

# HORIBA

# LAQUA

LAQUA 200 Series Handheld Water Quality Meters



|             |          |                        |              |
|-------------|----------|------------------------|--------------|
| pH          | ORP      | Dissolved Oxygen       | Conductivity |
| Resistivity | Salinity | Total Dissolved Solids | Turbidity    |



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

Explore the future

**HORIBA**

# LAQUA 200 Series

Handheld Water Quality Meters



Scan code to view LAQUA 200 Series feature video online



### Eco-Friendly, Shock & Scratch Resistant & Non-slip

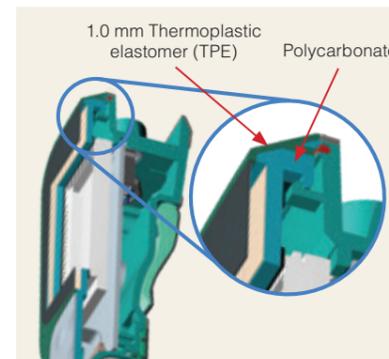
Apart from their high impact strength, the polycarbonate and TPE materials are also long-lasting and recyclable. The TPE provides non-slip grip and is not easily damaged by abrasion.



### Built-in Electrode Holder

Two grooves on the meter serve as electrode holders.

Electrode adapter provides secure attachment for two electrodes so they can be easily placed in solutions.



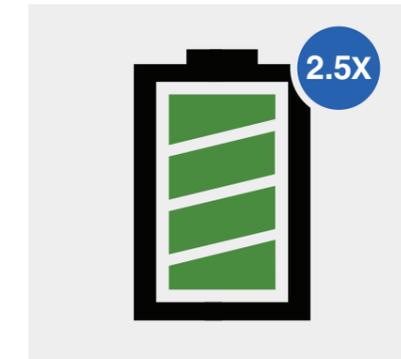
### Ergonomic Design

The black meter housing is made of polycarbonate material covered with a layer of TPE material. It is lightweight, comfortable to touch, and suitable for field applications.



### Backlit, Large LCD Screen

All models have scratch-resistant monochrome digital LCD with white LED backlight for easy viewing of readings even in dark locations.



### High Battery Capacity

AA batteries have greater power capacity than AAA batteries. Battery life is increased by 2.5x.



### IP67 Waterproof and Dustproof

Fully protected from dust and capable of withstanding water immersion up to 1 meter depth for 30 mins.<sup>1</sup>

<sup>1</sup> With electrodes connected and communication port sealed



### 9-Button Keypad Minimal Matrix

Operation buttons are reduced to the bare minimum.



### Integrated Foldable Meter Stand

A collapsible meter stand is integrated at the back of the meter for convenient usage and storage.



### PC / Printer Communications

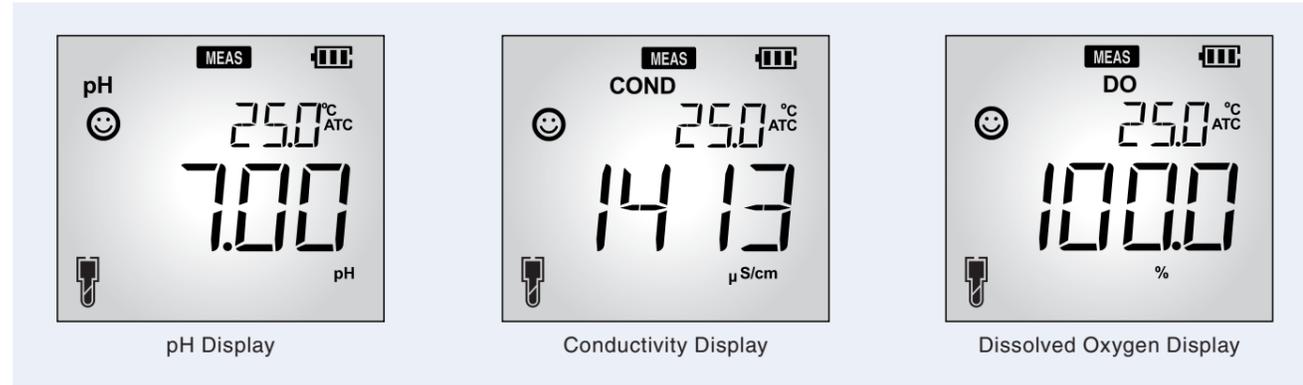
The 220 models are GLP-compliant, recording calibration and measurement data with date and time stamps. Connect to a PC via USB cable<sup>2</sup> to transfer data or to a HORIBA printer via RS232 cable<sup>2</sup> to print.

<sup>2</sup> Cables and printer are sold separately

< Meter shown in actual size

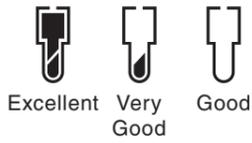
## Easy-to-Read Display

Electrode condition, reading stability, parameter, and temperature in one screen can be checked at a glance.



## Electrode Status Indicator

The electrode icon indicates the condition of the electrode after each calibration.



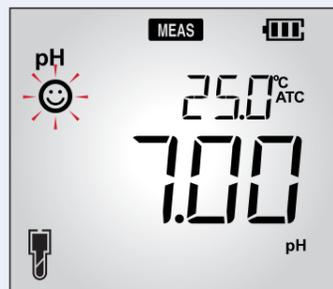
## Calibration Data

Simply press CAL button and then DATA button to view the latest calibration data.

