

Specifications for VersaStar™ 94 (V-STAR94)

AC Adapter	Universal 50-60 Hz, 100-240 VAC power adapter (Cat. No. STARA-PWR)
Accuracy (Barometer)	±6 mm Hg
Accuracy (Conductivity)	0.5% of reading ±1 digit > 3 µS; 0.5% of reading ±0.01 µS ≤ 3 µS
Accuracy (ISE)	±0.2 mV or ±0.05% of reading whichever is greater
Accuracy (mV)	±0.2 mV or ±0.05% of reading whichever is greater
Accuracy (pH)	±0.002
Accuracy (Polarographic DO)	±0.2 mg/L or ±2% of reading, whichever is greater
Accuracy (RDO)	±0.1 mg/L up to 8 mg/L, ±0.2 mg/L from 8 to 20 mg/L, ±10% of reading up to 50 mg/L
Accuracy (Resistivity)	0.5% of reading ±1 digit
Accuracy (Salinity)	0.5% of reading ±1 digit
Accuracy (TDS)	0.5% of reading ±1 digit
Advanced ISE Functions	Segmented (point-to-point) slope, non-linear selectable auto-blank, low concentration range stability
Alarm Output	Set point alarm, high/low limit alarm, calibration due alarm
Backlight Option	Yes
Barometric Pressure Correction	400 to 850 mm Hg, automatic using built-in barometer or manual entry
Calibration	pH with calibration editing option, ion concentration (ISE) with calibration editing option
Calibration Modes	Water-saturated air, air-saturated water, manual (Winkler titration), zero point
Calibration Points	1 point relative mV (RmV) mode, 1 point ORP mode
Calibration Points (Conductivity)	Up to 6
Calibration Points (ISE)	1 to 6
Calibration Points (pH)	1 to 6
Cell Constant	0.001 to 199.9 cm ⁻¹
Certifications/Compliance	CE, TUV 3-1, FCC Class A
Data Management Details	Transfer single, range or all data points to printer or computer
Data Points	2000 with date and time stamp
Description	Orion Versa Star Pro benchtop meter kit with pH/ISE/mV module, conductivity/TDS/salinity/resistivity module, RDO/DO module, ROSS Ultra Triode epoxy-body pH/ATC electrode, DuraProbe 4-cell conductivity sensor, RDO optical DO sensor, stirrer probe, solutions and stand
Channels	4 - customizable with modules
Display Type	Color graphic LCD with user-customizable options
IP Rating	IP 54

Measurement Modes	pH, mV, relative mV (RmV), ORP or ion concentration (ISE) with temperature; conductivity, TDS, salinity
Outputs	USB (2), RS232
Percent Saturation Range Polarographic DO	0.0 to 600.0% saturation
Range (Conductivity)	0.001 μ S/cm to 3000 mS/cm
Range (mV)	$\pm$ 2000.0 mV
Range (pH)	-2.000 to 20.000
Range (Resistivity)	2 ohm to 100.0 meg-ohm
Range (Salinity)	0.06 to 80.00 psu, 0.05 to 42.00 ppt
Range (TDS)	0.001 to 200.0 ppm
Resolution (ISE)	0.0001 minimum, 1 to 4 significant digits (user selectable)
Resolution (pH)	0.1/0.01/0.001
Temperature Range	-5.0 °C to +105.0 °C (22.0 °F to 221.0 °F)
Includes	Versa Star Pro meter, VSTAR-ISE pH/ISE module, VSTAR-CND conductivity module, VSTAR-RD RDO/DO module, 8157BNUMD ROSS Ultra Triode epoxy-body pH/ATC electrode, 013005MD Orion DuraProbe 4-cell (K=0.475) conductivity sensor, 087010MD Orion RDO optical dissolved oxygen sensor, 096019 Orion Star stirrer probe, 810199 ROSS pH buffer and solution kit, 011007 Orion 1413 μ S conductivity standard, electrode stand, universal power adapter, literature CD, printed quick start guide, computer interface cable and meter test certificate
Inputs	BNC (pH, ORP or ion selective electrode), pin-tip (reference electrode), 8 pin MiniDIN (ATC temperature probe), 8 pin MiniDIN (conductivity sensor with built-in temperature), 9 pin MiniDIN (RDO optical or polarographic DO sensor with built-in temperature), two stirrer inputs (stirrer probe)
Isopotential Point	7.000 pH (adjustable), 1.000 ISE (adjustable)
Keypad	Numeric with menu-specific function keys and dual purpose scroll/shortcut keys
Languages	English, Spanish, French, Italian, German, Chinese, Portuguese and Korean
Log Function Type	Automatic data logging with Auto-Read, Timed and Single Shot measure modes; manual data logging with
Memory	Non-volatile memory preserves data log, calibration log and meter settings
Methods	10 per channel
Percent Saturation Range (Polarographic DO)	0.0 to 600.0% saturation

Percent Saturation Relative Accuracy (RDO)	±2% saturation ≤ 200% saturation, ±10% saturation > 200% saturation
Percent Saturation Resolution (Polarographic DO)	0.1, 1% saturation
Percent Saturation Range (RDO)	0.0 to 500.0% saturation
Percent Saturation Relative Accuracy (Polarographic DO)	±2% saturation or ±2% of reading whichever is greater
Percent Saturation Resolution (RDO)	0.1, 1% saturation
Power Rating	DC input: 9 VDC, 1 A
Power Supply	Universal AC adapter (included)
Pressure Range	400 to 850 mm Hg
Pressure Resolution	0.1 mm Hg
Range (ISE)	0.0001 to 19990 with selectable units of ppm, Molar, mg/L, %, ppb or none
Range (ORP)	±2000.0 mV
Range (Polarographic DO)	0.00 to 90.00 mg/L
Range (RDO)	0.00 to 50.00 mg/L
Range (Relative mV)	±2000.0 mV
Relative Humidity Range	5 to 85%, non-condensing
Resolution (Conductivity)	0.001 µS minimum, auto ranging up to 4 significant digits
Resolution (mV)	0.1 mV
Resolution (Polarographic DO)	0.01, 0.1 mg/L
Resolution (RDO)	0.01, 0.1 mg/L
Resolution (Resistivity)	1 ohm or 0.1 meg-ohm, auto ranging
Resolution (Salinity)	0.01 psu or 0.01 ppt minimum, auto ranging
Resolution (TDS)	0.001 ppm minimum, auto ranging up to 4 significant digits
Salinity Factor	0.0 to 45.0 ppt, automatic correction using conductivity reading or manual entry of sample salinity
Salinity Measurement Modes	Practical salinity (psu) or natural sea water (ppt)
Stability	Selectable fast, medium, slow or Smart Stability setting; Selectable off or Automatic Smart averaging setting
TDS Factor Range	Linear (0.02 to 9.99)
Temperature Accuracy	±0.1 °C
Temperature Compensation	Linear, nLFn (non-linear ultra pure water), nLFu (non-linear ultra pure degassed water), EP (off with warning) or off
Temperature Operating	Ambient — 5 °C to 45 °C (41 °F to 113 °F)
Temperature (Metric) Reference	5 °C, 10 °C, 15 °C, 20 °C, 25 °C
Temperature Probe Calibration	1 point temperature offset calibration
Temperature Resolution	0.1 °C, 0.1 °F

Temperature Selection	Manual or automatic with ATC temperature probe
Dimensions (L x W x H)	28 x 24 x 10 cm (11 x 9.5 x 3.9 in.), modules add ≤ 2 cm (0.8 in.) L & H
Weight	1.2 kg, modules add 0.2 kg each (2.5 lb., modules add 0.5 lb. each)