

ISO 9001 CERTIFIED

Bench-top Meters for Laboratories



pH 200 SERIES

The pH 200 series of bench meters are ideal for water analysis in all laboratory settings. Each and every Hanna bench meter is easy to use, economical, reliable, and most important, precise.



pH 213

Multiple parameters and very versatile, the **pH 213** measures pH directly as well as millivolts for pH, Ion Specific Electrodes (ISE), and Oxidation Reduction Potential (ORP) electrodes. All measurements can be made using automatic or manual temperature compensation. The instructions for calibration are presented on the display with safeguards to prevent premature calibration errors. You can choose either 1 or 2 point calibration using the 5 most common memorized buffers. Secure connectivity to your PC or network through a serial RS232 connection and Windows® compatible software.

Ordering Information

pH 210, pH 211, pH 211R, pH 212 & pH 213 are supplied complete with HI 1131B pH electrode with BNC connector and 1 m cable, HI 7669/2W temperature probe, electrode holder, pH 4 and 7 calibration solution (20 mL each), electrolyte solution, & 12VDC adapter

Accessories

| | | |
|------------------|-------|---------------------------------------|
| HI 76404 | ..... | Electrode holder |
| HI 7004L | ..... | pH 4.01 buffer solution, 500 mL |
| HI 7007L | ..... | pH 7.01 buffer solution, 500 mL |
| HI 7010L | ..... | pH 10.01 buffer solution, 500 mL |
| HI 77400P | ..... | Cal. kit (pH 4 & 7, 20 mL, 5 pcs ea.) |
| HI 70300L | ..... | Storage solution, 460 mL |
| HI 92000 | ..... | Windows® compatible software |
| HI 920010 | ..... | .9-pin cable for PC |
| HI 8427 | ..... | pH and ORP electrode simulator |
| HI 931001 | ..... | pH and ORP electrode simulator |



pH 212

If only pH is needed, the **pH 212** performs brilliantly. It includes all the enhancements of the **pH 213**. You can select the displayed resolution of 0.01 pH or 0.001 pH for greater accuracy and clarity.

Specifications pH 213

| | |
|-------------------------|--------------------------------------|
| pH Range | -2.00 to 16.00 -2.000 to 16.000 |
| pH Accuracy | ±0.01; ±0.002 |
| pH Resolution | 0.01; 0.001 |
| mV Range | ±999.9 (ISE & ORP) |
| mV Accuracy | ±0.05% F.S. (ISE & ORP) |
| mV Resolution | 0.1 (ISE & ORP) |
| °C Range | 0.0 to 100.0 |
| °C Accuracy | ±0.5 |
| °C Resolution | 0.1 |
| Auto cal Buffers | 4.01/6.86/7.01/9.18/10.01 |
| pH calibration | Automatic 1 or 2 points |
| Auto T.C. | with HI 7669/2W probe |
| Manual T.C. | from 0 to 100°C |
| pH electrode | HI 1131B (included) |
| °C probe | HI 7669/2W (included) |
| Input impedance | 10 ¹² ohm |
| RS232 output | • |
| Power | 12VDC adapter (included) |
| Environment | 0 to 50 (32 to 122°F) max. 95% RH |
| Dimensions | 240 x 182 x 74 mm (9.4 x 7.2 x 2.9") |
| Weight | 1.1 Kg (2.4 lb) |



pH 211

Combining the most frequently asked for parameters, the **pH 211** is the popular choice for bench-top instruments of laboratories around the world. You can measure pH directly, millivolts for pH, Ion Specific Electrodes (ISE), and Oxidation Reduction Potential (ORP) electrodes. Automatic or manual temperature compensation is user selectable. The instructions for calibration are presented in a step-by-step display with safeguards to prevent premature calibration errors.

pH 210

To solely measure pH, the easy choice is the **pH 210**. Calibration is just a few simple steps and is guided by graphics on the LCD and sophisticated custom microprocessor. You can calibrate at 1 or 2 points by choosing any combination of the 5 buffer values in the meter's powerful memory.

pH 209

The practical design of this meter makes it a smart choice for any laboratory. Its manual calibration feature provides you with an endless choice of offset and slope values. It is ideal for those applications where standardized buffers are not suitable. As an educational tool, the principles of pH measurement can be demonstrated with greater understanding.