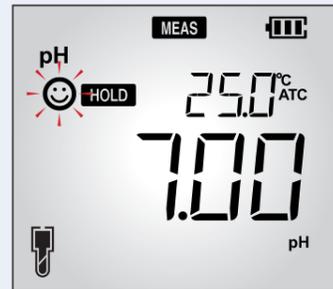


## Measurement Modes: Auto Stable, Auto Hold, Real Time

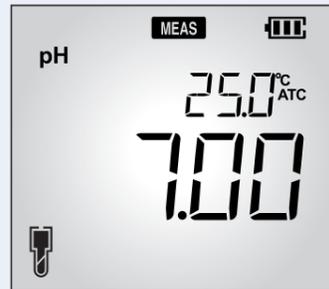
| Measurement Modes | Readings                    | 😊                              | HOLD      |
|-------------------|-----------------------------|--------------------------------|-----------|
| Auto Stable (AS)  | Meter shows live readings   | Blinks until reading is stable | Inactive  |
| Auto Hold (AH)    | Meter locks stable readings | Blinks until reading is stable | Lights up |
| Real Time         | Meter shows live readings   | Inactive                       | Inactive  |



Auto Stable



Auto Hold

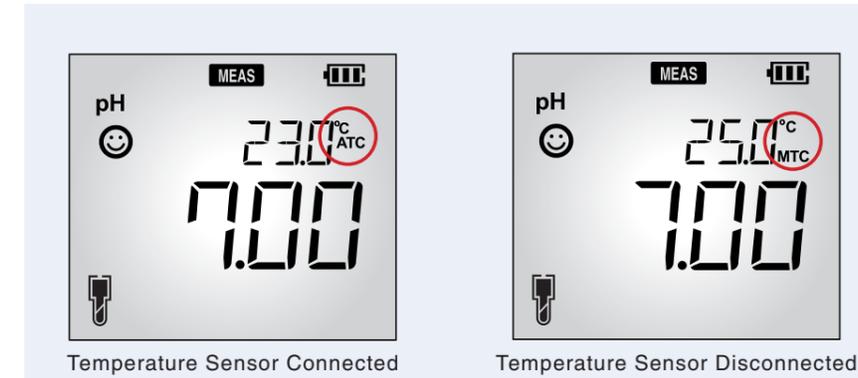


Real Time



## Temperature Sensor Indicator

When the temperature sensor is connected to the meter, ATC is displayed. Otherwise MTC is displayed.

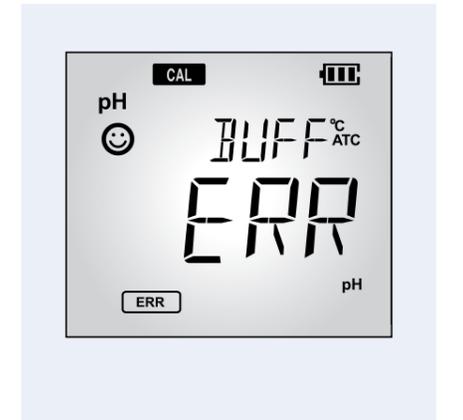


Temperature Sensor Connected

Temperature Sensor Disconnected

## Diagnostic Messages

Self-diagnosing meters display measurement and meter issues for fast fault finding and troubleshooting.



## Rugged Carrying Case

The durable case keeps your meter, electrodes, solutions, and accessories secured, organized, and protected during quick field testing on the go or storage.



- 1 User Manual and Notes Compartment
- 2 Clear Sleeve for Quick Guide
- 3 DO Replacement Tip
- 4 Electrode Adapter
- 5 2 x AA Batteries
- 6 Calibration Solutions
- 7 pH Electrode
- 8 Conductivity Electrode
- 9 Electrode Cable Compartment
- 10 LAQUA 200 Series Meter
- 11 DO Electrode Cable Winder (up to 5.0m)
- 12 DO Electrode

## Electrodes

IP67 waterproof and dustproof

| 9652-10D / 20D Plastic-body, Double Junction, Gel pH Electrodes |                              |            |
|---|------------------------------|------------|
| Model   | 9652-10D                     | 9652-20D   |
| Part No.  | 3200786359                   | 3200786361 |
| pH Range  | 0 - 14 pH                    |            |
| Temperature Range   | 0 - 80 °C                    |            |
| Liquid Junction   | Porous sintered polyethylene |            |
| Temperature Sensor  | Integrated                   |            |
| Connectors  | BNC, phono                   |            |
| Electrode Length & Diameter                                     | 150 x 16mm                   |            |
| Cable Length  | 1.0 m                        | 2.0 m      |

| 9301-10D Plastic-body, Platinum / Gel ORP Electrode |                              |
|---|------------------------------|
| Model   | 9301-10D                     |
| Part No.  | 3200922105                   |
| ORP Range   | ±2000 mV                     |
| Temperature Range                                   | 0 - 80 °C                    |
| Liquid Junction                                     | Porous sintered polyethylene |
| Temperature Sensor                                  | Integrated                   |
| Connectors  | BNC, phono                   |
| Electrode Length & Diameter                         | 110 x 16mm                   |
| Cable Length  | 1.0 m                        |

| 9383-10D Plastic-body, Titanium / Platinum Black Conductivity Cell |                      |
|--|----------------------|
| Model  | 9383-10D             |
| Part No.   | 3200780927           |
| Cell Constant  | 1 cm <sup>-1</sup>   |
| Conductivity Range   | 1 µS/cm to 100 mS/cm |
| Temperature Range  | 0 - 80 °C            |
| Temperature Sensor   | Integrated           |
| Connectors   | BNC, phono           |
| Electrode Length & Diameter  | 150 x 16mm           |
| Cable Length   | 1.0 m                |

| 9552-20D / 50D Galvanic DO Probes |                   |            |
|-----------------------------------|-------------------|------------|
| Model                             | 9552-20D          | 9552-50D   |
| Part No.                          | 3200780939        | 3200780941 |
| DO Range                          | 0 - 20.00 mg/L    |            |
| Temperature Range                 | 0 - 50 °C         |            |
| Temperature Sensor                | Integrated        |            |
| Connectors                        | BNC, phono        |            |
| Electrode Length & Diameter       | 165 x 30mm        |            |
| Cable Length                      | 2.0 m             | 5.0 m      |
| Replacement DO Tip / Part No.     | 5402 / 3200781553 |            |

