

Benchtop Water Analysis Meters



Conductivity/°C Bench Meter



4 Conductivity Ranges

Automatic Temperature Compensation

Platinum Probe with built-in Temperature Sensor

EC 215

Hanna Instruments offers you a choice of three bench top conductivity 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 temperature differences. In addition, when working with highly acidic, alkaline, or saline sample, you can adjust the temperature coefficient 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. The **EC 215** features a large, easy to read liquid crystal display. For added versatility, the **EC 215R** offers analog output of 0 to 5V that represents the full conductivity scale across all 4 ranges.

The **EC 214** offers all the features of the **EC 215** models but temperature compensation is manual in case ATC is not required. All models have large, easy to read liquid crystal displays.

Specifications

	EC 215/EC 215R*
µS/cm Range	0.0 to 199.9; 0 to 1999
µS/cm Accuracy	±1% F.S. (excluding probe error)
µS/cm Resolution	0.1; 1
mS Range	0.00 to 19.99; 0.0 to 199.9
mS Accuracy	±1% F.S. (excluding probe error)
mV Resolution	0.01; 0.1
EC Calibration	Manual 1 point with knob
Temp. Comp.	Automatic from 0 to 50°C with an adjustable β from 0 to 2.5% per °C
Probe	HI 76303 conductivity probe with platinum 4-ring, temperature sensor, 1 m cable (included)
Power	12 VDC 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 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 & 1 m (3.3') cable, 12 VDC power adapter, & instruction manual.

Accessories

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)

pH Bench Meters



Automatic Temperature Compensation

Automatic Calibration

Computer Compatible

Logging Function

User-friendly Prompts

pH 213/pH 212

With a resolution selectable between 0.01 and 0.001 over the -2 to 16 pH range, the top-of-the-range pH 212 and pH 213 are designed for those users that require added accuracy. Both meters are supplied with opto-isolated RS 232. The pH and temperature are displayed simultaneously and all pH measurements are automatically compensated for the effects of temperature. pH 213 also measures mV in the ± 999.9 mV range when used with ISE and ORP electrodes. The large, horizontal display shows both pH (or mV) and temperature. Calibration can be at one or two points aided by automatic buffer recognition at pH 4.01, 6.86, 7.01, 9.18, and 10.01. A stability indicator ensures proper calibration and accurate measurements. Any particular measurement can be stored and recalled at a later time. The front label carries clear and concise information about how to operate the meter. pH 212 and pH 213 are supplied complete and ready to use with a laboratory-grade glass pH electrode, stainless steel temperature probe, electrode holder, 12VDC transformer, and calibration buffers.

Specifications

	pH 213	pH 212
pH Range	-2.00 to 16.00 -2.000 to 16.000	-2.00 to 16.00 -2.000 to 16.000
pH Accuracy	± 0.01 ; ± 0.002	± 0.01 ; ± 0.002
pH Resolution	0.01; 0.001	0.01; 0.001
mV Range	± 999.9 (ISE & ORP)	-
mV Accuracy	$\pm 0.05\%$ F.S. (ISE & ORP)	-
mV Resolution	0.1 (ISE & ORP)	-
°C Range	0.0 to 100.0	0.0 to 100.0
°C Accuracy	± 0.5	± 0.5
°C Resolution	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
pH calibration	Automatic 1 or 2 points	Automatic 1 or 2 points
Auto T.C.	with HI 7669/2W probe	with HI 7669/2W probe
Manual T.C.	from 0 to 100°C	from 0 to 100°C
pH electrode	HI 1131B (included)	HI 1131B (included)
°C probe	HI 7669/2W (included)	HI 7669/2W (included)
Input impedance	10^{12} ohm	10^{12} ohm
RS232 output	Yes	Yes
Power	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
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	1.1 Kg (2.4 lb)	1.1 Kg (2.4 lb)

Ordering Information

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

Accessories

HI 76404	.....	Electrode holder for pH 212 and pH 213
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 70300L	.....	Storage solution, 460 mL
HI 92000	.....	Windows® compatible software
HI 920010	.....	.9-pin cable for PC





Automatic or Manual
Temperature Compensation

Automatic Calibration

Computer Compatible

Logging Function

User-Friendly Prompts

pH 301

pH 301 measures pH, mV, °C, and direct ion strength measurement in ppm. In addition, the resolution of the pH range has been extended to 0.001 pH. For routine operations, the operator can still choose to use the 0.01 pH resolution.

For high accuracy over a wide range, pH calibration can be performed at 1, 2, or 3 points with 6 memorized pH values (pH 1.68, 4.01, 6.86, 7.01, 9.18, and 10.01). In the ISE mode, the user can choose between readings in mV or direct concentration in ppm. Calibration can be performed at 1 or 2 points with 5 memorized concentration values (0.1, 1, 10, 100, and 1000 ppm). During pH and ISE calibration, the time (hours and minutes) is stored in nonvolatile memory together with the date and data. Similar to the pH mode, the ISE calibration time, date, and data can be recalled, to meet GLP requirements.

The opto-isolated RS232 is bidirectional so the user can operate the meter from a computer keyboard. The pH 301's logging function can be used in the pH, mV, and ISE modes. The logging interval is user-selectable (1, 15, or 30 seconds and 1, 5, 30, 60, 120, or 180 minutes). The memory is capable of retaining up to 99 different lots up to 8000 samples.