| | pH 212 | pH 211/pH 211R* | pH 210 | pH 209 |
|-------------------------|--------------------------------------|--------------------------------------|-----------------------------------|------------------------------|
| pH Range | -2.00 to 16.00 -2.000 to 16.000 | 0.00 to 14.00 | 0.00 to 14.00 | 0.00 to 14.00 |
| pH Accuracy | ±0.01/±0.002 | ±0.01 | ±0.01 | ±0.01 |
| pH Resolution | 0.01/0.001 | 0.01 | 0.01 | 0.01 |
| mV Range | - | ±399.9 (ISE); ±1999 (ORP) | - | -1999 to 1999 |
| mV Accuracy | - | ±0.2 (ISE); ±1 (ORP) | - | ±1 |
| mV Resolution | - | 0.1 (ISE); 1 (ORP) | - | 1 |
| °C Range | 0.0 to 100.0 | 0.0 to 100.0 | 0.0 to 100.0 | - |
| °C Accuracy | ±0.5 | ±0.5 | ±0.5 | - |
| °C Resolution | 0.1 | 0.1 | 0.1 | - |
| Auto cal Buffers | 4.01/6.86/7.01/9.18/10.01 | 4.01/6.86/7.01/9.18/10.01 | 4.01/6.86/7.01/9.18/10.01 | - |
| pH calibration | Automatic 1 or 2 points | Automatic 1 or 2 points | Automatic 1 or 2 points | Manual 2 points |
| Auto T.C. | with HI 7669/2W probe | with HI 7669/2W probe | with HI 7669/2W probe | - |
| Manual T.C. | from 0 to 100°C | from 0 to 100°C | from 0 to 100°C | from 0 to 100°C |
| pH electrode | HI 1131B (included) | HI 1131B (included) | HI 1131B (included) | HI 1332B (included) |
| °C probe | HI 7669/2W (included) | HI 7669/2W (included) | HI 7669/2W (included) | - |
| Input impedance | 10 ¹² ohm | 10 ¹² ohm | 10 ¹² ohm | 10 ¹² ohm |
| RS232 output | • | - | - | - |
| Power | 12VDC adapter (included) | 12VDC adapter (included) | 12VDC adapter (included) | 12VDC adapter (included) |
| Environment | 0 to 50 (32 to 122°F) max. 95% RH | 0 to 50 (32 to 122°F) max. 95% RH | 0 to 50 (32 to 122°F) max. 95% | 0 to 50 (32 to 122°F) |
| Dimensions | 240x182x74 mm (9.4x7.1x2.9") | 240x182x74 mm (9.4x7.1x2.9") | 240x182x74 mm (9.4x7.1x2.9") | 240x182x74 mm (9.4x7.1x2.9") |
| Weight | 1.1 Kg (2.4 lb) | 1.1 Kg (2.4 lb) | 1.1 Kg (2.4 lb) | 1.0 Kg (2.2 lb) |

*pH 211R offers analog output of 0 to 5 V that represents the full pH and mV range.

pH 300 SERIES



Today's regulatory environment is the compelling reason to demand more from laboratory instrumentation. To remain in compliance, instrumentation must follow protocols for traceability and documentation. The pH 300 series of multi-functional instruments meet requirements of Good Laboratory Practices for calibration protocols and data record keeping.

Ordering Information

pH 300, pH 301 and **pH 302** are supplied complete with HI 1131B pH electrode with BNC connector and 1 m cable, HI 7669/2W temperature probe, pH 4, 7 and 10 cal. solutions (20 mL each) & 12VDC adapter

In addition, **pH 302** comes with 5 spare paper rolls

pH 302

The **pH 302** fulfills the needs of general purpose and analytical laboratories for a single instrument to measure pH milliVolts (mV), Oxidation Reduction Potential (ORP), and specific ions. The oversized display is easy to read and presents step-by-step guidance for calibration. Instructions are also provided on the display to correct calibration errors and guarantees optimal performance. Advanced memory feature also recalls calibration data to comply with Good Laboratory Practices (GLP) protocols.