# LAQUA TB220

Turbidity Meter



ISO 7027,  
DIN EN 27027  
Compliant

Software  
Upgradeable

Up to 4  
Calibration Points

0.02, 20, 100, 800 NTU  
Styrene Divinylbenzene  
(SDVB) polymer  
solution standards

Large Memory

Up to 2000 data  
with date and  
time stamp

PC and Printer  
Compatible

## Meter Kit Components



Carrying Case



Vials for sample  
measurement



Instruction and  
Quick Manuals



Turbidity SDVB Standard  
Solutions (10ml each)



Cloth



Silicone Oil

## Turbidity Meter Specifications

| Model                              | TB220   |
|------------------------------------|---|
| Turbidity Range                    | 0.00 to 2000 NTU  |
| Resolution                         | 0.00–19.99 NTU, 20.0–199.9 NTU, 200–2000 NTU  |
| Accuracy                           | 0.00–1000 NTU: $\pm 0.02$ NTU or $\pm 2\%$ , 1001–2000 NTU: $\pm 3\%$                             |
| Repeatability                      | $\pm 0.02$ NTU or $\pm 2\%$   |
| Calibration Points                 | Up to 4 (0.02, 20, 100, 800 NTU)  |
| Calibration Standards              | Styrene divinylbenzene (SDVB) polymer solution  |
| Principle                          | Ratiometric turbidity measurement using nephelometric light scatter and transmitted light signals |
| Compliance                         | ISO 7027, DIN EN 27027  |
| Light Source                       | Infrared light emitting diode (860 nm)  |
| Detector                           | Silicone photodiode   |
| Sample Volume                      | 10 ml   |
| Memory                             | 2000  |
| Real-Time Clock                    | Yes   |
| Date & Time Stamp                  | Yes   |
| Auto Shut-Off                      | Off, 1 to 30 mins   |
| Diagnostic Messages                | Yes   |
| Software Upgrade <sup>1</sup>      | Yes, PC (USB) cable required  |
| PC Communication <sup>1</sup>      | Yes, PC (USB) cable required  |
| Printer Communication <sup>2</sup> | Yes, Printer (RS232) cable required   |
| Display                            | Custom LCD with backlight (50 x 40 mm)  |
| Housing                            | IP67 (Except for inside of sensor unit), shock & scratch resistant, non-slip                      |
| Power Requirement                  | 4 x AA batteries  |
| Battery Life                       | > 2000 measurements   |
| Meter Dimensions                   | 210 (L) x 110 (W) x 55 (H) mm   |
| Meter Weight                       | Approx. 510 g (with batteries) / 410 g (without batteries)  |

## Ordering Information

| Meter Kit  |   |
|------------|---|
| 3201073569 | <b>TB220-K TB220 Turbidity Meter Kit</b> <ul style="list-style-type: none"> <li>• TB220 Meter</li> <li>• 0.02, 20, 100 &amp; 800 NTU standards (10ml each)</li> <li>• Silicone oil</li> <li>• Cloth</li> <li>• 4 sample vials</li> <li>• Carrying case</li> <li>• Instruction &amp; Quick Manual</li> </ul> |

# LAQUA PH210 & PH220

pH/ORP/Temperature (°C/°F) Meters



Accepts up to 6 Calibration Points

USA, NIST & DIN pH Buffer Groups

| pH Buffer Group | pH Buffer Values (25° C)            |
|-----------------|-------------------------------------|
| USA             | 1.68, 4.01, 7.00, 10.01, 12.45      |
| NIST            | 1.68, 4.01, 6.86, 9.18, 12.45       |
| DIN             | 1.09, 3.06, 4.65, 6.79, 9.23, 12.75 |

Allows 1-point ORP Calibration

Shows Offset & Average Slope Data

## pH Meters Specifications

| Model                               | PH210  | PH220 |
|-------------------------------------|--|-------|
| pH Range                            | -2.00 to 16.00 pH  |       |
| Resolution                          | 0.01 pH  |       |
| Accuracy                            | ±0.01 pH   |       |
| Calibration Points                  | USA & NIST (Up to 5), DIN (Up to 6)                        |       |
| pH Buffer Groups                    | USA, NIST, DIN   |       |
| ORP Range                           | ±2000 mV   |       |
| Resolution                          | 0.1 mV (< ±1000 mV), 1 mV (≥ ±1000mV)                      |       |
| Accuracy                            | ±0.3 mV (< ±1000 mV), 0.3% of reading (≥ ±1000mV)          |       |
| 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  |       |
| Memory                              | 500  | 1000  |
| Auto Data Log                       | ✓  | ✓     |
| Real-time Clock                     | –  | ✓     |
| Date & Time Stamp                   | –  | ✓     |
| Auto Hold / Auto Stable / Real Time | ✓  | ✓     |
| Offset & Average Slope Display      | ✓  | ✓     |
| Calibration Alarm (1 to 90 days)    | ✓  | ✓     |
| Auto Shut-Off (1 to 30 mins.)       | ✓  | ✓     |
| Electrode Status                    | ✓  | ✓     |
| Diagnostic Messages                 | ✓  | ✓     |
| PC Communication <sup>1</sup>       | –  | ✓     |
| Printer Communication <sup>2</sup>  | –  | ✓     |
| Meter Inputs                        | BNC, phono   |       |
| Display                             | Custom LCD with backlight (50 x 50 mm)                     |       |
| Housing                             | IP67, shock & scratch resistant, non-slip                  |       |
| Power Requirement                   | 2 x AA batteries   |       |
| Battery Life                        | > 500 hours  |       |
| Meter Dimensions                    | 160 (L) x 80 (W) x 40.60 (H) mm                            |       |
| Meter Weight                        | Approx. 260 g (with batteries) / 216 g (without batteries) |       |