Specifications

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

Ordering Information

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

Accessories

HI 1131B	.....	Combination, refillable pH electrode
HI 3131B	.....	Combination, platinum ORP electrode
HI 7669/W	.....	Temperature probe
HI 76405	.....	Electrode holder for pH 301
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 70300L	.....	Storage solution, 460 mL
HI 92000	.....	Windows® compatible software
HI 920010	.....	9-pin cable for PC





A complete range

The range of Hanna calibration and maintenance solutions is such to satisfy all your needs, from pH to conductivity and double-junction electrolyte to cleaning solutions. The container sizes are just as varied with an extensive choice from 20 mL sachets for single use to the 1 gallon containers made for busy analytical labs.

Electrode cleaning and storage solutions

Cleaning and storage solutions are needed to keep electrodes in optimal working condition. Cleaning the liquid junction and leaving the electrode in storage solution prevent a drifting of the offset as well as a shortened slope. Better maintenance also speeds up your measurements.

pH 4.01 Calibration solutions

- HI 70004PpH 4.01 buff. sol., 25 sachets, 20 mL pcs each
- HI 7004MpH 4.01 buffer solution, in bottle of 230 mL
- HI 7004LpH 4.01 buffer solution, in bottle of 500 mL
- HI 7004L/CpH 4.01 buff. sol., in bottle of 500 mL+Certif.

pH 7.01 Calibration solutions

- HI 70007PpH 7.01 buff. sol., 25 sachets, 20 mL pcs each
- HI 7007MpH 7.01 buffer solution, in bottle of 230 mL
- HI 7007LpH 7.01 buffer solution, in bottle of 500 mL
- HI 7007L/CpH 7.01 buff. sol., in bottle of 500 mL+Certif.

pH 10.01 Calibration solutions

- HI 70010PpH 10.01 buff. sol., 25 sachets, 20 mL pcs each
- HI 7010MpH 10.01 buffer solution, in bottle of 230 mL
- HI 7010LpH 10.01 buffer solution, in bottle of 500 mL
- HI 7010L/CpH 10.01 buff. sol., in bottle of 500 mL+Certif.

Conductivity solutions

- HI 7030M12880 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL
- HI 7030L12880 $\mu\text{S}/\text{cm}$ calibration solution, 460 mL
- HI 7031M1413 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL
- HI 7031L1413 $\mu\text{S}/\text{cm}$ calibration solution, 460 mL
- HI 7033M84 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL
- HI 7033L84 $\mu\text{S}/\text{cm}$ calibration solution, 460 mL
- HI 7034M80000 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL
- HI 7034L80000 $\mu\text{S}/\text{cm}$ calibration solution, 460 mL
- HI 7039L5000 $\mu\text{S}/\text{cm}$ calibration solution, 460 mL

Cleaning solutions

- HI 70000PRinse solution sachets, 20 mL, 25 pcs
- HI 7061MGeneral purpose, 230 mL
- HI 7061LGeneral purpose, 460 mL

Storage solutions

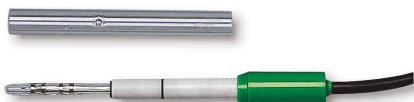
- HI 70300M230 mL bottle
- HI 70300L460 mL bottle



4-ring potentiometric EC probes

The 4-ring potentiometric technology to measure EC with portable meters was pioneered by Hanna in 1980. This method still offers the most linear measurement over an extensive range. Hanna probes also contain a temperature sensor for ATC.

- HI 76302W** Stainless steel probe with PVC sleeve (for HI 9033)
- HI 76309** Stainless steel probe with PVC body (for HI 9835)
- HI 76303** Glass-body, platinum probe (for EC 215)



Electrode cables

Hanna pH meters are normally supplied with an electrode ending in a BNC connector with 1 meter of cable. The pH meters can also be used with stick electrodes ending in a screw-type connector together with a connecting lead.

- HI 7855/1** Screw to BNC with 1 m cable
- HI 7855/3** Screw to BNC with 3 m cable



12 VDC power adapter

12 VDC power adapter for all bench and portable meters that operate with a 12 VDC power supply.

- HI 710005** 110VAC to 12VDC with US plug



Mini Stirrers

Choose from an extensive selection of Hanna mini stirrers with ABS or stainless steel tops as well as mains or 12 VDC power inlet.

- HI 180** Mini stirrer with blue ABS top (other colors available)
- HI 190M** Mini stirrer with ABS top
- HI 200M** Mini stirrer with stainless steel top
- HI 190MB** 12 VDC operated with ABS top



Windows® compatible software

The Hanna Windows® based **HI 92000** software can help import the data in a host of common programs to save you time and money.

- HI 92000** Windows® compatible software



Connection cable to PC

Serial connection cables for Hanna equipment are available for both bench and portable meters.

- HI 920010** 9 to 9-pin connection cable for bench meters
- HI 920011** 5 to 9-pin connection cable for portable meters



Choice of electrode holders

These stable and rugged cantilever electrode holders can hold up to 2 electrodes and a temperature probe.

- HI 76404** Electrode holder for pH 210-213 & EC 215 bench meters
- HI 76405** Electrode holder with enamel coated base



Authorized Distributor www.clarksonlab.com

HANNA
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Water Analysis & Control Division

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