To support your requirements to customize activities and record samplings, the meter features an on-board dot matrix plain paper printer and unique programmable functions:

- Sampling cycle - set the sample number, time, and date
- Custom calibration - calibrate the meter using nonstandard buffer values
- GLP compliance - prints calibration data with date, time, pH offset, and slope
- Time study 1 - log and print pH, mV, and temperature values at selected intervals
- Time study 2 - log and print pH, mV, and temperature to a pre-set parameter
- Alarms - set upper and lower pH or mV limits
- International - choose different languages for printed data
- ISE - print the ion concentration for pH values
- Connectivity - sets up communication with your computer system

Accessories

| | | |
|------------------|-------|---------------------------------------|
| HI 76405 | ..... | Electrode holder |
| HI 7004L | ..... | pH 4.01 buffer solution, 500 mL |
| HI 7007L | ..... | pH 7.01 buffer solution, 500 mL |
| HI 7010L | ..... | pH 10.01 buffer solution, 500 mL |
| HI 77400P | ..... | Cal. kit (pH 4 & 7, 20 mL, 5 pcs ea.) |
| HI 70300L | ..... | Storage solution, 460 mL |
| HI 92000 | ..... | Windows® compatible software |
| HI 920010 | ..... | 9-pin cable for PC |
| HI 8427 | ..... | pH and ORP electrode simulator |
| HI 931001 | ..... | pH and ORP electrode simulator |



pH 301

When requirements include specific ion concentration measurements, the **pH 301** is an exceptional value. It optimizes precision and accuracy by employing 1, 2, or 3-point calibration. In the Ion Specific Electrode (ISE) mode, you can switch between the readings in millivolts or direct concentration. Collected data is logged at selected intervals and can be easily transferred to your computer.



pH 300

If requirements are for pH, mV and temperature, the **pH 300** will provide superior performance and value. The oversized LCD provides easy-to-read sample information and instructions for calibration with safeguards to prevent premature calibration.

Specifications

| | pH 302 | pH 301 | pH 300 |
|-------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| pH Range | 0.00 to 14.00 | -1.999 to 19.999 | 0.00 to 14.00 |
| pH Accuracy | ±0.01 | ±0.002 | ±0.01 |
| pH Resolution | 0.01 | 0.01; 0.001 | 0.01 |
| mV Range | ±399.9 (ISE); ±1999 (ORP) | ±1999.9 | ±399.9 (ISE); ±1999 (ORP) |
| mV Accuracy | ±0.2 (ISE); ±1 (ORP) | ±0.1 (±799.9); ±0.2 (outside) | ±0.2 (ISE); ±1 (ORP) |
| mV Resolution | 0.1 (ISE); 1 (ORP) | 0.1 | 0.1 (ISE); 1 (ORP) |
| °C Range | -9.9 to +120.0 | -9.9 to +120.0 | -9.9 to +120.0 |
| °C Accuracy | ±0.5 | ±0.5 | ±0.5 |
| °C Resolution | 0.1 | 0.1 | 0.1 |
| ppm Range | - | 0.001 to 19999 | - |
| ppm Accuracy | - | ±0.5% F.S. | - |
| ppm Resolution | - | 0.001; 0.01; 0.1; 1 | - |
| Auto cal Buffers | 4.01/7.01/10.01 | 1.68/4.01/6.86/7.01/9.18/10.01 | 4.01/7.01/10.01 |
| pH calibration | Automatic 1 or 2 points | Automatic 1, 2 or 3 points | Automatic 1 or 2 points |
| Last cal recall | • | • | • |
| Auto T.C. | with HI 7669/2W probe | with HI 7669/2W probe | with HI 7669/2W probe |
| Manual T.C. | from -9.9 to +120.0°C | from -9.9 to +120.0°C | from -9.9 to +120.0°C |
| pH electrode | HI 1131B (included) | HI 1131B (included) | HI 1131B (included) |
| °C probe | HI 7669/2W (included) | HI 7669/2W (included) | HI 7669/2W (included) |
| Printer | • | - | - |
| Input impedance | 10 ¹² ohm | 10 ¹² ohm | 10 ¹² ohm |
| RS232 output | • | • | • |
| Power | 12VDC adapter (included) | 12VDC adapter (included) | 12VDC adapter (included) |
| Environment | 0 to 50 (32 to 122°F) max. 95% RH | 0 to 50 (32 to 122°F) max. 95% RH | 0 to 50 (32 to 122°F) max. 95% RH |
| Dimensions | 280 x 200 x 75 mm (11 x 7.9 x 3") | 280 x 200 x 75 mm (11 x 7.9 x 3") | 280 x 200 x 75 mm (11 x 7.9 x 3") |
| Weight | 1.3 Kg (2.9 lb) | 1.3 Kg (2.9 lb) | 1.3 Kg (2.9 lb) |

