line. The expanded offering combines the tried-and-true features relied on by many professionals with new features concentrated on making them easier to use and minimizing the time needed to train others or to refer to instructions.



Orion /ERSA STAR Benchtop Series

The Orion VERSA STAR advanced benchtop meter and modules exemplify versatility. Four channels can be configured in any combination. Define the channels as you need them. Some suggestions are: four different parameters for complete multiparameter analysis, two sets of two different parameters for simultaneous dual-parameter testing or even four of the same for really high throughput. The versatility also shows in the large, customizable color display; ability to handle the testing spectrum from simple readings to advanced ISE applications; redesigned electrode holder head and exclusive auto-recognition capability for Orion optical RDO and polarographic DO probes. Orion VERSA STAR meters have all the best features and options to work with any application, even the unexpected.

To complement the new meters, we've kept our specialized, industry-proven meters. The Orion DUAL STAR meters are easy-to-use with two channels for simultaneous measurement. For environments that need non-sparking meters, the Orion Intrinsically-Safe Meters meet that criteria and are US intrinsicallysafe rated.

Our 2012 Orion meter offering means no more settling for a meter – get the right fit for your application and testing needs.

Orion Star A320 and A200-series meters offer dependability and are an easy choice if you need a dedicated single or multiparameter meter for accurate and repeatable measurements every day. Built with the testing location in mind, the benchtop meters feature an Orion Star stirrer probe port and include the redesigned electrode holder head. The portable meters are waterproof with an IP67-rated housing and have the option to accept AC power. The large, backlit graphic display shows results with plain language prompts. Exclusive auto-recognition capability for Orion optical RDO and polarographic DO probes lets you choose the best probe for your application, not limiting your probe options. These meters are the ideal choice for any lab, for every sample, every day.

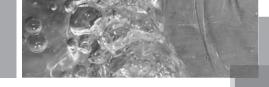
## Orion Star A320 & A200 Series



## Orion Star A100 Series

For simplicity and affordability without sacrificing accuracy, look no further than the Orion Star A100-series meters. These single parameter meters are available in benchtop and portable housings. The simple keypad layout combined with the dedicated onscreen messages help with calibration and setup. Orion Star A100-series meters provide just the core information you need.

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M	odel (Benchtop Meters)	Orion VERSA STAR Premium	Orion DUAL STAR Advanced	Orion Star A200 Series Advanced	Orion Star A100 Series Basic
Ex	ample Display	Charmed 1 PritAmenoment 22.2010   Charmed 1 PritAmenoment 11.91   Charmed 2 Cond Manuscrement 11.90   Charmed 3 ROD Manuscrement 11.90   Charmed 4 97.65 %.35 ° CARD   Charmed 3 ROD Manuscrement 11.90   Charmed 4 97.65 %.35 ° CARD   Charmed 5 ROD Manuscrement 11.90   Charmed 6 97.65 %.35 ° CARD   Charmed 7 97.65 %.35 ° CARD   Charmed 8 ROD Manuscrement 11.90   Rader 97.65 %.35 ° CARD   Charmed 8 ROD Manuscrement 11.90   Rader 97.65 %.35 ° CARD   Charmed 8 ROD Manuscrement 11.90   Charmer 7 20.00 mm 24 ° CARD 70.00 mm 24 ° CARD   Cold Manuscrement 11.60 70.00 mm 24 ° CARD   Cold Manuscrement 11.40 70.00 mm 24 ° CARD	Сл. 20.9°С 4. Lubitizing 20.9°С AACC рн 4. Ст.	pH ready (2) rec 7.00 pH 25.0°C ready (2) rec 99.2 Xaat 25.0°C (2) rec 99.2 Xaat 25.0°C (2) rec 99.2 Xaat	₩EAS 224° × 0 549**
Di	splay Type	Customizable color graphic LCD with step-by-step text prompts	Graphic LCD with step-by-step text prompts	Graphic LCD with step-by-step text prompts	Fixed segment LCD with basic text prompts
Ke	ypad	Numeric with menu-specific function keys	Numeric with menu-specific function keys	Comprehensive with menu-specific function keys	Simple with highlighted measure key
Number of Channels		1 to 4	2	1 to 2	1
Orion Star Stirrer Probe Control		2	1	1	-
Datalog		2000 with date/time	1000 with date/time	2000 with date/time	50
USB Output		2	1	1	-
RS232 Output Methods		10 per channel	10 per channel	10	-
IVI	рН	Versa Star 10 meter with pH module Versa Star 80 meter with pH/LogR module Versa Star 50 meter with pH, conductivity modules	Dual Star meter with two pH/ISE channels	Star A211 pH meter Star A215 pH/ conductivity meter Star A216 pH/RDO/DO meter	- Star A111 pH meter
		Versa Star 40A meter with pH/ISE module Versa Star 40B meter with two pH/ISE modules	Dual Star meter with two pH/ISE channels	Star A214 pH/ISE meter	-
	Resistivity/Salinity	Versa Star 20 meter with conductivity module Versa Star 50 meter with pH, conductivity modules	-	Star A212 conductivity meter Star A215 pH/ conductivity meter	-
ete	Conductivity, TDS	-	-	-	Star A112 conductivity meter
Parameter	RDO Optical & Polarographic Dissolved Oxygen	Versa Star 30 meter with RDO/DO module	-	Star A213 RDO/DO meter Star A216 pH/RDO/DO meter	-
	Polarographic Dissolved Oxygen	-	-	-	Star A113 DO meter
	pH/ISE/Conductivity/ RDO/DO	Versa Star 90 meter with pH/ISE, conductivity, RDO/DO modules Versa Star 90 meter with two pH/ISE, conductivity, RDO/DO modules	-	-	-
	Selectable Meter Components	Versa Star meter customizable with up to four pH modules ● pH ● pH/ISE ● pH/LogR ● Conductivity ● RDO/DO	-	-	-

