

Thermo Scientific Orion Versa Star Pro Benchtop Meters

Versatile, high-performance lab measurement systems

Thermo Scientific™ Orion™ Versa Star Pro™ premium electrochemistry meter is your meter as you need it – now and in the future.



Applications

- Pharmaceutical
- Biotechnology
- Food and beverage
- Industrial
- Environmental
- Drinking water
- Wastewater



Thermo Scientific Orion Versa Star Pro benchtop meters are designed to meet your most challenging applications with ease. Delivering rich features and functionality, you can optimally configure your meter system to meet your changing needs using interchangeable measurement modules to customize four channels.

Easily view your measurements on a large color display with adjustable text sizes. Take the guesswork out of meter calibration and setup with onscreen instructions available in a variety of languages. Enjoy quick and simple data entry using the numeric keypad.

Orion Versa Star Pro meters offer a system access feature for administrative and custom user access levels to various meter functions including data/time settings, meter setup, data log and calibration log. The system access feature can easily be turned on or off as the needs of your lab change for flexibility in operation and ease-of-use.

Features and Benefits:

- Select modules to measure pH, ion concentration (ISE), conductivity, dissolved oxygen and LogR temperature
- Onscreen measurement stability indicator shows when readings are ready
- View active calibration log while taking measurements to ensure data integrity
- Audible alarms notify offset value, high/low limit, and calibration time limit
- Mix samples using meter-controlled stirrer probes that can be easily rinsed
- Collect up to 2000 data sets with time/date stamp and optional electrode, sample and account identification
- Calibration log stores 30 calibrations per parameter
- Non-volatile memory preserves data and settings, even in event of power loss
- Transfer data to computer or printer via USB or RS232

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System Access Feature

Use the new system access feature offered with Orion Versa Star Pro meters to assign administrative and custom user access levels to the following meter functions:

- Cal Log View & Print
- Calibration Log Delete
- Calibration Mode
- Channel Display
- Diagnostics Menu
- Data Log Delete
- Data Log Print
- Data Log View
- Incremental Techniques
- Instrument Settings
- Log/Print (Manual)
- Measure Mode & Settings
- Methods
- Sample ID
- Temperature Settings

Use password protection to secure selected meter functions while leaving others accessible for the customized security needed for your laboratory and data reporting needs. The system access feature can easily be turned on or off as the needs of your lab change for the ultimate flexibility in operation and ease-of-use.



Create name, password and access level for up to ten users



Secure your preferred meter functions using the custom access level

Versa Star Measurement Modules

Select the measurement modules you need to best fit your application requirements.

Orion Versa Star Pro meters are available without modules for maximum flexibility in your preferred meter configuration or with modules in preconfigured systems that can be updated at any time by adding or removing modules. Modules are automatically recognized by the meter and the channel measurement capabilities are updated according to the type of module that is installed.



Cat. No.	Description
VSTAR-PH	Versa Star pH Module to measure pH, mV, relative mV, ORP and temperature
VSTAR-LR	Versa Star pH/LogR Module to measure pH, mV, relative mV, ORP and LogR temperature
VSTAR-ISE	Versa Star pH/ISE Module to measure pH, ion concentration (ISE), mV, relative mV, ORP and temperature
VSTAR-CND	Versa Star Conductivity Module to measure conductivity, TDS, salinity, resistivity and temperature
VSTAR-RD	Versa Star RDO/DO Module to measure dissolved oxygen and temperature using RDO optical or polarographic DO probe
VSTAR00	Versa Star Pro Meter Without Modules includes electrode stand, universal power adapter and USB cable



Versa Star Pro 10 pH Meter

- Measure pH, mV, relative mV or ORP with temperature
- Perform up to a six point pH calibration with automatic buffer recognition of NIST, DIN or user-defined buffer groups
- Use calibration editing function to fix individual points without a full recalibration
- Onscreen calibration graph for multipoint pH calibrations
- Customize measurements to show calibration history and pH electrode condition or simplify to show extra-large pH reading