<sup>1</sup>Via PC (USB) cable PN 3201025022

<sup>2</sup>Via Printer (RS232) cable PN 3200779638

## Meter Kit Components



Carrying Case



Manual & Quick Guide



pH Buffers



9652-10D Gel pH electrode



2 X AA Batteries

## Ordering Information

| Meter Kits* |  |
|-------------|--|
| 3200779526  | <b>PH210-K Waterproof pH/ORP/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• PH210 Meter</li> <li>• 9652-10D Gel pH electrode</li> <li>• 4.01, 7.00, 10.01 pH Buffers (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |
| 3200779527  | <b>PH220-K Waterproof pH/ORP/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• PH220 Meter</li> <li>• 9652-10D Gel pH electrode</li> <li>• 4.01, 7.00, 10.01 pH Buffers (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |

\*Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code.

# LAQUA EC210 & EC220

Conductivity/Resistivity/TDS/Salinity/Temperature (°C/°F) Meters



Allows Auto and Manual Calibrations

Linear, EN27888, 442, NaCl TDS Curves

Accepts up to 5 Calibration Points

Allows 1-point Salinity Calibration

## Meter Kit Components



Carrying Case



Manual & Quick Guide



Conductivity standards



9383-10D Ti/Pt Conductivity electrode



2 X AA Batteries

## Conductivity Meters Specifications

| Model                              | EC210  | EC220 |
|------------------------------------|--|-------|
| Conductivity Range                 | ..μS/cm to 200.0 mS/cm (k=1.0)                             |       |
| Resolution                         | 0.05% full scale   |       |
| Accuracy                           | ±0.6% full scale, ±1.5% full scale > 18.0 mS/cm            |       |
| Reference Temperature              | 15 to 30 °C  |       |
| Temperature Coefficient            | 0.00 to 10.00%   |       |
| Cell Constants                     | 0.1, 1.0, 10.0   |       |
| Calibration Points                 | Up to 4 (Auto) / Up to 5 (Manual)                          |       |
| Units                              | S/cm, S/m (Auto Ranging)                                   |       |
| Total Dissolved Solids (TDS) Range | ..ppm to 100 ppt (TDS factor=0.5)                          |       |
| Resolution                         | 0.01 ppm (mg/L) / 0.1 ppt (g/L)                            |       |
| Accuracy                           | ±0.1% full scale   |       |
| TDS Curves                         | Linear (0.40 to 1.00), EN27888, 442, NaCl                  |       |
| Resistivity Range                  | 0.000 Ω•cm to 20.0 MΩ•cm                                   |       |
| Resolution                         | 0.05% full scale   |       |
| Accuracy                           | ±0.6% full scale, ±1.5% full scale > 1.80 MΩ•cm            |       |
| 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  |       |
| Memory                             | 500  | 1000  |
| Auto Data Log                      | ✓  | ✓     |
| Real-time Clock                    | -  | ✓     |
| Date & Time Stamp                  | -  | ✓     |
| Auto Hold / Auto Stable/ Real Time | ✓  | ✓     |
| Auto Shut-Off (1 to 30 mins.)      | ✓  | ✓     |
| Electrode Status                   | ✓  | ✓     |
| Diagnostic Messages                | ✓  | ✓     |
| PC Communication <sup>1</sup>      | -  | ✓     |
| Printer Communication <sup>2</sup> | -  | ✓     |
| Meter Inputs                       | BNC, phono   |       |
| Display                            | Custom LCD with backlight (50 x 50 mm)                     |       |
| Housing                            | IP67, shock & scratch resistant, non-slip                  |       |
| Power Requirement                  | 2 x AA batteries   |       |
| Battery Life                       | > 500 hours  |       |
| Meter Dimensions                   | 160 (L) x 80 (W) x 40.60 (H) mm                            |       |
| Meter Weight                       | Approx. 260 g (with batteries) / 216 g (without batteries) |       |

<sup>1</sup>Via PC (USB) cable PN 3201025022

<sup>2</sup>Via Printer (RS232) cable PN 3200779638

## Ordering Information

| Meter Kits |   |
|------------|---|
| 3200779528 | <b>EC210-K Waterproof Conductivity/TDS/Res/Sal/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• EC210 Meter</li> <li>• 9383-10D Ti/Pt Conductivity electrode (k=1.0)</li> <li>• 84 μS/cm, 1413 μS/cm, 12.88 mS/cm, &amp; 111.8 mS/cm Conductivity standards (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |
| 3200779529 | <b>EC220-K Waterproof Conductivity/TDS/Res/Sal/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• EC220 Meter</li> <li>• 9383-10D Ti/Pt Conductivity electrode (k=1.0)</li> <li>• 84 μS/cm, 1413 μS/cm, 12.88 mS/cm, &amp; 111.8 mS/cm Conductivity standards (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |

# LAQUA DO210 & DO220

Dissolved Oxygen/Temperature (°C/°F) Meters



Allows up to 2 Calibration Points

Measures DO concentration in ppm (mg/L) and % saturation

Compatible with Galvanic DO Probes

Compensates Salinity, Temperature and Atmospheric Pressure

## Meter Kit Components



Carrying Case



Manual & Quick Guide



9552-20D or 9552-50D Galvanic DO probe



2 X AA Batteries

## DO Meters Specifications

| Model                               | DO210  | DO220 |
|-------------------------------------|--|-------|
| Dissolved Oxygen (DO) Range         | 0.0 to 20.00 mg/L, 0.0 to 200.0%                           |       |
| Resolution                          | 0.01 mg/L, 0.1%  |       |
| Accuracy                            | ±0.1 mg/L  |       |
| Salinity Compensation               | 0.0 to 40.0 ppt  |       |
| Barometric Pressure Compensation    | Yes  |       |
| DO Probe Type                       | Galvanic integrated with temperature sensor                |       |
| Calibration Points                  | Up to 2  |       |
| 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  |       |
| Memory                              | 500  | 1000  |
| Auto Data Log                       | ✓  | ✓     |
| Real-time Clock                     | -  | ✓     |
| Date & Time Stamp                   | -  | ✓     |
| Auto Hold / Auto Stable / Real Time | ✓  | ✓     |
| Auto Shut-Off (1 to 30 mins.)       | ✓  | ✓     |
| Electrode Status                    | ✓  | ✓     |
| Diagnostic Messages                 | ✓  | ✓     |
| PC Communication <sup>1</sup>       | -  | ✓     |
| Printer Communication <sup>2</sup>  | -  | ✓     |
| Meter Inputs                        | BNC, phono   |       |
| Display                             | Custom LCD with backlight (50 x 50 mm)                     |       |
| Housing                             | IP67, shock & scratch resistant, non-slip                  |       |
| Power Requirement                   | 2 x AA batteries   |       |
| Battery Life                        | > 500 hours  |       |
| Meter Dimensions                    | 160 (L) x 80 (W) x 40.60 (H) mm                            |       |
| Meter Weight                        | Approx. 260 g (with batteries) / 216 g (without batteries) |       |

<sup>1</sup>Via PC (USB) cable PN 3201025022

<sup>2</sup>Via Printer (RS232) cable PN 3200779638

## Ordering Information

| Meter Kits with Galvanic DO probe, 2m Cable |  | Meter Kits with Galvanic DO probe, 5m Cable |  |
|---|--|---|--|
| 3200779530                                  | <b>DO210-K Waterproof DO/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• DO210 Meter</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> <li>• 9552-20D Galvanic DO probe, 2m cable</li> </ul> | 4000009167                                  | <b>DO210-K05 Waterproof DO/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• DO210 Meter</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> <li>• 9552-50D Galvanic DO probe, 5m cable</li> </ul> |
| 3200779531                                  | <b>DO220-K Waterproof DO/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• DO220 Meter</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> <li>• 9552-20D Galvanic DO probe, 2m cable</li> </ul> | 4000009168                                  | <b>DO220-K05 Waterproof DO/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• DO220 Meter</li> <li>• 2 x AA Batteries</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> <li>• 9552-50D Galvanic DO probe, 5m cable</li> </ul> |

# LAQUA PC210 & PC220

pH/ORP/Conductivity/Resistivity/TDS/Salinity/Temperature (°C/°F) Meters



Accepts up to 6 Calibration Points

USA, NIST & DIN pH Buffer Groups

| pH Buffer Group | pH Buffer Values (25° C)            |
|-----------------|-------------------------------------|
| USA             | 1.68, 4.01, 7.00, 10.01, 12.45      |
| NIST            | 1.68, 4.01, 6.86, 9.18, 12.45       |
| DIN             | 1.09, 3.06, 4.65, 6.79, 9.23, 12.75 |

Allows 1-point ORP Calibration

Shows Offset & Average Slope Data

Accepts up to 5 Calibration Points

Allows 1-point Salinity Calibration

Allows Auto and Manual Calibrations

Linear, EN27888, 442, NaCl TDS Curves

## Meter Kit Components



Carrying Case



Manual & Quick Guide



pH Buffers



Conductivity standards



9652-10D Gel pH electrode



9383-10D Ti/Pt Conductivity electrode



2 X AA Batteries

## Multi-Parameters Meters Specifications

| Model                               | PC210  | PC220 |
|-------------------------------------|--|-------|
| pH Range                            | -2.00 to 16.00 pH  |       |
| Resolution                          | 0.01 pH  |       |
| Accuracy                            | ±0.01 pH   |       |
| Calibration Points                  | USA & NIST (Up to 5), DIN (Up to 6)                      |       |
| pH Buffer Groups                    | USA, NIST, DIN   |       |
| ORP Range                           | ±2000 mV   |       |
| Resolution                          | 0.1 mV (< ±1000 mV), 1 mV (≥ ±1000mV)                    |       |
| Accuracy                            | ±0.3 mV (< ±1000 mV), 0.3% of reading (≥ ±1000mV)        |       |
| Calibration Option                  | Yes  |       |
| Conductivity Range                  | ..µS/cm to 200.0 mS/cm (k=1.0)                           |       |
| Resolution                          | 0.05% full scale   |       |
| Accuracy                            | ±0.6% full scale, ±1.5% full scale > 18.0 mS/cm          |       |
| Reference Temperature               | 15 to 30 °C  |       |
| Temperature Coefficient             | 0.00 to 10.00%   |       |
| Cell Constants                      | 0.1, 1.0, 10.0   |       |
| Calibration Points                  | Up to 4 (Auto) / Up to 5 (Manual)                        |       |
| Units                               | S/cm, S/m (Auto Ranging)                                 |       |
| Total Dissolved Solids (TDS) Range  | ..ppm to 100 ppt (TDS factor=0.5)                        |       |
| Resolution                          | 0.01 ppm (mg/L) / 0.1 ppt (g/L)                          |       |
| Accuracy                            | ±0.1% full scale   |       |
| TDS Curves                          | Linear (0.40 to 1.00), EN27888, 442, NaCl                |       |
| Resistivity Range                   | 0.000 Ω•cm to 20.0 MΩ•cm                                 |       |
| Resolution                          | 0.05% full scale   |       |
| Accuracy                            | ±0.6% full scale, ±1.5% full scale > 1.80 MΩ•cm          |       |
| 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  |       |
| Memory                              | 500  | 1000  |
| Auto Data Log                       | ✓  | ✓     |
| Real-time Clock                     | -  | ✓     |
| Date & Time Stamp                   | -  | ✓     |
| Auto Hold / Auto Stable / Real Time | ✓  | ✓     |
| Offset & Average Slope Display      | ✓  | ✓     |
| Calibration Alarm (1 to 90 days)    | ✓  | ✓     |
| Auto Shut-Off (1 to 30 mins.)       | ✓  | ✓     |
| Electrode Status                    | ✓  | ✓     |
| Diagnostic Messages                 | ✓  | ✓     |
| PC Communication <sup>1</sup>       | -  | ✓     |
| Printer Communication <sup>2</sup>  | -  | ✓     |
| Meter Inputs                        | BNC, phono   |       |
| Display                             | Custom LCD with backlight (50 x 50 mm)                   |       |
| Housing                             | IP67, shock & scratch resistant, non-slip                |       |
| Power Requirement                   | 2 x AA batteries   |       |
| Battery Life                        | > 500 hours  |       |
| Meter Dimensions                    | 160 (L) x 80 (W) x 40.60 (H) mm                          |       |
| Meter Weight                        | Approx. 260g (with batteries) / 216g (without batteries) |       |

