



**HORIBA**  
Scientific

# LAQUA

LAQUA 1500 Series Benchtop Water Quality Meters



pH

ORP

Temperature

Resistivity

Conductivity

Total Dissolved Solids

Salinity



[www.horiba-laqua.com](http://www.horiba-laqua.com)



# LAQUA

LAQUA 1500 Series Benchtop Water Quality Meters

Ideal for student training and routine applications.

Good value for money: no fancy bells and whistles which sounds good but are rarely used.

From a reputed manufacturer—one whose company was started with pH meters back in 1945.

## Visual Electrode Status Indicator

Shows electrode condition after calibration



## Adjustable, Integrated Electrode Stand

Holds up to 2 electrodes and can be positioned on either side of the meter



## Universal Power Adaptor

Multi-voltage (100-240V) and 6 plugs (US, UK, EU, ANZ, Korea, China) included



### Large Memory

Up to 1000 data sets



### Auto Data Log

Efficiently capture and save data into internal memory



### Adjustable Shut-off Time

Up to 30 mins



Auto Stable



Auto Hold



Real Time

### Auto Stable, Auto Hold and Real Time Measurement Modes

Smiley face and HOLD icons serve as reading stability indicators

### Data Acquisition Software Connectivity

Export data to computer using USB cable and software



### Data Output to Printer Capability

Print data using RS232 cable and printer



### Smaller Footprint

Occupies minimal space on lab desk



### Ready to go out of the box

Meter kits come with 9625-10D and/or 9382-10D electrode(s) and calibration solutions





## LAQUA-PH1500



- Provides accurate pH & ORP readings with auto temperature compensation
- Accepts up to 6 pH calibration points
- Auto calibrates USA, NIST, & DIN pH buffers
- Displays offset & average slope
- Allows 1-point ORP calibration and temperature calibration



9625-10D



501-S



502-S

LAQUA-PH1500 pH/ORP/Temp (°C/°F) Bench Meter	
pH Range	-2.00 to 16.00 pH
Resolution	0.01 pH
Accuracy	± 0.01 pH
pH Buffer Groups	USA, NIST, DIN
Calibration Points	Up to 5 (USA, NIST) / Up to 6 (DIN)
ORP Range	± 2000.0 mV
Resolution	0.1 mV (< ±1000 mV), 1 mV (≥ ±1000mV)
Accuracy	±0.3 mV (< ±1000 mV), 0.3% of reading (≥ ±1000mV)
Calibration Option	Yes (Up to ±200 mV)
Temperature Range	-30.0 to 130.0 °C / -22.0 to 266.0 °F
Resolution	0.1 °C / °F
Accuracy	± 0.5 °C / ± 0.9 °F
Calibration Option	Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)
Memory	1000 data sets
Auto Data Log	Yes
Measurement Modes	Auto Stable / Auto Hold / Real Time
Offset & Slope Display	Yes (Average slope)
Auto Shut-Off	Yes (programmable: 1 to 30 mins.)
Electrode Status	On screen display
PC / Printer Communication	Phono jack (USB / RS232)
Meter Inputs	BNC, phono (ATC), DC sockets
Display	Static segment LCD with 160 segments
Power Requirement	AC adaptor 100 - 240V, 50 - 60Hz
Dimensions	155 (L) x 150 (W) x 67 (H) mm
Weight	727g
Electrode Stand	Integrated

Meter Kits	
<b>PH1500</b> 3200875198	<ul style="list-style-type: none"> <li>• Meter with integrated electrode stand</li> <li>• Universal power adaptor with 6 plugs</li> <li>• Manual</li> </ul> Box: 300(L)x165(W)x80(H)mm, approx. 1650g
<b>PH1500-S</b> 3200869155	<ul style="list-style-type: none"> <li>• PH1500</li> <li>• 9625-10D refillable, plastic body pH electrode with built-in temperature sensor</li> <li>• 502-S USA pH buffers kit</li> </ul> Box: 410(L)x260(W)x225(H)mm, approx. 2980g
<b>PH1500-SN</b> 3200875199	<ul style="list-style-type: none"> <li>• PH1500</li> <li>• 9625-10D refillable, plastic body pH electrode with built-in temperature sensor</li> <li>• 501-S NIST pH buffers kit</li> </ul> Box: 410(L)x260(W)x225(H)mm, approx. 2980g