Cat. No.	Description
VSTAR10	<p>Orion Versa Star Pro pH Benchtop Meter and Stand Only</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH module (VSTAR-PH) • Electrode stand, universal power adapter, USB cable and literature
VSTAR12	<p>Orion Versa Star Pro pH Benchtop Meter Standard ROSS Kit</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH module (VSTAR-PH) • 8302BNUMD ROSS Ultra Triode glass-body pH/ATC electrode • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and solution kit • Electrode stand, universal power adapter, USB cable and literature
VSTAR13	<p>Orion Versa Star Pro pH Benchtop Meter ROSS Difficult Sample Kit</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH module (VSTAR-PH) • 8172BNWP ROSS Sure-Flow glass-body pH electrode • 927007MD Orion stainless steel ATC temperature probe • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and solution kit • Electrode stand, universal power adapter, USB cable and literature



Versa Star Pro 80 pH/LogR Meter

- LogR technology uses the glass-bulb of most pH electrodes to measure both pH and temperature at the same location, ideal for small sample volumes and samples that are difficult to clean
- Measure pH, mV, relative mV or ORP with temperature
- Select automatic, manual or LogR temperature functions
- Perform up to a six point pH calibration with automatic buffer recognition of NIST, DIN or user-defined buffer groups

Cat. No.	Description
VSTAR80	<p>Orion Versa Star Pro pH/LogR Benchtop Meter and Stand Only</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH/LogR module (VSTAR-LR) • Electrode stand, universal power adapter, USB cable and literature
VSTAR82	<p>Orion Versa Star Pro pH/LogR Benchtop Meter Standard ROSS Kit</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH/LogR module (VSTAR-LR) • 8172BNWP ROSS Sure-Flow glass-body pH electrode • 927007MD Orion stainless steel ATC temperature probe • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and solution kit, 810007 ROSS fill solution • Electrode stand, universal power adapter, USB cable and literature
VSTAR83	<p>Orion Versa Star Pro pH/LogR Benchtop Meter ROSS Micro Sample Kit</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH/LogR module (VSTAR-LR) • 8220BNWP ROSS Micro glass-body pH electrode • 927007MD Orion stainless steel ATC temperature probe • 810199 ROSS pH buffer and solution kit • Electrode stand, universal power adapter, USB cable and literature



Ion Concentration (ISE) Measurement

Versa Star Pro 40 pH/ISE Meters

- Measure pH, ion concentration (ISE), mV, relative mV or ORP with temperature
- Perform up to a six point pH calibration with automatic buffer recognition of NIST, DIN or user-defined buffer groups
- Perform up to a six point ISE calibration with easy entry of concentration values using the numeric keypad
- Incremental techniques for single and double known addition and subtraction and analate (sample) addition and subtraction

Single Channel pH/ISE Meter Options

Cat. No.	Description
VSTAR40A	Orion Versa Star Pro pH/ISE Benchtop Meter and Stand Only <ul style="list-style-type: none"> • Versa Star Pro meter with pH/ISE module (VSTAR-ISE) • Electrode stand, universal power adapter, USB cable and literature
VSTAR40A2	Orion Versa Star Pro pH/ISE Benchtop Meter Standard ROSS Kit <ul style="list-style-type: none"> • Versa Star Pro meter with pH/ISE module (VSTAR-ISE) • 8102BNUWP ROSS Ultra glass-body pH electrode • 927007MD Orion stainless steel ATC temperature probe • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and storage solution kit • Electrode stand, universal power adapter, USB cable and literature



