Colo Science
Laboratory & Scientific Equipment

COLO.SCIENCE · TECHNICAL SPECIFICATION

ANALYZER CATEGORY | REQUEST QUOTE | HTML DATASHEET | WATER QUALITY KNOWLEDGE

VIKING-M510T-A

Portable pH / Conductivity / ISE / Dissolved Oxygen Multi-parameter Meter

VIKING-M510T-A Portable Multi-parameter Meter is a rugged IP65 field and laboratory electrochemistry platform for **pH, mV/ORP, pX, ISE, conductivity, resistivity, TDS, salinity, dissolved oxygen and temperature**. It combines a 4.3" color touchscreen, intelligent method management, GLP-oriented memory and multiple reading modes for portable water quality, environmental, plant and QA/QC workflows.

PORTABLE ANALYZER | PH / MV / ORP | ISE / PX | EC CONDUCTIVITY | TDS / SALINITY | RESISTIVITY | DISSOLVED OXYGEN | TEMPERATURE | 4.3" TOUCHSCREEN | USB 2.0 | GLP MEMORY | IP65

Document type: **Technical Specification Sheet**
Product family: **Portable Electrochemistry / Water Quality Multi-parameter Analyzer**
Model: **VIKING-M510T-A** · SKU: **To be confirmed**
Main image: **VIKING-M510T portable main unit image from COLO.Science template**
Format: **A4 landscape · COLO.Science TechSpec v2.4 with navigation links**

VIKING-M510T-A · portable pH / EC / ISE / DO multi-parameter meter · main unit

MODEL / SKU
VIKING-M510T-A
TBC

ADDRESS / HQ
Polje ob Sotli 4
SI-3255, Slovenia

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VIKING-M510T-A · technical specification

Portable multi-parameter analyzer for pH, ISE, conductivity, ORP, pX, TDS, salinity, resistivity, dissolved oxygen and temperature

PH -2.000 TO 20.000 | ISE 1.000E-9 TO 9.999E+9 | EC 0.000 MS/CM TO 3000 MS/CM | DO 0.00 TO 99.99 PPM | TEMP. -10 TO 135°C — Portable workflow for laboratory, plant and field measurement

Product Overview

Application profile

Water quality: designed for pH, conductivity, salinity, TDS, ISE, ORP and dissolved oxygen checks in water and process samples.

Field and laboratory use: portable IP65 format with touchscreen operation, rechargeable battery and compact 90 × 255 × 40 mm housing.

Ion measurement: supports ISE and pX work with direct, standard addition, sample addition and GRAN methods.

DO workflow: polarographic dissolved oxygen measurement with air-saturated water or zero-point calibration.

Design and handling advantage

Touchscreen workflow: 4.3” high-contrast color LCD touchscreen with backlight for parameter setup and result review.

Calibration control: pH up to 8 points, EC up to 5 points, ISE up to 8 points and pX up to 6 points.

Traceability: GLP features and data storage for up to 1000 groups support routine documentation.

Operator support: Auto Read, Timed Read, Continuous Read and Auto-Hold endpoint detection reduce routine handling error.

Key features

Multi-parameter platform: pH, mV/ORP, pX, ISE, conductivity, resistivity, TDS, salinity, dissolved oxygen and temperature.

pH performance: -2.000 to 20.000 pH range, selectable 0.1 / 0.01 / 0.001 pH resolution and ±0.002 pH accuracy.

Conductivity performance: 0.000 µS/cm to 3000 mS/cm range with ±0.5% FS accuracy.

DO performance: 0.00 to 99.99 ppm dissolved oxygen concentration and 0.0 to 600.0% saturation.

Connectivity: USB 2.0 support for flash memory device, PC and scanner connection.