<sup>1</sup>Via PC (USB) cable PN 3201025022

<sup>2</sup>Via Printer (RS232) cable PN 3200779638

## Ordering Information

| Meter Kits* |   |
|-------------|---|
| 3200779532  | <b>PC210-K Waterproof pH/ORP/Conductivity/TDS/Sal/Res/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• PC210 Meter</li> <li>• 9652-10D Gel pH electrode</li> <li>• 9383-10D Ti/Pt Conductivity electrode (k=1.0)</li> <li>• 4.01 &amp; 7.00 pH Buffers (60 ml each)</li> <li>• 1413 µS/cm &amp; 12.88 mS/cm Conductivity standards (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Electrode Adapter</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |
| 3200779533  | <b>PC220-K Waterproof pH/ORP/Conductivity/TDS/Sal/Res/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• PC220 Meter</li> <li>• 9652-10D Gel pH electrode</li> <li>• 9383-10D Ti/Pt Conductivity electrode (k=1.0)</li> <li>• 4.01 &amp; 7.00 pH Buffers (60 ml each)</li> <li>• 1413 µS/cm &amp; 12.88 mS/cm Conductivity standards (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Electrode Adapter</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |

\*Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code.

# LAQUA PD210 & PD220

pH/ORP/Dissolved Oxygen/Temperature (°C/°F) Meters



Accepts up to 6 Calibration Points

USA, NIST & DIN pH Buffer Groups

| pH Buffer Group | pH Buffer Values (25° C)            |
|-----------------|-------------------------------------|
| USA             | 1.68, 4.01, 7.00, 10.01, 12.45      |
| NIST            | 1.68, 4.01, 6.86, 9.18, 12.45       |
| DIN             | 1.09, 3.06, 4.65, 6.79, 9.23, 12.75 |

Allows 1-point ORP Calibration

Shows Offset & Average Slope Data

Allows up to 2 Calibration Points

Measures DO concentration in ppm (mg/L) and % saturation

Compatible with Galvanic DO Probes

Compensates Salinity, Temperature and Atmospheric Pressure

## Multi-Parameters Meters Specifications

| Model                               | PD210  | PD220 |
|-------------------------------------|--|-------|
| pH Range                            | -2.00 to 16.00 pH  |       |
| Resolution                          | 0.01 pH  |       |
| Accuracy                            | ±0.01 pH   |       |
| Calibration Points                  | USA & NIST (Up to 5), DIN (Up to 6)                        |       |
| pH Buffer Groups                    | USA, NIST, DIN   |       |
| ORP Range                           | ±2000 mV   |       |
| Resolution                          | 0.1 mV (< ±1000 mV), 1 mV (≥ ±1000mV)                      |       |
| Accuracy                            | ±0.3 mV (< ±1000 mV), 0.3% of reading (≥ ±1000mV)          |       |
| Calibration Option                  | Yes  |       |
| Dissolved Oxygen (DO) Range         | 0.0 to 20.00 mg/L<br>0.0 to 200.0%                         |       |
| Resolution                          | 0.01 mg/L, 0.1%  |       |
| Accuracy                            | ±0.1 mg/L  |       |
| Salinity Compensation               | 0.0 to 40.0 ppt  |       |
| Barometric Pressure Compensation    | Yes  |       |
| DO Probe Type                       | Galvanic integrated with temperature sensor                |       |
| Calibration Points                  | Up to 2  |       |
| 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  |       |
| Memory                              | 500  | 1000  |
| Auto Data Log                       | ✓  | ✓     |
| Real-time Clock                     | —  | ✓     |
| Date & Time Stamp                   | —  | ✓     |
| Auto Hold / Auto Stable / Real Time | ✓  | ✓     |
| Offset & Average Slope Display      | ✓  | ✓     |
| Calibration Alarm (1 to 90 days)    | ✓  | ✓     |
| Auto Shut-Off (1 to 30 mins.)       | ✓  | ✓     |
| Electrode Status                    | ✓  | ✓     |
| Diagnostic Messages                 | ✓  | ✓     |
| PC Communication <sup>1</sup>       | —  | ✓     |
| Printer Communication <sup>2</sup>  | —  | ✓     |
| Meter Inputs                        | BNC, phono   |       |
| Display                             | Custom LCD with backlight (50 x 50 mm)                     |       |
| Housing                             | IP67, shock & scratch resistant, non-slip                  |       |
| Power Requirement                   | 2 x AA batteries   |       |
| Battery Life                        | > 500 hours  |       |
| Meter Dimensions                    | 160 (L) x 80 (W) x 40.60 (H) mm                            |       |
| Meter Weight                        | Approx. 260 g (with batteries) / 216 g (without batteries) |       |

