

# Waterproof Instrumentation



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 **HANNA**<sup>®</sup>  
instruments  
With Great Products, Come Great Results™



## Extended Range, Waterproof, pH/ORP/Temperature Meters

- **Extended range: -2.00 to 16.00 pH**
- **Simultaneously shows temperature in °C or °F**
- **Automatic pH calibration & temperature compensation**
- **Stability indicator & HOLD feature**
- **Measure 3 parameters with 1 amplified probe (HI 991002/ HI 991003 only)**
- **Sensor Check electrode condition feature (HI 991003 only)**



These extended range pH meters solve the problem of changing the electrode when an ORP or temperature reading is needed.

The HI 991003 incorporates HANNA's Sensor Check feature which allows the user to establish the status of the pH electrode before performing measurements.

The HI 1296D and HI 1297D combination electrodes feature a built-in temperature sensor and a small mini amplifier to render your measurements impervious to noise and interference.

### ORDERING INFORMATION

**HI 991001** is supplied complete with HI 1296D pH/temperature electrode, 3 x 1.5V AA batteries and carrying case.

**HI 991002** is supplied complete with HI 1297D pH/ORP/temperature electrode, 3 x 1.5V AA batteries and carrying case.

**HI 991003** is supplied complete with HI 1297D pH/ORP/temperature electrode, 3 x 1.5V AA batteries, carrying case and instructions.

## Rugged, Waterproof pH Meters

- **Automatic pH calibration**
- **Dual-level display with graphic symbols**
- **Automatic or manual temperature compensation**
- **HI 9024C measures pH & °C**
- **HI 9025C measures pH, ORP in the mV range & °C**



The HI 9024C & HI 9025C provide professional measurements in rugged, waterproof casings that are built to withstand industrial conditions. These meters also provide an auto-instruction feature which guides users step-by-step through the calibration process with graphic symbols.

The double junction design of the HI 1230B electrode (included) guarantees the delicate reference system inside the electrode is well protected against aggressive and unclean solutions.

### ORDERING INFORMATION

**HI 9024C** is supplied complete with HI 1230B double-junction pH electrode with BNC and 1 m (3.3') cable, HI 7669/2W temperature probe with 1 m (3.3') cable, 4 x 1.5V AA batteries, pH 4 & 7 buffers in a rugged case.

**HI 9025C** is supplied complete with HI 1230B double-junction pH electrode with BNC and 1 m (3.3') cable, HI 7669/2W temperature probe with 1 m (3.3') cable, 4 x 1.5V AA batteries, pH 4 & 7 buffers in a rugged case.

### SPECIFICATIONS

	HI 991001	HI 991002	HI 991003	HI 9024C	HI 9025C
<b>Range</b>					
<b>pH</b>	-2.00 to 16.00	-2.00 to 16.00	-2.00 to 16.00	0.00 to 14.00	0.00 to 14.00
<b>pH (in mV)</b>	-	-	±825 mV	-	-
<b>ORP</b>	-	±1999 mV	±1999 mV	-	±399.9/±1999
<b>Temperature</b>		-5.0 to 105.0°C or 23.0 to 221.0°F		0.0 to 100.0°C	0.0 to 100.0°C
<b>Resolution</b>					
<b>pH</b>	0.01	0.01	0.01	0.01	0.01
<b>pH (in mV)</b>	-	-	1 mV	-	-
<b>ORP</b>	-	1 mV	1 mV	-	0.1/1
<b>Temperature</b>	0.1°C or 0.1°F	0.1°C or 0.1°F	0.1°C or 0.1°F	0.1	0.1
<b>Accuracy (@20°C/68°F)</b>					
<b>pH</b>	±0.02	±0.02	±0.02	±0.01	±0.01
<b>pH (in mV)</b>	-	-	±1 mV	-	-
<b>ORP</b>	-	±2 mV	±2 mV	-	±0.2/±1
<b>Temperature</b>	±0.5 up to 60.0°C, ±1°C (outside); ±1°F up to 140°F, ±2°F (outside)			±0.5	±0.5
<b>Calibration</b>	Automatic 1 or 2 points with 2 sets of standardized buffers (4.01, 7.01, 10.01 or 4.01, 6.86, 9.18)			Automatic with 5 memorized standard buffers (4.01, 6.86, 7.01, 9.18, 10.01)	
<b>Temperature Compensation</b>	Automatic from -5.0 to 105.0°C (23.0 to 221.0°F for pH only)			Automatic or manual from 0 to 100°C (32 to 212°F)	