Core technical summary

Parameter	Specification
Model	VIKING-M510T-A
Instrument type	Portable pH / conductivity / ISE / DO multi-parameter meter
Measured parameters	pH, mV/ORP, pX, ISE, EC, resistivity, TDS, salinity, DO concentration, DO saturation, temperature
Display	4.3” color high-contrast LCD touchscreen with backlight
Reading modes	Auto Read Fast / Medium / Slow, Timed Read and Continuous Read
Temperature compensation	Automatic / manual temperature compensation (ATC / MTC)
Data storage	1000 groups; GLP features supported
Protection	IP65 enclosure

PH ACCURACY
±0.002 pH

EC ACCURACY
±0.5% FS

DO RANGE
0.00–99.99 ppm

PROTECTION
IP65

pH / mV / ORP / pX / ISE Specifications

pH, mV, ORP and pX measurement

Parameter	Range / resolution / accuracy	Calibration / notes
pH range	-2.000 to 20.000 pH	Up to 8-point calibration
pH resolution	0.1 / 0.01 / 0.001 pH	Selectable resolution according to workflow
pH accuracy	±0.002 pH	Slope limit and calibration reminder supported
Buffer groups	USA, NIST, MERK, JIS, GB, DIN	Standard customization supported
mV / ORP range	-2000.00 to 2000.00 mV	EH ORP mode supported
mV resolution	0.1 / 0.01 mV	Relative mV: 1 custom calibration point
mV accuracy	±0.1 mV or ±0.03%	For ORP and millivolt measurements
pX range	-2.000 to 20.000 pX	Up to 6-point calibration
pX resolution	0.1 / 0.01 / 0.001 pX	For ion-selective workflows
pX accuracy	±0.002 pX	Method-dependent performance

Reading and calibration workflow

Function	Technical note
Reading modes	Auto Read Fast / Medium / Slow, Timed Read and Continuous Read.
Reading prompts	Reading / Stable / Locked status prompts with Auto-Hold endpoint detection.
Management	User, calibration, electrode, method, data and log management.
Temperature compensation	Automatic and manual temperature compensation for supported parameters.

ISE concentration measurement

Parameter	Specification	Notes
ISE range	1.000e-9 to 9.999e+9	Concentration measurement by selected ion method
ISE resolution	Up to 4 significant digits	Displayed according to concentration range
ISE accuracy	±0.3%	Method and electrode dependent
ISE calibration	Up to 8 points	Supports routine and advanced calibration curves
Units	mol/L, mmol/L, g/L, mg/L, µg/L, ppm, ppb, pX	Selectable concentration units
Methods	Direct, Standard Addition, Sample Addition, GRAN	Built-in ion measurement methods
Built-in ions	F–, Cl–, Br–, I–, NO_3–, BF_4–, NH_4^+, K^+, Na^+, Ca^{2+}, Cu^{2+}, Pb^{2+} and Ag^+; user-defined methods supported.	

Electrode and method note

pH electrode: BNC / Q9 pH input for the delivered electrode configuration.

ISE workflow: select the ion electrode, ionic strength adjustment and calibration points according to the target sample matrix.

ORP workflow: confirm whether direct mV, relative mV or EH ORP reporting is required before defining the method.

PH CALIBRATION	ISE CALIBRATION	PX CALIBRATION
Up to 8 points	**Up to 8 points**	**Up to 6 points**

Technical values are provided for product selection and orientation. Final electrode type, calibration method, ion method, dissolved oxygen probe and accessory configuration should be confirmed through the official COLO.Science quotation or manufacturer-confirmed offer.