EC 215 & EC 214

EC 215 & EC 214

Hanna Instruments offers you a choice of two bench meters for the laboratory. The **EC 215** presents 4 selectable ranges and provides the highest resolution and precision for your measuring requirements. Each measurement is automatically compensated for the effects of temperature. In addition, when working with highly acidic, alkaline, or saline samples, the temperature coefficient can be adjusted from 0 to 2.5% per degree Celsius. Included with the **EC 215** is a rugged, platinum, 4-ring sensor that responds faster than conventional stainless steel models.

For greater versatility of use, the **EC 214** offers manual temperature compensation. Both models feature large, easy-to-read liquid crystal displays that show conductivity and temperature values simultaneously. Trust Hanna Instruments to deliver quality and value.



Specifications

| | EC 215/EC 215R* | EC 214 |
|-------------------------|---|---|
| µS/cm Range | 0.0 to 199.9; 0 to 1999 | 0.0 to 199.9; 0 to 1999 |
| µS/cm Accuracy | ±1% F.S. (excluding probe error) | ±1% F.S. (excluding probe error) |
| µS/cm Resolution | 0.1; 1 | 0.1; 1 |
| mS Range | 0.00 to 19.99; 0.0 to 199.9 | 0.00 to 19.99; 0.0 to 199.9 |
| mS Accuracy | ±1% F.S. (excluding probe error) | ±1% F.S. (excluding probe error) |
| mV Resolution | 0.01; 0.1 | 0.01; 0.1 |
| EC Calibration | Manual 1 point with knob | Manual 1 point with knob |
| Temp. Comp. | Automatic from 0 to 50°C with an adjustable β from 0 to 2.5% per °C | Manual from 0 to 50°C with an adjustable β from 0 to 2% per °C |
| Probe | HI 76303 platinum, 4-ring, conductivity probe with temperature sensor and 1 m cable (included) | HI 76300 platinum, 4-ring, conductivity probe and 1 m cable (included) |
| Power | 12 VDC power adapter (included) | 12 VDC power adapter (included) |
| Environment | 0 to 50°C (32 to 122°F); max. 95% RH | 0 to 50°C (32 to 122°F); max. 95% RH |
| Dimensions | 240 x 182 x 74 mm (9.4 x 7.2 x 2.9") | 240 x 182 x 74 mm (9.4 x 7.2 x 2.9") |
| Weight | 1 Kg (36 oz) | 1 Kg (36 oz) |

* EC 215R offers analog output of 0 to 5 V that represents the full conductivity scale across all 4 ranges.

Ordering Information

EC 215 & EC 215R is supplied complete with HI 76303 conductivity probe with temperature sensor and 1 m (3.3') cable, 12 VDC power adapter, and instruction manual.

EC 214 is supplied complete with 1 m (3.3') cable, 12 VDC power adapter, and instruction manual

Accessories

| | |
|---------------------------|--|
| HI 76303 | Conductivity probe for EC 214 |
| HI 76300 | Conductivity probe for EC 215 |
| HI 76404 | Probe holder |
| HI 7030L | 12880 µS/cm calibration solution (460 mL) |
| HI 7031L | 1413 µS/cm calibration solution (460 mL) |
| HI 7033L | 84 µS/cm calibration solution (460 mL) |
| HI 7034L | 80000 µS/cm calibration solution (460 mL) |
| HI 7035L | 111800 µS/cm calibration solution (460 mL) |

C 200



C 200

The C 200 measures 36 different parameters and is perhaps the most versatile water quality photometer available. The C 200 can be powered in the laboratory by its 12 VDC adapter or in the field by inexpensive 9V batteries. Simple to use: select the test from the menu on the front panel, enter the test code, zero, and read the results. Best of all, the reagents cost is less per test than you would expect. The C 200 is a complete, reliable analytical system for the most important water quality parameters. Other photometers in single and application specific combinations are also available.

Ordering Information

C 200 is supplied with 3 cuvetts, caps, 2 x 9V battery, 12 VDC power adapter, and instruction manual.