### ACCESSORIES

- HI 1296D** Combination amplified pH/temperature electrode with DIN connector and 1 m (3.3') cable
- HI 1297D** Combination amplified pH/ORP/temperature electrode with DIN connector and 1 m (3.3') cable
- HI 3230B** Combination, platinum ORP electrode with BNC connector on a 1 m (3.3') cable

- HI 4430B** Combination, Gold ORP electrode with BNC connector on a 1 m (3.3') cable
- HI 710007** Blue shockproof rubber boot
- HI 70004P** pH 4.01 calibration sol. (25 x 20 mL)
- HI 7004L** pH 4.01 buffer solution, 500 mL
- HI 77400P** Cal. kit (pH 4 & 7, 20 mL, 5 pcs each)
- HI 70007P** pH 7.01 calibration sol. (25 x 20 mL)
- HI 7007L** pH 7.01 buffer solution, 500 mL

- HI 770710P** Cal. kit (pH 10 & 7, 20 mL, 5 pcs each)
- HI 70010P** pH 10.01 calibration sol. (25 x 20 mL)
- HI 7010L** pH 10.01 buffer solution, 500 mL
- HI 7020L** Test solution, 200-275 mV, 500 mL
- HI 7061L** Cleaning solution, 460 mL
- HI 70300L** Storage solution, 460 mL
- HI 1230B** Combination pH electrode
- HI 7669/2W** Temperature probe

## Waterproof Conductivity/ TDS/NaCl/°C Meter



- Auto-ranging up to 500.0 mS/cm
- Large LCD simultaneously displays temperature
- Auto calibration to known standards
- Operates on batteries or 12VDC

The HI 9835 allows the measurement of 4 parameters in a single unit without the hassle of changing probes. Incorporating a dual-level LCD, the HI 9835 displays temperature along with conductivity, TDS or %NaCl simultaneously. This is the ideal meter for field use or harsh industrial applications.

The HI 9835 includes Hanna's 4-ring platinum enhanced probe which offers greater stability while increasing the range of measurable concentrations and temperature.

### ORDERING INFORMATION

**HI 9835** is supplied complete with HI 76309 4-ring conductivity probe with 1 m (3.3') screened cable, 4 x 1.5V AA batteries and instruction manual in a rugged case.

## Waterproof pH/Conductivity/ TDS/Temperature Meters

- Measure pH, conductivity, TDS & temperature with a single probe
- Automatic calibration
- Automatic temperature compensation
- Amplified pH electrode with extractable junction
- Easy to operate



The HI 991300 and HI 991301 offer the combination of pH, conductivity, TDS and temperature measurements. Each parameter is displayed simultaneously with temperature readings.

With only two buttons, users can select parameters, calibrate the sensor and change the TDS factor and temperature coefficient (BETA). The multifunctional, industrial probe houses the pH and conductivity sensor along with an integrated solid state amplifier to eliminate noise and interference.

### ORDERING INFORMATION

**HI 991300** is supplied complete with HI 1288 pH/EC/TDS/°C probe, batteries, and instruction manual in a hard carrying case.

**HI 991301** is supplied complete with HI 1288 pH/EC/TDS/°C probe, batteries, and instruction manual in a hard carrying case.