Conductivity / DO / Temperature / System Specifications

Conductivity-related parameters

Parameter	Range / resolution / accuracy	Calibration / notes
Conductivity	0.000 µS/cm to 3000 mS/cm	Up to 5-point calibration
EC resolution	Minimum 0.001 µS/cm; varies by range	Auto-ranging display
EC accuracy	±0.5% FS	Full-scale accuracy
Reference temperature	5, 10, 15, 18, 20, 25°C	Selectable reference temperature
EC standards	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 100.0 MΩ·cm	0.01 Ω·cm minimum resolution; ±0.5% FS
TDS	0.000 ppm to 1000 ppt	0.001 ppm minimum resolution; ±0.5% FS
Salinity	0.0 to 80.0 ppt	0.1 ppt resolution; ±1 ppt accuracy

Dissolved oxygen measurement

Parameter	Specification
Sensor type	Polarographic dissolved oxygen sensor
DO concentration range	0.00 to 99.99 ppm
DO concentration resolution	0.01 ppm
DO concentration accuracy	±0.10 ppm from 0.00–50.00 ppm; ±0.50 ppm from 50.0–99.99 ppm
Calibration points	Air-saturated water or zero point
Compensation	Automatic barometric compensation; manual salinity factor correction
DO saturation range	0.0 to 600.0%
DO saturation resolution / accuracy	0.10% resolution; ±2.0% accuracy

Temperature, inputs and system

Parameter	Specification
Temperature range	-10 to 135°C / 14 to 275°F
Temperature resolution	0.1
Temperature relative accuracy	±0.1
Temperature units	°C / °F
pH electrode input	BNC (Q9)
DO with temperature probe	4-pin aviation connector
Conductivity with temperature probe	5-pin aviation connector
USB output	USB 2.0 for flash memory device, PC and scanner connection
Backlight	Yes
Date and time	Yes
Auto shutdown	300 / 600 / 1200 / 1800 / 3600 s or Off
Power supply	Rechargeable lithium battery; AC adapter 100–240 V AC input, DC 5 V output
Dimensions / weight	90 × 255 × 40 mm; approx. 500 g

VIKING-M510T-A · carrying case and typical portable measurement accessories

Typical standard delivery / configuration note

pH input: BNC (Q9) pH electrode input for the supplied pH electrode configuration.

Conductivity input: 5-pin aviation connector for conductivity probe with temperature measurement.

DO input: 4-pin aviation connector for DO probe with temperature measurement.

Accessories: final electrode set, DO probe, buffers, EC standards, electrolyte and carrying case should be confirmed for exact delivery.

DO SENSOR	DO SATURATION	MEMORY
Polarographic	**0.0–600.0%**	**1000 groups**

DO values are listed for dissolved oxygen measurement configuration. Probe type, membrane/electrolyte consumables, calibration standards and delivery kit must be confirmed in the official offer.

📌 Selection and Use Notes

For water quality

Routine pH / EC: define sample range, calibration buffers, EC standards and reporting units before purchase.

Salinity / TDS: confirm conversion factor, reference temperature and temperature compensation approach.

For ISE work

Ion method: choose direct, standard addition, sample addition or GRAN according to sample matrix.

Electrode set: select the correct ion-selective electrode and ionic strength adjustment procedure.

For DO workflows

Probe configuration: confirm DO probe, membrane/electrolyte requirements and calibration workflow.

Field use: IP65 housing, rechargeable battery and portable connectors support outdoor measurement routines.

MANUFACTURER AND SUPPORT

COLO Lab Experts
Polje ob Sotli 4, SI-3255, Slovenia

Selection guidance: Send the required parameters, sample matrix, expected measuring range, calibration method, electrode/probe type and field/laboratory use case. COLO.Science can help confirm the correct VIKING-M510T-A configuration and accessory set for your measurement workflow.

QUICK CONTACT

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Portable multi-parameter analyzers

COLO.SCIENCE · VIKING-M510T-A PORTABLE MULTI-PARAMETER ANALYZER SUPPORT

Need help selecting the correct pH, EC, ISE and dissolved oxygen configuration?

Send the sample matrix, required parameters, expected ranges, electrode/probe configuration and calibration standards. COLO.Science can help confirm whether VIKING-M510T-A is the correct portable analyzer for water quality, environmental, plant or QA/QC workflow.

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Technical specification path: **VIKING-M510T-A HTML datasheet**