Мо	del (Portable Meters)	Orion Star A300 Series Premium	Orion Star A200 Advanced	Orion Star A100 Series Basic	Orion Intrinsically Safe
Exa	ımple Display	Image: State of the	Image: Second		<b>900</b> 260°
Display Type Keypad		Graphic LCD with step-by-step text prompts	Graphic LCD with step-by-step text prompts	Fixed segment LCD with basic text prompts	Fixed segment LCD
		Comprehensive with menu-specific function keys	Comprehensive with menu-specific function keys	Simple with highlighted measure key	Simple
Number of Channels		1 to 3	1	1	100 with date/time (266S, 136S only)
Datalog		5000 with date/time	1000 with date/time	50	100 with date/time on select meters
USB Output		1	1	-	-
RS232 Output		1	1	-	1 (266S, 136S only)
Me	thods	10	—	-	-
	рН	Star A321 pH meter Star A325 pH/conductivity meter Star A326 pH/RDO/DO meter	Star A221 pH meter	Star A121 pH meter	261S pH meter 266S pH meter
	ISE	Star A324 pH/ISE meter	-	-	-
	Conductivity/TDS/ Resistivity/Salinity	Star A322 conductivity meter Star A325 pH/conductivity meter	Star A222 conductivity meter	-	-
arameter	Conductivity/TDS	-	-	Star A122 conductivity meter	131S conductivity meter 136S conductivity meter
Para	RDO Optical & Polarographic Dissolved Oxygen	Star A323 RDO/DO meter Star A326 pH/RDO/DO meter	Star A223 RDO/DO meter	-	-
	Polarographic Dissolved Oxygen	-	-	Star A123 DO meter	-
	pH/ISE/Conductivity/ RDO/DO	Star A329 pH/ISE/conductivity/RDO/DO meter	-	-	-

Introduction





Orion VERSA STAR Meters

## **Thermo Scientific Orion VERSA STAR**

Advanced Electrochemistry Meter

Visible indicators to quickly show how each of the four channels are assigned

Calibration information with buffer points and electrode slope from last calibration

Function keys that update depending on your screen and shortcut keys on the keypad make this meter easy for anyone to use The large, color graphic display is easy on the eyes and

Four channels to mix and match in any combination as you need

> Display information can be customized to show only the information you need

can be seen from any angle

More BIG surprises just for you! Find out on the following pages.

> This versatile meter has a large, color graphic LCD display. The informative (and customizable) display shows readings, connections, time, date, sample ID, user ID and calibration information.

### Features and Benefits

7.000

10.410 U.450

2.000 4.010 2.000 pt pt pt

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 Select from five modules to customize the four channels your way it's versatile for you to configure how you need it for now or for later

25.0 ·c (ATC)

0.0 mV

- Anyone can use this meter with its plain language screen prompts, function keys that update for easy selection and a multilanguage interface that supports English, Spanish, French, Italian, German and Chinese
- Non-volatile memory holds up to 2000 data points with time and date stamp
- Memory for up to 10 methods per channel allow for customized procedures to differentiate between tests and/or users

- Data transfer and updating meter software is easy with two USB and RS232 ports
- Includes data analysis software for transferring stored results or displaying readings in real-time
- Mix samples without a stir plate with direct control for two Orion Star stirrer probes (096019, sold separately)
- Included electrode arm and newlydesigned probe holder make it easier to maintain and place probes into samples
- Works with almost every AC power source with the included universal power adapter
- IP54-rated housing handles splashes
- 3 year meter replacement warranty

# A variety of modules that you can place in any of the four channels.

#### • pH/Temperature Module Allows:

- Up to 6 point pH calibration with automatic recognition for USA/NIST and DIN buffers
- Fixing of calibration errors without a complete recalibration with calibration editing
- Use the pH/ISE/Temperature Module for:
  - All the benefits of the pH module
  - Fixing pH/ISE calibration errors without a complete recalibration with calibration editing
  - Advanced ISE benefits such as auto-blank, timed end point, linear point-to-point, non-linear selectable auto-blank, low-concentration range stability, ISE ID and incremental techniques

### • Conductivity/Temperature Module Offers:

- Conductivity, TDS, salinity or resistivity capabilities
- Selectable reading reference temperatures of 5, 10, 15, 20 or 25 °C with linear, non-linear, nLFu or USP/EP curve options for conductivity
- Choice of practical salinity or natural sea water curves for salinity readings
- Linear or ISO/EN 27888 curves for TDS

### • Dissolved Oxygen/RDO/Temperature Module:

- Takes the worry out of DO probe compatibility the meter accepts and automatically recognizes Orion polarographic and RDO optical/luminescence-based probes
- Compensates automatically for temperature, salinity with manual input and barometric pressure (automatic or manual)
- Allows for calibration using water-saturated air, air-saturated water, a Winkler titration or zero point
- Calculates BOD/DOUR/SOUR readings when combined with the complimentary data analysis software

### • Module Featuring LogR Technology:

- Includes all of the features of the pH module with the added benefits of:
- The most advanced electrode diagnostics
- No temperature sensor needed to get temperaturecompensated pH readings

Orion VERSA STAR meters are about versatility, even with accessories. Shown here – the electrode arm can be attached on either side.

> Orion VERSA STAR meters can be configured a variety of ways at any time. This example shows a meter with the pH/LogR module and a pH/ISE module.

> > No need to turn off your meter to switch modules – meter automatically recognizes module changes.