### SPECIFICATIONS

	HI 9835	HI 991300	HI 991301
<b>Range</b>			
<b>pH</b>	-	0.00 to 14.00	0.00 to 14.00
<b>EC</b>	0.00 to 29.99 µS/cm; 30.0 to 299.9 µS/cm; 300 to 2999 µS/cm; 3.00 to 29.99 mS/cm; 30.0 to 200.0 mS/cm; up to 500.0 mS/cm	0 to 3999 µS/cm	0.00 to 20.00 mS/cm
<b>TDS</b>	0.00 to 14.99 ppm; 15.0 to 149.9 ppm; 150 to 1499 ppm; 1.50 to 14.99 ppt; 15.0 to 100.0 ppt; Up to 400.0 ppt	0 to 2000 ppm	0.00 to 10.00 ppt
<b>NaCl</b>	0.0 to 400.0%	-	-
<b>Temperature</b>	0.0 to 60.0°C	0.0 to 60.0°C or 32.0 to 140.0°F	-
<b>Resolution</b>			
<b>pH</b>	-	0.01	0.01
<b>EC</b>	0.01 µS/cm (0.00 to 29.99 µS/cm); 0.1 µS/cm (30.0 to 299.9 µS/cm); 1 µS/cm (300 to 2999 µS/cm); 0.01 mS/cm (3.00 to 29.99 mS/cm); 0.1 mS/cm (over 30.0 mS/cm)	1 µS/cm	0.01 mS/cm
<b>TDS</b>	0.01 ppm (0.00 to 14.99 ppm); 0.1 ppm (15.0 to 149.9 ppm); 1 ppm (150 to 1499 ppm); 0.01 ppt (1.50 to 14.99 ppt); 0.1 ppt (over 15.0 ppt)	1 ppm	0.01 ppt
<b>NaCl</b>	0.1%	-	-
<b>Temperature</b>	0.1°C	0.1°C or 0.1°F	0.1°C or 0.1°F
<b>Accuracy (@20°C/68°F)</b>			
<b>pH</b>	-	±0.01	±0.01
<b>EC</b>	±1% of reading ± (0.05 µS/cm or 1 digit, whichever is greater)	±2% F.S.	±2% F.S.
<b>TDS</b>	±1% of reading ± (0.03 ppm or 1 digit, whichever is greater)	±2% F.S.	±2% F.S.
<b>NaCl</b>	±1% of reading	-	-
<b>Temperature</b>	±0.4°C	±0.5°C or ±1.0°F	±0.5°C or ±1.0°F
<b>Calibration</b>	EC: 1 point with 6 memorized buffers; NaCl: 1 point with HI 7037 buffer (optional); Temperature: 2 points at 0 and 50°C (plus ±1°C adjustment)	pH: Automatic 1 or 2 points EC/TDS: Automatic 1 point	pH: Automatic 1 or 2 points EC/TDS: Automatic 1 point
<b>Temperature Compensation</b>	Automatic or manual from 0 to 60°C	Automatic from 0 to 60°C	Automatic from 0 to 60°C

### ACCESSORIES

**HI 1288** pH/EC/TDS/°C probe for HI 991300/01  
**HI 710007** Blue shockproof rubber boot\*  
**HI 710008** Orange shockproof rubber boot\*  
**HI 70030P** 12880 µS/cm cal. sol. (25 x 20 mL)  
**HI 7030L** 12880 µS/cm calibration sol., 460 mL  
**HI 7031L** 1413 µS/cm calibration sol., 460 mL

**HI 70031P** 1413 µS/cm cal. sol. (25 x 20 mL)  
**HI 77100P** 1413 µS/cm & pH 7 sol., 20 mL, 10 pcs ea.  
**HI 70033P** 84 µS/cm cal. sol. (25 x 20 mL)  
**HI 7033L** 84 µS/cm calibration sol., 460 mL  
**HI 70442P** 1500 ppm cal. sol. (25 x 20 mL)  
**HI 70032P** 1382 ppm cal. sol. (25 x 20 mL)

**HI 77300P** 1382 ppm & pH 7 sol., 20 mL, 10 pcs ea.  
**HI 70038P** 6.44 ppt cal. sol. (25 x 20 mL)  
**HI 77400P** pH 4 & 7 sol., 20 mL, 5 pcs ea.  
**HI 76309** Conductivity probe for HI 9835  
**HI 721317** Hard carrying case for HI 9835

\* Fits HI 991300 and HI 991301 case style only.

All thermometers feature: Simultaneous High, Low and Current Temperature Display • Waterproof Casing • Ergonomic Design  
Tactile Sealed Rubber Keys • Percent Battery Remaining • Long Battery Life • Auto Shut-off • Optional Shockproof Rubber Boots

## Waterproof, Single & Dual Channel Thermistor Thermometers

- Simultaneously display high, low and current temperature
- HOLD button to freeze readings
- Measures °F and °C

These high performance thermometers are tailor made for lab and field use. In addition to their outstanding features the HI 93510N and HI 93522 offer a CAL button to allow the operator to calibrate the meter in an ice bath at 0°C and a user-activated backlight for low or no light conditions.