## LAQUA-EC1500



9382-10D



503-S

- Provides accurate conductivity readings with auto temperature compensation
- Accepts up to 5 conductivity calibration points
- Auto calibrates 84 $\mu$ S/cm, 1413 $\mu$ S/cm, 12.88mS/cm, & 111.8mS/cm standards
- Displays average calibration factor
- Allows 1-point salinity calibration and temperature calibration
- With pre-programmed TDS and salinity curves for various applications

LAQUA-EC1500 Conductivity/Resistivity/TDS/Salinity/Temp (°C/°F) Bench Meter	
Conductivity Range	0.00 – 200.0 mS
Resolution	0.01 / 0.1 / 1 $\mu$ S ; 0.01 / 0.1 mS
Accuracy	$\pm 0.6\%$ full scale, $\pm 1.5\%$ full scale > 18.0 mS/cm
Reference Temperature	15.0 to 30.0 °C (adjustable)
Temperature Coefficient	0.00 to 10.00 % per °C (adjustable)
Cell Constants	0.070 to 13.00 (adjustable)
Calibration Points	Up to 4 (Auto) / Up to 5 (Manual)
Units	S/cm, S/m (Auto ranging)
Resistivity Range	0.000 $\Omega \cdot \text{cm}$ to 20.0 M $\Omega \cdot \text{cm}$
Resolution	0.5% full scale
Accuracy	$\pm 0.6\%$ full scale, $\pm 1.5\%$ full scale > 1.80 M $\Omega \cdot \text{cm}$
Total Dissolved Solids (TDS) Range	0 ppm – 100 ppt
Resolution	0.01 / 0.1 / 1 ppm ; 0.01 / 0.1 ppt
Accuracy	$\pm 0.1\%$ full scale
TDS Curves	EN27888, 442, NaCl, Linear (0.40 to 1.00)
Salinity Range	0.0 to 100.0 ppt / 0.00 to 10.00 %
Resolution	0.1 ppt / 0.01%
Accuracy	$\pm 0.2\%$ full scale
Salinity Curves	NaCl / Seawater
Calibration Option	Yes
Temperature Range	-30.0 to 130.0 °C / -22.0 to 266.0 °F
Resolution	0.1 °C / °F
Accuracy	$\pm 0.5$ °C / $\pm 0.9$ °F
Calibration Option	Yes ( $\pm 10.0$ °C / $\pm 18.0$ °F range in 0.1 °C increments)
Memory	1000 data sets
Auto Data Log	Yes
Measurement Modes	Auto Stable / Auto Hold / Real Time
Auto Shut-Off	Yes (programmable: 1 to 30 mins.)
Electrode Status	On screen display
PC / Printer Communication	Phono jack (USB / RS232)
Meter Inputs	BNC, phono (ATC), DC sockets
Display	Static segment LCD with 160 segments
Power Requirement	AC adaptor 100 - 240V, 50 - 60Hz
Dimensions	155 (L) x 150 (W) x 67 (H) mm
Weight	727g
Electrode Stand	Integrated

TDS Curves	Applications
EN27888	Environmental
442 (Na <sub>2</sub> SO <sub>4</sub> , NaHCO <sub>3</sub> , NaCl)	Boiler water, HVAC
NaCl	Aquaculture, pickling
Linear (KCl)	General

Meter Kits	
<b>EC1500</b> 3200899658	<ul style="list-style-type: none"> <li>• Meter with integrated electrode stand</li> <li>• Universal power adaptor with 6 plugs</li> <li>• Manual</li> </ul> Box: 300(L)x165(W)x80(H)mm, approx. 1650g
<b>EC1500-S</b> 3200899661	<ul style="list-style-type: none"> <li>• EC1500</li> <li>• 9382-10D plastic body conductivity cell k=1.0 with built-in temperature sensor</li> <li>• 503-S Conductivity standard solutions kit</li> </ul> Box: 410(L)x260(W)x225(H)mm, approx. 3030g

## LAQUA-PC1500



- Multi-parameter meter with dual channel input
- Combination of PH1500 and EC1500



