



# 949 pH Meter

Benchtop instrument  
for the determination  
of pH, mV, and ORP

PEOPLE  
YOU  
CAN  
TRUST

 **Metrohm**

# Compact, fast, and reliable to use

The 949 pH meter is the ideal benchtop pH meter for fast and reliable pH measurements. It is compatible with all analogue pH electrodes from Metrohm. Thanks to predefined buffer tables it can be calibrated quickly and reliably. Several additional features like mV or ORP measurements provide for easy and convenient results in the laboratory.



### CLEAR DISPLAY OF THE MEASURED VALUE

- Backlit LCD display
- Easy-to-read presentation of results
- Brightness of display can be adjusted

### RELIABLE DATA ACQUISITION

- Output of measured values with time and date
- Access to calibration data
- Calibration notification

### CALIBRATION WITH INTERNAL BUFFER LISTS

- Guided pH calibration
- Three-point calibration with Metrohm, USA and NIST buffers
- Two-point calibration with user-defined buffers

### REPRODUCIBLE RESULTS

- Stability criteria can be adjusted
- Stability of the measurement signal is displayed
- Precise measurements

### EASY DATA OUTPUT

- Printer connection via RS232 interface
- PC connection via RS232 interface
- Efficient data exchange and documentation

### CONTINUOUS MONITORING OF YOUR PROCESS

- Continuous recording of the measurement process
- Direct output to the printer
- Automatic temperature compensation with temperature sensor Pt1000

## THE RIGHT ELECTRODE FOR YOUR APPLICATION

Solitrode



Spearhead



Flat membrane



Application field	Simple sample matrix	Semisolid samples	pH measurements on surfaces
Matrix examples	Surface water (rivers, lakes, creeks), fishponds, aquaculture, wastewater	Cheese, fruits, jams, meat, dough, ointments, lotions, gels	Skin, paper, leather, petri dishes, soil and water suspensions
Special features and benefits	<ul style="list-style-type: none"><li>– Robust plastic shaft</li><li>– Glass membrane shielded by protectors</li></ul>	<ul style="list-style-type: none"><li>– Maintenance-free</li><li>– Sensor lifetime indicator</li><li>– Easy to clean</li></ul>	<ul style="list-style-type: none"><li>– Minimum immersion depth 1 mm</li></ul>
Electrode without temperature sensor	—	6.0226.100	6.0256.100
Electrode with temperature sensor	6.0228.000	6.00226.600	—

Biotrode



Porotrode



Aquatrode



Unitrode



Smallest sample volumes	Protein containing samples	Poorly buffered samples. Ion deficient samples	Strongly alkaline or acidic samples, abrasive samples
Miktotiter plates, nutrient media, clinical samples	Milk, curd, yoghurt, soja milk, tofu, nutrient media	Drinking water, ultra-pure water	Fruit juices, ore slurries, effluents from mines, slurries, process waters
<ul style="list-style-type: none"><li>– Smallest electrode diameter 3 mm</li></ul>	<ul style="list-style-type: none"><li>– Insensitive to blocking of the diaphragm by proteins</li><li>– Viscous samples</li></ul>	<ul style="list-style-type: none"><li>– Short response time</li><li>– Electrolyte can be freely selected</li><li>– Minimal electrolyte outflow</li></ul>	<ul style="list-style-type: none"><li>– Robust membrane</li><li>– Tolerates high temperatures</li><li>– Insensitive to contamination</li></ul>
6.0224.100	6.0235.200	6.0253.100	6.0259.100
—	6.00235.600	6.0257.600	6.0258.600

## TECHNICAL SPECIFICATIONS

<b>pH measuring range</b>	-2 ... 16.00
Resolution	0.1/0.01
Accuracy	±0.02
Calibration points	1 ... 3 Auto, +2 Custom
Buffer recognition	Metrohm, USA, NIST
Guided calibration	Yes
Calibration report	Yes
Stability criteria	Yes: low, mid, high
<b>mV measuring range</b>	-1000 ... +1900 mV
Resolution	1/0.1 mV
<b>ORP calibration point</b>	1 point = 250 mV
<b>Temperature measuring range</b>	-10 ... +110 °C
Resolution	0.1 °C
Accuracy	±0.5 °C
Temperature compensation	0 ... 100 °C

<b>GLP</b>	Yes
<b>Calibration monitoring</b>	Yes
<b>Internal memory</b>	1000 Datapoints
<b>Display</b>	High-definition colored backlight LCD
<b>Brightness adjustment</b>	Yes
<b>IP protection</b>	IP54
<b>Output</b>	RS 232
<b>Power supply</b>	5 V Power adapter
<b>Input voltage</b>	100 ... 240 V
<b>Working condition</b>	0 ... +45 °C
<b>Dimensions</b>	160 x 140 x 45 mm
<b>Weight</b>	380 g

## ORDERING INFORMATION

949 pH Meters	
2.949.0210	949 pH Meter with electrode holder <b>without electrode</b>
2.949.0220	949 pH Meter with electrode holder <b>and Solitrode with fix cable</b>
6.2104.020	Electrode cable with socket G, 1m for electrodes without temperature sensor
6.2104.600	Electrode cable with socket U, 1m for electrodes with temperature sensor
Separate temperature sensor	
6.1110.100	Pt1000 temperature sensor
6.2104.140	Sensor cable for Pt1000, 1m for temperature sensors
Buffer	
6.2307.230	Mixed buffer solutions pH 4.00/7.00/9.00 (25 °C) in single use sachets, colourless, box of 3 x 10 x 30 mL
6.2307.100	Buffer solution pH 4 (500 mL)
6.2307.110	Buffer solution pH 7 (500 mL)
6.2307.120	Buffer solution pH 9 (500 mL)
Printer	
2.143.0200	TX-900MH impact printer