<sup>1</sup>Via PC (USB) cable PN 3201025022

<sup>2</sup>Via Printer (RS232) cable PN 3200779638

## Meter Kit Components



## Ordering Information

| Meter Kits <sup>^</sup> |  |  |
|-------------------------|--|--|
| 3200779534              | <b>PD210-K Waterproof pH/ORP/DO/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• PD210 Meter</li> <li>• 9652-20D Gel pH electrode, 2m cable</li> <li>• 9552-20D Galvanic DO probe, 2m cable</li> <li>• 4.01, 7.00, 10.01 pH Buffers (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Electrode Adapter</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |  |
| 3200779535              | <b>PD220-K Waterproof pH/ORP/DO/Temperature Handheld Meter Kit</b> <ul style="list-style-type: none"> <li>• PD220 Meter</li> <li>• 9652-20D Gel pH electrode, 2m cable</li> <li>• 9552-20D Galvanic DO probe, 2m cable</li> <li>• 4.01, 7.00, 10.01 pH Buffers (60 ml each)</li> <li>• 2 x AA Batteries</li> <li>• Electrode Adapter</li> <li>• Carrying case</li> <li>• Manual &amp; Quick Guide</li> </ul> |  |

<sup>^</sup>Meter kit with NIST pH buffers is available upon request. Add 'N' suffix to order code.

# Accessories & Solutions

## Ordering Information

### pH Buffers

| Part No.   | Model      | Description   |
|------------|------------|---|
| 3200043642 | 101-S      | pH6,86 (500 ml), pH4 (250 ml) and pH9,18 (250 ml) buffer Solution / Reference Electrode Internal Solution #300 (250 ml) / Dropper |
| 3200043639 | 100-2      | pH 1,68 buffer Solution (500 ml)  |
| 3200043637 | 100-7      | pH 6.86 Standard Solution (500 ml)  |
| 3200043636 | 100-9      | pH 9.18 buffer Solution (500 ml)  |
| 1300045600 | 250-PH-4   | pH 4,01 buffer solution, 250 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C                         |
| 1300045602 | 500-PH-4   | pH 4,01 buffer solution, 500 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C                         |
| 1300045599 | 1000-PH-4  | pH 4,01 buffer solution, 1 ltr in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C                          |
| 1300045607 | 250-PH-7   | pH 7,00 buffer solution, 250 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C                         |
| 1300045608 | 500-PH-7   | pH 7,00 buffer solution, 500 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C                         |
| 1300045606 | 1000-PH-7  | pH 7,00 buffer solution, 1 ltr in dosing bottle, NIST Traceable with certificate, accuracy ± 0,01 @ 25°C                          |
| 1300045604 | 250-PH-10  | pH 10,01 buffer solution, 250 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,02 @ 25°C                        |
| 1300045605 | 500-PH-10  | pH 10,01 buffer solution, 500 ml in dosing bottle, NIST Traceable with certificate, accuracy ± 0,02 @ 25°C                        |
| 1300045603 | 1000-PH-10 | pH 10,01 buffer solution, 1 ltr in dosing bottle, NIST Traceable with certificate, accuracy ± 0,02 @ 25°C                         |



### ORP Solutions

| Part No.   | Model       | Description   |
|------------|-------------|---|
| 1300045637 | 250-ORP-200 | 200 mV Redox / ORP solution, 250 ml round brown bottle, accuracy ± 5mV @ 25°C |
| 1300045636 | 250-ORP-475 | 475 mV Redox / ORP solution, 250 ml dosing bottle, accuracy ± 5mV @ 25°C      |
| 1300045635 | 500-ORP-475 | 475 mV Redox / ORP solution, 500 ml dosing bottle, accuracy ± 5mV @ 25°C      |
| 1300045634 | 500-ORP-650 | 650 mV Redox / ORP solution, 500 ml dosing bottle, accuracy ± 5mV @ 25°C      |



### Conductivity Standards

| Part No.   | Model        | Description  |
|------------|--------------|--|
| 1300045609 | 250-EC-84    | 84 uS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy±1%, KCl                 |
| 1300045632 | 500-EC-84    | 84 uS/cm Calibration Solution, 500 ml dosing bottle with certificate, accuracy±1%, KCl                 |
| 1300045633 | 1000-EC-84   | 84 uS/cm Calibration Solution, 1 ltr dosing bottle with certificate, accuracy±1%, KCl                  |
| 1300051602 | 250-EC-147   | 147 uS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy±1%, KCl                |
| 1300045595 | 250-EC-1413  | 1,413 uS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy±1%, (25°C)=0.01M KCl |
| 1300045638 | 500-EC-1413  | 1,413 uS/cm Calibration Solution, 500 ml dosing bottle with certificate, accuracy±1%, (25°C)=0.01M KCl |
| 1300045591 | 1000-EC-1413 | 1,413 uS/cm Calibration Solution, 1 ltr dosing bottle with certificate, accuracy±1%, (25°C)=0.01M KCl  |
| 1300045590 | 250-EC-1288  | 12,88 mS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy ±1%, (25°C)=0.1M KCl |
| 1300045639 | 500-EC-1288  | 12,88 mS/cm Calibration Solution, 500 ml dosing bottle with certificate, accuracy ±1%, (25°C)=0.1M KCl |
| 1300045588 | 1000-EC-1288 | 12,88 mS/cm Calibration Solution, 1 ltr dosing bottle with certificate, accuracy ±1%, (25°C)=0.1M KCl  |
| 1300045630 | 250-EC-1118  | 111,8 mS/cm Calibration Solution, 250 ml dosing bottle with certificate, accuracy ±1% (25°C)= 1M KCl   |
| 1300045660 | 500-EC-1118  | 111,8 mS/cm Calibration Solution, 500 ml dosing bottle with certificate, accuracy ±1% (25°C)= 1M KCl   |
| 1300045631 | 1000-EC-1118 | 111,8 mS/cm Calibration Solution, 1 ltr dosing bottle with certificate, accuracy ±1% (25°C)= 1M KCl    |