9625-10D



9382-10D



502-S



503-S

## LAQUA-PC1500

## pH/ORP/Conductivity/Resistivity/TDS/Salinity/Temp (°C/°F) Bench Meter

pH Range	-2.00 to 16.00 pH
Resolution	0.01 pH
Accuracy	± 0.01 pH
pH Buffer Groups	USA, NIST, DIN
Calibration Points	Up to 5 (USA, NIST) / Up to 6 (DIN)
ORP Range	± 2000.0 mV
Resolution	0.1 mV (< ±1000 mV), 1 mV (≥ ±1000mV)
Accuracy	±0.3 mV (< ±1000 mV), 0.3% of reading (≥ ±1000mV)
Calibration Option	Yes (Up to ±200 mV)
Conductivity Range	0.00 µS – 200.0 mS
Resolution	0.01 / 0.1 / 1 µS ; 0.01 / 0.1 mS
Accuracy	±0.6% full scale, ±1.5% full scale > 18.0 mS/cm
Reference Temperature	15.0 to 30.0 °C (adjustable)
Temperature Coefficient	0.00 to 10.00 % per °C (adjustable)
Cell Constants	0.070 to 13.00 (adjustable)
Calibration Points	Up to 4 (Auto) / Up to 5 (Manual)
Units	S/cm, S/m (Auto ranging)
Resistivity Range	0.000 Ω•cm to 20.0 MΩ•cm
Resolution	0.5% full scale
Accuracy	±0.6% full scale, ±1.5% full scale > 1.80 MΩ•cm
Total Dissolved Solids (TDS) Range	0 ppm – 100 ppt
Resolution	0.01 / 0.1 / 1 ppm ; 0.01 / 0.1 ppt
Accuracy	±0.1% full scale
TDS Curves	EN27888, 442, NaCl, Linear (0.40 to 1.00)
Salinity Range	0.0 to 100.0 ppt / 0.00 to 10.00 %
Resolution	0.1 ppt / 0.01%
Accuracy	±0.2% full scale
Salinity Curves	NaCl / Seawater
Calibration Option	Yes
Temperature Range	-30.0 to 130.0 °C / -22.0 to 266.0 °F
Resolution	0.1 °C / °F
Accuracy	± 0.5 °C / ± 0.9 °F
Calibration Option	Yes ( ± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)
Memory	1000 data sets
Auto Data Log	Yes
Measurement Modes	Auto Stable / Auto Hold / Real Time
Offset & Slope Display	Yes (Average slope)
Auto Shut-Off	Yes (programmable: 1 to 30 mins.)
Electrode Status	On screen display
PC / Printer Communication	Phono jack (USB / RS232)
Meter Inputs	2 x BNC, 2 x phono (ATC), DC sockets
Display	Static segment LCD with 160 segments
Power Requirement	AC adaptor 100 - 240V, 50 - 60Hz
Dimensions	155 (L) x 150 (W) x 67 (H) mm
Weight	740g
Electrode Stand	Integrated



## Meter Kits

<b>PC1500</b> 3200899659	<ul style="list-style-type: none"> <li>• Meter with integrated electrode stand</li> <li>• Universal power adaptor with 6 plugs</li> <li>• Manual</li> </ul> Box: 300(L)x165(W)x80(H)mm, approx. 1665g
<b>PC1500-S</b> 3200899662	<ul style="list-style-type: none"> <li>• PC1500</li> <li>• 9625-10D refillable, plastic body pH electrode with built-in temperature sensor</li> <li>• 9382-10D plastic body conductivity cell k=1.0 with built-in temperature sensor</li> <li>• 502-S USA pH buffers kit</li> <li>• 503-S Conductivity standard solutions kit</li> </ul> Box: 410(L)x260(W)x225(H)mm, approx. 3860g
<b>PC1500-SN</b> 3200899679	<ul style="list-style-type: none"> <li>• PC1500</li> <li>• 9625-10D refillable, plastic body pH electrode with built-in temperature sensor</li> <li>• 9382-10D plastic body conductivity cell k=1.0 with built-in temperature sensor</li> <li>• 501-S NIST pH buffers kit</li> <li>• 503-S Conductivity standard solutions kit</li> </ul> Box: 410(L)x260(W)x225(H)mm, approx. 3860g




# Solutions, Electrodes, & Accessories

pH Buffers		
Part No.	Model	Description
3999960015	501-S	NIST pH Buffers Kit (pH 4.01, 6.86, 9.18 buffers & 3.33M KCl, 250ml each)
3999960016	502-S	USA pH Buffers Kit (pH 4.01, 7.00, 10.01 buffers & 3.33M KCl, 250ml each)
3999960028	500-2	pH 1.68 Buffer at 25°C, 500ml
3999960029	500-4	pH 4.01 Buffer at 25°C, 500ml
3999960030	500-686	pH 6.86 Buffer at 25°C, 500ml
3999960031	500-7	pH 7.00 Buffer at 25°C, 500ml
3999960032	500-9	pH 9.18 Buffer at 25°C, 500ml
3999960033	500-10	pH 10.01 Buffer at 25°C, 500ml
3999960034	500-12	pH 12.46 Buffer at 25°C, 500ml