Dual Channel pH/ISE Meter Options

Cat. No.	Description
VSTAR40B	Orion Versa Star Pro Two Channel pH/ISE Meter and Stand Only <ul style="list-style-type: none"> • Versa Star Pro meter with two pH/ISE modules (2 x VSTAR-ISE) • Electrode stand, universal power adapter, USB cable and literature
VSTAR40B2	Orion Versa Star Pro Two Channel pH/ISE Meter Standard ROSS Kit <ul style="list-style-type: none"> • Versa Star Pro meter with two pH/ISE modules (2 x VSTAR-ISE) • 8102BNUWP ROSS Ultra glass-body pH electrode • 927007MD Orion stainless steel ATC temperature probe • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and storage solution kit • 2 electrode stands, universal power adapter, USB cable and literature



Add an Orion ion selective electrode (ISE) to measure ammonia, bromide, cadmium, calcium, carbon dioxide, chloride, chlorine, cupric, cyanide, fluoride, floroborate, iodide, lead, nitrate, potassium, silver, sodium, sulfide, surfactant or thiocyanate ion concentration.



Conductivity Measurement

Versa Star Pro 20 Conductivity Meter

- Measure conductivity, TDS, salinity or resistivity with temperature
- Perform up to a six point conductivity calibration
- Auto-ranging conductivity values help ensure accurate results with ease – no need to manually switch conductivity measurement ranges
- Temperature compensation settings include linear, non-linear, EP (USP) or off with selectable 5, 10, 15, 20 or 25 °C reference temperatures

Cat. No.	Description
VSTAR20	Orion Versa Star Pro Conductivity Benchtop Meter and Stand Only <ul style="list-style-type: none"> • Versa Star Pro meter with conductivity module (VSTAR-CND) • Electrode stand, universal power adapter, USB cable and literature
VSTAR22	Orion Versa Star Pro Conductivity Benchtop Meter Standard Kit <ul style="list-style-type: none"> • Versa Star Pro meter with conductivity module (VSTAR-CND) • 013005MD Orion 4-cell (K=0.475) conductivity probe • 011007 Orion 1413 μS conductivity standard • Electrode stand, universal power adapter, USB cable and literature
VSTAR23	Orion Versa Star Pro Conductivity Benchtop Meter Pure Water Kit <ul style="list-style-type: none"> • Versa Star Pro meter with conductivity module (VSTAR-CND) • 013016MD Orion 2-cell (K=0.1) conductivity probe • 011008 Orion 100 μS conductivity standard • Electrode stand, universal power adapter, USB cable and literature



pH and Conductivity Measurement

Versa Star Pro 50 pH and Conductivity Meter

- Includes all the benefits of a pH and conductivity meter in one convenient system
- Measure pH, mV, relative mV or ORP with temperature on one channel
- Measure conductivity, TDS, salinity or resistivity with temperature on a second channel
- View each measurement separately on a full screen display or toggle to a split screen display to view both measurement channels simultaneously

Cat. No.	Description
VSTAR50	Orion Versa Star Pro pH and Conductivity Benchtop Meter and Stand Only <ul style="list-style-type: none"> • Versa Star Pro meter with pH module and conductivity module • Electrode stand, universal power adapter, USB cable and literature
VSTAR52	Orion Versa Star Pro pH and Conductivity Benchtop Meter Standard Kit <ul style="list-style-type: none"> • Versa Star Pro meter with pH module and conductivity module • 8157BNUMD ROSS Ultra Triode epoxy-body pH/ATC electrode • 013005MD Orion 4-cell (K=0.475) conductivity probe • 810199 ROSS pH buffer and storage solution kit • 011007 Orion 1413 μS conductivity standard • Electrode stand, universal power adapter, USB cable and literature



Dissolved Oxygen Measurement

Versa Star Pro 30 RDO/DO Meter

- Measure dissolved oxygen in % saturation or mg/L with temperature
- Use an Orion RDO optical or polarographic DO probe with automatic meter recognition
- Calibrate using water-saturated air, air-saturated water, custom value (Winkler) or zero point
- Built-in barometer automatically adjusts dissolved oxygen readings for barometric pressure
- Automatic salinity correction using manual entry of salinity value or direct input from separate conductivity module and conductivity probe