Accessories

- HI 731321 Measurement cuvetts (4 pcs)
- HI 731318 Tissue for wiping cuvetts (4 pcs)
- HI 7040L Zero oxygen solution, 460 mL
- HI 93703-50 Cuvet cleaning solution

Specifications

| Test | Range | Method | Reagent Code |
|------------------|---------------------|-----------------------------|--------------|
| Aluminum | 0.00 to 1.00 mg/L | Aluminon | HI 93712-01 |
| Ammonia MR | 0.00 to 9.99 mg/L | Nessler | HI 93715-01 |
| Ammonia LR | 0.00 to 3.00 mg/L | Nessler | HI 93700-01 |
| Bromine | 0.00 to 8.00 mg/L | DPD | HI 93716-01 |
| Free Chlorine * | 0.00 to 2.50 mg/L | DPD | HI 93701-01 |
| Total Chlorine * | 0.00 to 3.50 mg/L | DPD | HI 93711-01 |
| Chlorine Dioxide | 0.00 to 2.00 mg/L | Chlorophenol Red | HI 93738-01 |
| Chromium VI HR | 0 to 1000 µg/L | Diphenylcarbohydrazide | HI 93723-01 |
| Chromium VI LR | 0 to 300 µg/L | Diphenylcarbohydrazide | HI 93749-01 |
| Color | 0 to 500 PCU | Chloroplatinate | — |
| Copper HR | 0.00 to 5.00 mg/L | Bicinchoninate | HI 93702-01 |
| Copper LR | 0 to 990 µg/L | Bicinchoninate | HI 93747-01 |
| Cyanide | 0.000 to 0.200 mg/L | Pyridine-Pyrazalone | HI 93714-01 |
| Cyanuric Acid | 0 to 80 mg/L | Turbidimetric | HI 93722-01 |
| Fluoride | 0.00 to 2.00 mg/L | SPADNS | HI 93729-01 |
| Ca Hardness | 0.00 to 2.70 mg/L | Calmagite | HI 93720-01 |
| Mg Hardness | 0.00 to 2.00 mg/L | EDTA | HI 93719-01 |
| Hydrazine | 0 to 400 µg/L | p-Dimethylaminobenzaldehyde | HI 93704-01 |
| Iodine | 0.0 to 12.5 mg/L | DPD | HI 93718-01 |
| Iron HR | 0.00 to 5.00 mg/L | Phenantroline | HI 93721-01 |
| Iron LR | 0 to 400 µg/L | TPTZ | HI 93746-01 |
| Manganese HR | 0.0 to 20.0 mg/L | Periodate Oxidation | HI 93709-01 |
| Manganese LR | 0 to 300 µg/L | PAN | HI 93748-01 |
| Molybdenum | 0.0 to 40.0 mg/L | Mercaptoacetic Acid | HI 93730-01 |
| Nickel HR | 0.00 to 7.00 g/L | Photometric | HI 93726-01 |
| Nitrate | 0.0 to 30.0 mg/L | Cadmium Reduction | HI 93728-01 |
| Nitrite HR | 0 to 150 mg/L | Ferrous Sulfate | HI 93708-01 |
| Nitrite LR | 0.00 to 0.35 mg/L | Diazotization | HI 93707-01 |
| Dissolved Oxygen | 0.0 to 10.0 mg/L | Winkler | HI 93732-01 |
| pH | 6.5 to 8.5 pH | Phenol Red | HI 93710-01 |
| Phosphate HR | 0.0 to 30.0 mg/L | Amino Acid | HI 93717-01 |
| Phosphate LR | 0.00 to 2.50 mg/L | Ascorbic Acid | HI 93713-01 |
| Phosphorus | 0.0 to 15.0 mg/L | Amino Acid | HI 93706-01 |
| Silica | 0.00 to 2.00 mg/L | Heteropoly blue | HI 93705-01 |
| Silver | 0.000 to 1.000 mg/L | PAN | HI 93737-01 |
| Zinc | 0.00 to 3.00 mg/L | Zincon | HI 93731-01 |

Reagents are available in quantities of 100 and 300 tests

Authorized Distributor



For more information or a distributor near you contact HANNA Instruments
 toll free: 800.504.2662/fax: 734.971.8155
www.hannainst.com