

VIKING-M500A Benchtop Multi-parameter pH/EC/ISE/ Temp. (mV/ ORP/pX/ Resistivity/ TDS/Sal.)

Product Details

Product Number

PRO5908



Technical Specification:

Features

General Features

- **Feature:** Graphic Display for Simultaneous Multi-Parameter View
- **Description:** High-resolution graphic LCD display capable of showing multiple measurement parameters (pH, conductivity, TDS, salinity, resistivity, temperature) simultaneously. The interface allows real-time data visualization with clear numeric and trend display, enhancing usability during multi-parameter analysis.
- Intelligent OS with user, calibration, method, and data management.
- Multi-reading modes: auto-read, timed-read, continuous-read.
- Automatic/Manual temperature compensation (ATC/MTC) for accurate results.
- **Data storage: 1000 sets** per parameter (GLP-compliant) with review/compare/recalculate tools.
- USB or RS-232 communication.
- Factory reset to default options.
- IP54 water-resistant housing.

pH

- 1–6 point calibration with standard recognition.
- Selectable buffer groups: DIN, NIST, USA, MERK, JIS, GB; custom buffer set supported.
- Automatic electrode diagnosis with pH slope and offset display.

Ion (ISE)

- 1–6 point calibration.
- Selectable units: $\mu\text{g/L}$, mg/L , g/L , mmol/L , pX , ppm , ppb .
- Measurement modes: Direct Reading, Standard Addition, Sample Addition, GRAN.
- 10+ built-in methods (F^- , Cl^- , Br^- , I^- , NO_3^- , BF_4^- , NH_4^+ , K^+ , Na^+ , Ca^{2+} , Cu^{2+} , Pb^{2+} , Ag^+ etc.) + user

methods.

Conductivity (EC)

- 1–5 point calibration with standard recognition.
- Settable parameters: cell constant; reference temperature (5/10/15/18/20/25 °C); temperature coefficient; TDS factor.
- Temperature compensation types: none, linear, pure water.

Technical Specifications

Overview

Model VIKING-M500A

Parameters pH / EC / ISE / Temp. (mV / ORP / pX / Resistivity / TDS / Salinity)

pH

Range	–2.000 to 20.000 pH
Resolution	0.1, 0.01, 0.001 pH
Accuracy	±0.002 pH
Calibration points	Up to 6, automatically
Standard customization	Yes
Calibration reminder	Yes
Standard recognition	NIST, GB, DIN, USA, MERK, JIS
Slope limit	Yes

mV / ORP

Range	–2000.00 to 2000.00 mV
Resolution	0.1, 0.01 mV
Accuracy	±0.1 mV or ±0.03% of reading (whichever is greater)
EH ORP mode	Yes
ORP calibration	1 custom point (relative mV)

pX

Range	–2.000 to 20.000 pX
Resolution	0.1, 0.01, 0.001 pX
Accuracy	±0.002 pX
Calibration points	Up to 6

ISE (Ion-Selective)

Range	1.000e–9 to 9.999e+9
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Units	mol/L, mmol/L, g/L, mg/L, µg/L, ppm, ppb
Resolution	Up to 4 significant digits
Accuracy	±0.3%
Calibration points	Up to 6

Conductivity / Resistivity / TDS / Salinity

Conductivity range	0.000 µS/cm to 2000 mS/cm
Resolution (EC)	min 0.001 µS/cm
Accuracy (EC)	±0.5% FS
Reference temperature	5, 10, 15, 18, 20, 25 °C
EC calibration	Automatically Up to 5 points
Calibration reminder	Yes
Standard recognition	10 µS/cm, 84 µS/cm, 500 µS/cm, 1413 µS/cm, 12.88 mS/cm; 146.5 µS/cm, 1408 µS/cm, 12.85 mS/cm, 111.3 mS/cm
Resistivity	5.00 Ω·cm to 200.0 MΩ·cm (min res. 0.01 Ω·cm)
TDS Range	0.000 ppm to 1000 ppt
TDS Resolution	0.01 ppm
Salinity type	%NaCl
Salinity range	0.0 to 80.0 ppt
Salinity resolution	0.1 ppt
Salinity accuracy	±1 ppt

Temperature & Measurement

Temperature range	-20 to 135 °C (-4 °F do 275 °F)
Temperature compensastion	-5 to 105 °C
Units	°C, °F
Resolution	0.1
Accuracy	±0.1 °C
Reading modes	Auto (Fast/Medium/Slow), Timed, Continuous
Prompts	Reading, Stable, Locked
Temp. compensation	ATC, MTC

Memory & Data

Data storage	1000 groups internal memory
GLP features	Yes
Log management	Yes

Inputs & Outputs

pH electrode	BNC (Q9)
DO with temp. probe	4-pin aviation connector
Conductivity with temp. probe	5-pin aviation connector
USB	USB 2.0 flash device; PC; scanner
RS-232	Printer; auto-sampler

Display & Power

Backlight Yes

Auto shutdown 1–60 min, or off

IP rating IP54

Date & time Yes

General

Power 220 V

Dimensions 220 × 195 × 68 mm

Net weight 950 g (2.09 lb)

More laboratory equipment at

[COLO.Science](https://www.colo.si).

Accessories:

- pH electrode
- EC Electrode
- Temperature sensor
- Electrode holder (Base stand, Electrode arm, Cable protector,)
- Power supply
- **Accessory:** 50 mL Electrolyte Solution – 3 M KCl

Description:

Electrolyte solution used for refilling or storing reference electrodes. The 3 M potassium chloride (KCl) maintains a stable reference potential, protects the electrode junction, and ensures reliable ionic contact between the reference system and the measured sample. Recommended for routine maintenance to extend electrode lifespan and measurement accuracy.

- **Accessory:** 2 × 50 mL (each) Standard Buffer Solutions — pH 4.00, pH 7.00, pH 10.00

Description:

Pre-mixed standard buffer solutions for pH meter calibration. Each set includes two 50 mL bottles for pH 4.00, pH 7.00, and pH 10.00 values. These certified buffers ensure precise calibration across the full acidic, neutral, and alkaline measurement range, guaranteeing accuracy and reliability of pH measurements.

- **Accessory:** 50 mL EC Calibration Solution — **1413 µS/cm (25 °C)**

Description:

Certified conductivity standard for calibrating conductivity/TDS meters. The 1413 µS/cm value is the industry mid-range reference, ideal for general-purpose aqueous solutions.

Details (concise):

- Volume: **50 mL** bottle (ready-to-use)
- Nominal value: **1413 µS/cm @ 25 °C**
- Certification: **NIST-traceable** (typical tolerance ≤ ±1%)
- Use: Rinse probe, equilibrate to **25 °C**, calibrate; **do not** return used solution to the bottle
- Storage: Tightly closed, room temp; avoid contamination
- (Compatible with VIKING-M500A and other EC/TDS instruments.)
- Calibration certificate
- Instruction manual

Optional accessories:

- Tisab

- Soil pH electrode