Cat. No.	Description
VSTAR30	Orion Versa Star Pro RDO/DO Benchtop Meter and Stand Only <ul style="list-style-type: none"> • Versa Star Pro meter with RDO/DO module (VSTAR-RD) • Electrode stand, universal power adapter, USB cable and literature
VSTAR32	Orion Versa Star Pro RDO/DO Benchtop Meter Standard Kit <ul style="list-style-type: none"> • Versa Star Pro meter with RDO/DO module (VSTAR-RD) • 083005MD Polarographic DO probe with calibration sleeve • 080513 DO probe maintenance kit • BOD adapter/funnel/stirrer • Electrode stand, universal power adapter, USB cable and literature



Multiparameter Measurement

Versa Star Pro 90 pH/ISE, Conductivity and RDO/DO Meter

- Includes all the benefits of a pH/ISE, conductivity and dissolved oxygen meter in one convenient system
- Measure pH, mV, relative mV or ORP with temperature on one channel
- Measure conductivity, TDS, salinity or resistivity with temperature on a second channel
- Measure dissolved oxygen in % saturation or mg/L with temperature on a third channel
- View each measurement separately on a full screen display or toggle to a split screen display to view any combination of measurement channels simultaneously

Single Channel pH/ISE with Conductivity and RDO/DO Meter Options

Cat. No.	Description
VSTAR90	<p>Orion Versa Star Pro pH/ISE, Conductivity and RDO/DO Meter and Stand Only</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH/ISE module (VSTAR-ISE), conductivity module (VSTAR-CND) and RDO/DO module (VSTAR-RD) • Electrode stand, universal power adapter, USB cable and literature
VSTAR92	<p>Orion Versa Star Pro pH/ISE, Conductivity and RDO/DO Meter Standard Kit</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH/ISE module (VSTAR-ISE), conductivity module (VSTAR-CND) and RDO/DO module (VSTAR-RD) • 8157BNUMD ROSS Ultra Triode epoxy-body pH/ATC electrode • 013005MD Orion 4-cell (K=0.475) conductivity probe • 083005MD Polarographic DO probe with calibration sleeve • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and storage solution kit • 011007 Orion 1413 μS conductivity standard • 080513 DO maintenance kit & BOD adapter/funnel/stirrer • Electrode stand, universal power adapter, USB cable and literature
VSTAR94	<p>Orion Versa Star Pro pH/ISE, Conductivity and RDO/DO Meter RDO Optical Kit</p> <ul style="list-style-type: none"> • Versa Star Pro meter with pH/ISE module (VSTAR-ISE), conductivity module (VSTAR-CND) and RDO/DO module (VSTAR-RD) • 8157BNUMD ROSS Ultra Triode epoxy-body pH/ATC electrode • 013005MD Orion 4-cell (K=0.475) conductivity probe • 087010MD RDO Optical DO probe with calibration sleeve • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and storage solution kit • 011007 Orion 1413 μS conductivity standard • Electrode stand, universal power adapter, USB cable and literature



Dual Channel pH/ISE with Conductivity and RDO/DO Meter Options

Cat. No.	Description
VSTAR91	<p>Orion Versa Star Pro Two Channel pH/ISE, Conductivity and RDO/DO Meter and Stand Only</p> <ul style="list-style-type: none"> • Versa Star Pro meter with two pH/ISE modules (2 x VSTAR-ISE), conductivity module (VSTAR-CND) and RDO/DO module (VSTAR-RD) • Electrode stand, universal power adapter, USB cable and literature
VSTAR93	<p>Orion Versa Star Pro Two Channel pH/ISE, Conductivity and RDO/DO Meter Standard Kit</p> <ul style="list-style-type: none"> • Versa Star Pro meter with two pH/ISE modules (2 x VSTAR-ISE), conductivity module (VSTAR-CND) and RDO/DO module (VSTAR-RD) • 8157BNUMD ROSS Ultra Triode epoxy-body pH/ATC electrode • 013005MD Orion 4-cell (K=0.475) conductivity probe • 083005MD Polarographic DO probe with calibration sleeve • 096019 Orion Star series meter-powered stirrer probe • 810199 ROSS pH buffer and storage solution kit • 011007 Orion 1413 μS conductivity standard • 080513 DO maintenance kit & BOD adapter/funnel/stirrer • Electrode stand, universal power adapter, USB cable and literature