### pH Electrode Cleaning Solutions

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



### Turbidity Solutions

| Part No.   | Model      | Description  |
|------------|------------|--|
| 3201063378 | 550-TBP-4  | Standard solution set (0.02, 20, 100 & 800 NTU), 50ml each |
| 3201063380 | 550-TBP-2L | Standard solution set (0.02 & 20 NTU) , 50ml each          |
| 3201063381 | 550-TBP-2H | Standard solution set (100 & 800 NTU) , 50ml each          |



550-TBP-4 Standard solution set 0.02, 20, 100 & 800 NTU (50ml each)

### Electrodes\*

| Part No.   | Model    | Description   |
|------------|----------|---|
| 3200786359 | 9652-10D | 3-in-1 Plastic-body, gel-filled pH electrode (1m cable)                       |
| 3200786361 | 9652-20D | 3-in-1 Plastic-body, gel-filled pH electrode (2m cable)                       |
| 3014046710 | 9300-10D | 3-in-1 Glass-body, platinum, refillable ORP electrode (1m cable)              |
| 3200922105 | 9301-10D | 3-in-1 Plastic-body, platinum, gel-filled ORP electrode (1m cable)            |
| 3200780927 | 9383-10D | Plastic-body, Ti/Pt black, k=1.0 conductivity cell with thermistor (1m cable) |
| 3200780939 | 9552-20D | Galvanic DO probe with thermistor (2m cable)                                  |
| 3200780941 | 9552-50D | Galvanic DO probe with thermistor (5m cable)                                  |
| 3200781553 | 5402     | Replacement DO tip for 9552-20D and 9552-50D                                  |

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



5402 Replacement DO Tip



X-51 Digital Simulator



X-52 Digital Simulator



Printer



25-pin D-Sub Printer (RS232) cable (Meter to Printer)

### 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 (printer cable is sold separately) |
| 3014030147 | -                             | Printer for GLP / GMP compliance, 230V EU version (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  |
| 3200775948 | -                             | Electrode adapter  |
| 3201025022 | -                             | PC (USB) cable to connect meter and computer, 1.5m                                   |
| 3201067504 | TB220-SILICONE OIL, CLOTH SET | Set of silicone oil and cloth  |
| 3201067927 | TB220-VIAL 4SET               | Set of 4 sample vials  |
| 3201068357 | TB220-VIAL COVER              | Vial cover for TB220   |



Electrode Adapter



PC (USB) cable (Meter to Computer)



TB220-SILICONE OIL, CLOTH SET  
Set of silicone oil and cloth



TB220-VIAL COVER  
Vial cover for TB220

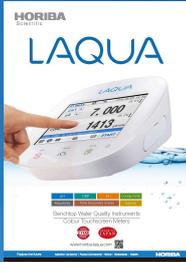
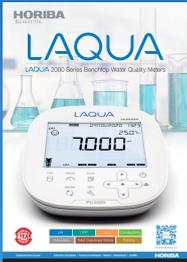


TB220-VIAL 4SET  
Set of 4 sample vials



With over 75 years of engineering excellence, HORIBA's innovative and diverse range of water quality analyzers, electrodes and solutions are ideal for everyday needs in the laboratory and field through to the most demanding of applications.

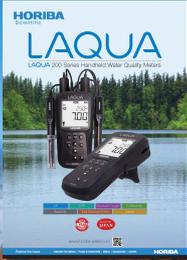
Visit our website for a wealth of useful information and water quality measurement tips to help you obtain the best results in your work.



**Benchtop Meters**

Developed using extensive feedback from users, our new LAQUA bench top meters deliver the best solution for water quality analysis. The complete solution for every lab, whether it is at school, quality assurance lab or pharmaceutical industry, we have the right instrument at the right budget for you.

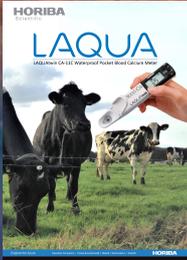
Consult our website or electrode brochure to select the electrode most suitable for your application.



**Handheld Meters**

In the field, in the lab or anywhere you need it. From easy to use, single parameter to highly sophisticated digital multi parameter to Sonde type instruments, we are able to meet your needs.

The LAQUA Handheld meters are designed for one hand use 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.



**LAQUAtwin meters and Kits**

Analyzing water quality is simplified when using our LAQUAtwin range of meters. A unique flat surface sensor technology enables to measure even the smallest samples.

Designed to produce accurate and reliable results. Anyone, anywhere, at any time can measure samples easily with a LAQUAtwin meter. Use the LAQUAtwin 4M carrying case to conveniently store and transport up to 7 meters, a true lab on the go. See just how good they are at our website.



**Electrodes**

Various electrodes to match any application. A wide range 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.



**Solutions**

A complete range of high quality calibration, buffer, filling and cleaning solutions is available for pH, conductivity, ORP and ion selective measurements.

Free of charge Certificates of Analysis are available on selected items.

**Check out our application notes.**



Available Online

Follow us at LinkedIn



Subscribe to our Youtube channel for product insights and demos.



**OneTemp<sup>o</sup>** pty ltd  
measure | control | record  
**1300 768 887**  
**www.onetemp.com.au**



HORIBA Group is certified Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System ISO45001 and operate as Integrated Management System (IMS).



- Catalog contents may change without prior notice or any subsequent liability to this company.
- Product colors may vary due to printing.
- Reproduction of the catalog is prohibited.

- All brands and names are trademarks of their respective companies.
- Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

Brochure HHM-06-2025A