ORP Standard Solution & Powders		
Part No.	Model	Description
4000047848	500-225	ORP Standard Solution 225 mV at 25°C (500ml)
3200043618	160-51	ORP Powder 89 mV at 25°C for 250ml (10 sachets/pack) 
3200043617	160-22	ORP Powder 258 mV at 25°C for 250ml (10 sachets/pack) 

Conductivity Standards		
Part No.	Model	Description
3999960017	503-S	Conductivity Standard Solutions Kit (84μS/cm, 1413μS/cm, 12.88mS/cm & 111.8mS/cm, 250ml each)
3999960035	500-21	84μS/cm Conductivity Standard Solution at 25°C, 500ml
3999960036	500-22	1413μS/cm Conductivity Standard Solution at 25°C, 500ml
3999960037	500-23	12.88mS/cm Conductivity Standard Solution at 25°C, 500ml
3999960038	500-24	111.8mS/cm Conductivity Standard Solution at 25°C, 500ml

pH / ORP Electrode Filling Solutions		
3999960023	525-3	3.33M KCl, 250ml
3200043640	300	3.33M KCl, 250ml

pH Electrode Cleaning Solutions		
Part No.	Model	Description
3014028653	220	Cleaning solution for removing inorganic sample residues, 50ml x 2pcs 
3200530494	230	Cleaning solution for removing inorganic and organic sample residues, Solution A (30ml) & Solution B (100ml)
3200366771	250	Cleaning solution for removing proteins, 400ml

Electrodes*		
Part No.	Model	Description
3200360505	9625-10D	Refillable, plastic-body pH electrode with built-in temperature sensor and 1m cable
3014046710	9300-10D	ORP electrode with flat platinum tip, temperature sensor, and 1m cable
3014046709	9382-10D	Plastic-body, titanium / platinum black conductivity cell (k=1.0) with built-in temperature sensor and 1m cable

Accessories		
Part No.	Model	Description
3014028368	X-51	Digital simulator for pH, mV, Ion, DO & temperature
3014028370	X-52	Digital simulator for conductivity & temperature
3014030146	-	Printer for GLP / GMP compliance, 120V US version, plain paper included (printer cable is sold separately)
3014030147	-	Printer for GLP / GMP compliance, 230V EU version, plain paper included (printer cable is sold separately)
3200779638	-	25-pin D-sub printer (RS232) cable (meter to printer), 1.5m
3014030149	-	Printer paper, 20 rolls
3014030150	-	Printer ink ribbon, 5pcs/pack
3200779639	-	PC (USB) cable (meter to PC), 1.5m; comes with free data acquisition software in USB stick

\*Electrodes carry 6-month warranty against manufacturing defects.

501-S NIST pH Buffers Kit



502-S USA pH Buffers Kit



ORP Standard Solution



ORP Powders



220 250 230

Cleaning Solutions



X-51 Digital Simulator



X-52 Digital Simulator



Printer



## Water Quality Analyzers

With over 60 years of engineering excellence, HORIBA's diverse range of water quality analyzers and electrodes are ideal for everyday laboratory needs through to the most demanding of applications. Visit our website for a wealth of useful information and water quality measurement tips to help you obtain the best results in your work.



### Benchtop Meters

Developed using extensive feedback from users, our new LAQUA meters deliver the best solution for water quality analysis. Our LAQUA website features an online 'Selection Guide' to enable you to find the perfect LAQUA meter and electrode for your need.



### Handheld Meters

In the lab, in the field or anywhere you need it. LAQUA Handheld meters are designed for use with one hand and with an IP67 waterproof rating and shock-resistant casing. Meters can be used for long periods, even in dark places, making it ideal for field measurements in rivers and lakes.



### Electrodes

Various electrodes to match any application. A wide range of products for both benchtop and portable systems are available, including easy and reliable standard models, application-focused models for small samples or large containers, and special electrodes for specific sample characteristics.



### Pocket Meters

Analyzing water quality is simplified when using our LAQUAtwin range of meters. Designed to produce accurate and reliable results. Anyone, anywhere, at any time can measure samples easily with a LAQUAtwin meter. See just how good they are at our website.



### Application Notes

LAQUAtwin pocket meters offer quick and convenient alternative to analyze important parameters with high accuracy. Several application notes are available at (<http://goo.gl/znwE6j>) detailing the use of LAQUAtwin and the results achieved for the respective applications. Additional application notes will be added when available.



Visit the **HORIBA LAQUA Singapore** Channel on YouTube and subscribe to see more of our videos.



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