Orion Versa Star Pro Meter and Orion Versa Star Module Specifications

Measurement Channels	4 – customizable with measurement modules
Display	Color graphic LCD with adjustable measurement text size
Onscreen Text Prompts	Step-by-step calibration and guided setup instructions
View Options	View 1 to 4 measurement channels simultaneously
Keypad	Numeric with menu-specific function keys
Measurement Modes	Auto-Read, Timed, Single-Shot, Continuous
Data Log Memory	2000 data sets with time and date stamp
Data Log Functions	Automatic (Auto-Read, timed, single-shot) or manual (continuous)
Data Log Transfer	Transfer single, range or all data points to printer or computer
Identification Options	Electrode ID, Sample ID, Account ID
Calibration Log	30 calibrations per measurement mode with time and date stamp
Methods	10 per channel
Alarms	Offset, High/Low Limit, Calibration Due
Communication Ports	RS232, bidirectional USB type B, printer-dedicated USB type AB
Stirrer Probe Ports	2
Power Source	Universal AC power adapter, 90-260 VAC, 50-60 Hz
Certifications	CE, TUV 3-in-1, FCC Class A
Enclosure (Designed to Meet)	IP-54
Meter Weight	1.15 kg (2.5 lb), modules add 0.15 kg (0.3 lb) each
Meter Dimensions (H x W x D)	9.5 cm x 24.0 cm x 28.2 cm (3.75" x 9.45" x 11.1")
Warranty	3 years

Orion Versa Star pH, pH/ISE and pH/LogR Module Specifications, Catalog Numbers VSTAR-PH, VSTAR-ISE, VSTAR-LR

pH	Range	- 2.000 to 20.000
	Resolution	0.1, 0.01, 0.001
	Relative Accuracy	± 0.002
	Calibration Points	Up to 6
	Calibration Editing	Yes
	Adjustable ISO Point	Yes
	Input Impedance	> 10 ¹² ohms
mV/RmV	Range	± 2000.0 mV
	Resolution	0.1 mV
	Relative Accuracy	± 0.2 mV or ± 0.05 % of reading, whichever is greater
	Relative mV Mode	Yes
	E _H ORP Mode	Yes
ISE (VSTAR-ISE module only)	Range	0.0001 to 19990
	Resolution	0.0001 minimum, 1 to 4 significant digits (user selectable)
	Relative Accuracy	± 0.2 mV or ± 0.05 % of reading, whichever is greater
	Units	ppm, Molar, mg/L, %, ppb, none
	Calibration Points	Up to 6
	Calibration Editing	Yes
	Adjustable ISO Point	Yes
Advanced Features	Segmented (point-to-point) slope or linear regression, non-linear selectable auto-blank, low concentration range stability, electrode type display, temperature compensation	
Incremental Techniques	Single known addition & subtraction, double known addition & subtraction, single analate (sample) addition & subtraction	
Temperature	Range	-5 to 105 °C, 22 to 221 °F
	Resolution	0.1 °C, 0.1 °F
	Relative Accuracy	± 0.1 °C, ± 0.1 °F
	Offset Calibration	1 point
	Source Options	Manual or automatic with ATC probe
LogR Temperature (VSTAR-LR module only)	Range	0 to 100 °C, 32 to 212 °F
	Resolution	0.1 °C, 0.1 °F
	Relative Accuracy	± 0.5 °C, ± 0.5 °F
	Resistance Range	0 to 6000 MΩ
	Resistance Resolution	0.1 MΩ up to 1999.9 MΩ, 1 MΩ above 1999.9 MΩ
	Offset Calibration	3 points
Calibration Options	ATC probe, NIST reference	
Inputs	BNC	pH, ORP or ion selective electrode (ISE)
	Pin Tip	Reference electrode
	8 pin MiniDIN	ATC temperature probe