### SPECIFICATIONS

		HI 93510/ HI 93510N/ HI 93512 (Dual-Channel)/ HI 93522 (Dual-Channel)
<b>Range</b>	°F	-58.0 to 302.0°F
	°C	-50.0 to 150.0°C
<b>Resolution</b>	°F	0.1°F (-58.0 to 230.0°F) / 0.2°F (outside)
	°C	0.1°C
<b>Accuracy</b> (excl. probe error)	°F	±0.8°F
	°C	±0.4°C

### ACCESSORIES

**HI 762PWL** Penetration probe with white handle  
**HI 762A** Air/gas probe with white handle  
**HI 762W/10** Wire probe, 10 m (33') cable

**HI 762BL** Liquid/gen. purpose probe w/black handle  
**HI 762L/10** Temp. probe with 10 m (33') cable  
**HI 721316** Hard carrying case

**HI 710004** Soft carrying case  
**HI 710007** Blue shockproof rubber boot  
**HI 710008** Orange shockproof rubber boot



### ORDERING INFORMATION

**HI 93510** is supplied complete with wrist-strap, HI 762BL temperature probe with 1 m (3.3') cable, 3 x 1.5V AA batteries and instructions.

**HI 93510N** is supplied complete with wrist-strap, HI 762BL temperature probe with 1 m (3.3') cable, 3 x 1.5V AA batteries & instructions.

**HI 93512** is supplied complete with wrist-strap, HI 762BL temperature probe with 1 m (3.3') cable, 3 x 1.5V AA batteries and instructions.

**HI 93522** is supplied complete with wrist-strap, HI 762BL temperature probe with 1 m (3.3') cable, 3 x 1.5V AA batteries and instructions.

## Waterproof, Single & Dual Channel K, J, T-type Thermocouple Thermometers

- Simultaneously display high, low and current temperature
- HOLD button to freeze readings
- Extended range and 0.1 resolution
- Measures °F and °C

Professional grade thermometers with the power of 3 meters in one. In addition to their outstanding features the HI 93551N and HI 93552 offer a CAL button to allow the operator to calibrate the meter in an ice bath at 0°C and a user-activated backlight for low or no light conditions.

### SPECIFICATIONS

		HI 93551/ HI 93551N/ HI 93542 (Dual-Channel)/ HI 93552 (Dual-Channel)
<b>Range</b>	<b>K</b>	-328.0 to 999.9°F / 1000 to 2500°F (also reads in °C)
	<b>J</b>	-328.0 to 999.9°F / 1000 to 1832°F (also reads in °C)
	<b>T</b>	-328.0 to 752.0°F (also reads in °C)
<b>Resolution</b>	<b>K</b>	0.1°F (-24.9 to 999.9°F) / 0.2°F (-24.9 to -25.0°F), 0.3°F (-328.0 to -250.0°F) / 1°F (1000 to 2500°F)
	<b>J</b>	0.1°F (-149.9 to 999.9°F) / 0.2°F (-328.0 to -150.0°F) / 1°F (1000 to 1832°F)
	<b>T</b>	0.1°F (0.0 to 752.0°F) / 0.2°F (-270.0 to -0.1°F) / 0.3°F (-328.0 to -270.1°F)
<b>Accuracy</b> (excl. probe error)		±1°F (-148.0 to 999.9°F) / ±1.5°F (outside for one year)

### ACCESSORIES

**HI 766C1** Penetration probe with 1 m (3.3') cable  
**HI 766D** Air probe with 1 m (3.3') cable  
**HI 766F** High temp wire probe with 1 m (3.3') cable

**HI 766E1** General use probe with 1 m (3.3') cable  
**HI 766TV1** Pipe clamp probe with 1 m (3.3') cable  
**HI 766F1** Wire probe with 1 m (3.3') wire length

**HI 766EX** 1 m (3.3') extension cable  
**HI 710007** Blue shockproof rubber boot  
**HI 710008** Orange shockproof rubber boot



### ORDERING INFORMATION

**HI 93551** is supplied complete with wrist-strap, 3 x 1.5V AA batteries and instruction manual.

**HI 93551N** is supplied complete with wrist-strap, 3 x 1.5V AA batteries and instruction manual.

**HI 93542** is supplied complete with wrist-strap, 3 x 1.5V AA batteries and instruction manual.

**HI 93552** is supplied complete with wrist-strap, 3 x 1.5V AA batteries and instruction manual.