Orion Versa Star Conductivity Module Specifications, Catalog Number VSTAR-CND

Conductivity	Range	0.001 μ S to 3000 mS
	Resolution	0.001 μ S minimum, auto ranging, up to 4 significant digits
	Relative Accuracy	0.5 % of reading \pm 1 digit > 3 μ S, 0.5 % of reading \pm 0.01 μ S \leq 3 μ S
	Reference Temperature	5 °C, 10 °C, 15 °C, 20 °C, 25 °C
	Temperature Compensation	Linear (0 to 10.0 %/°C), nonlinear nLFn, nonlinear nLFu, EP (USP), off
	Compatible Cell Constants	0.001 to 199.9 cm ⁻¹
	Calibration Points	Up to 6
	Calibration Editing	Yes
TDS	Range	0.001 to 200.0 ppm
	Resolution	0.001 ppm minimum, auto ranging, up to 4 significant digits
	Relative Accuracy	0.5 % of reading \pm 1 digit
	TDS Factor	Linear (0.02 to 9.99) or ISO/EN 27888
Salinity	Range	0.06 to 80.00 psu, 0.05 to 42.00 ppt
	Resolution	0.01 psu or ppt minimum, auto ranging
	Relative Accuracy	0.5 % of reading \pm 1 digit
	Type	Practical salinity (psu) or natural sea water (ppt)
Resistivity	Range	2 Ω to 100 M Ω
	Resolution	1 Ω or 0.1 M Ω , auto ranging
	Relative Accuracy	0.5 % of reading \pm 1 digit
Temperature	Range	-5 to 105 °C, 22 to 221 °F
	Resolution	0.1 °C, 0.1 °F
	Relative Accuracy	\pm 0.1 °C, \pm 0.1 °F
	Offset Calibration	1 point
	Source Options	Manual or automatic with built-in temperature sensor
Input	8 pin MiniDIN	Conductivity probe with optional built-in temperature sensor

Orion Versa Star RDO/Dissolved Oxygen Module Specifications, Catalog Number VSTAR-RD

Dissolved Oxygen	Polarographic DO	Concentration	% Saturation
	Range	0 to 90 mg/L	0 to 600 %
	Resolution	0.01, 0.1 mg/L	0.1, 1 %
	Relative Accuracy	\pm 0.2 mg/L	\pm 2 %
	RDO Optical DO	Concentration	% Saturation
	Range	0 to 50 mg/L	0 to 500 %
	Resolution	0.01, 0.1 mg/L	0.1, 1 %
	Relative Accuracy	\pm 0.1 mg/L up to 8 mg/L, \pm 0.2 mg/L from 8 to 20 mg/L, \pm 10 % of reading from 20 to 50 mg/L	\pm 2 %
	Barometric Pressure Correction	450 to 850 mmHg, automatic using built-in barometer or manual entry	
	Salinity Factor Correction	0 to 45 ppt, automatic using conductivity module and probe or manual entry	
Barometric Pressure	Calibration Types	Water saturated air, air saturated water, manual (Winkler), zero point	
	Compatible Sensors	Polarographic, RDO optical	
	Range	450.0 to 850.0 mmHg	
	Resolution	0.1 mmHg	
	Relative Accuracy	\pm 6 mmHg	
Temperature	Range	0 to 50 °C, 32 to 122 °F	
	Resolution	0.1 °C, 0.1 °F	
	Relative Accuracy	\pm 0.1 °C, \pm 0.1 °F	
	Offset Calibration	1 point	
	Source Option	Automatic with built-in temperature sensor	
Input	9 pin MiniDIN	Dissolved oxygen probe with built-in temperature sensor	

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