HI 2300

# Autoranging EC, TDS, NaCl, Temperature Meter

- **Autoranging**
  The EC and TDS scales are autoranging. The meter automatically sets the scale with the highest possible resolution.
- **Manual range selection and range lock**
- **Four ring potentiometric conductivity probe with internal temperature sensor**
- **Automatic (ATC), manual (MTC) or no temperature compensation (NoTC)**
- **GLP features**
- **Log-on-demand up to 500 records**
- **PC compatible via USB**


HI 2300 measures EC, TDS, NaCl and temperature. In conductivity and TDS ranges (up to 500 mS/cm and 400 g/L respectively) the instrument automatically chooses the best scale to maintain the highest accuracy.

EC calibration is a one-point procedure. Selectable calibration points are 0.00 µS, 84.0 µS, 1413 µS, 5.00 mS, 12.88 mS, 80.0 mS, and 111.8 mS selected according with the expected measurement range. NaCl calibration is a one-point procedure at 100.0% NaCl. Use HI 7037L calibration solution as a 100% NaCl standard solution.

This instrument utilizes a four ring potentiometric probe with platinum sensors to offer versatility over typical amperometric designs. By utilizing the four ring method, it is possible to measure very low or high conductivity levels without changing probes.

Three options of compensating for temperature are available for this instrument:

**Automatic (ATC)**: The EC probe has a built-in temperature sensor which is used to automatically compensate the EC/TDS reading (from -9.9°C to 120.0°C), using the selected reference temperature (20 or 25°C) and temperature compensation coefficient from (0.0 to 6.0%)/°C

**Manual (MTC)**: The temperature value, shown on the secondary LCD, can be manually set with the ARROW keys. The compensation is referenced at the selected temperature. All the other parameters of temperature compensation are settable similar to ATC.

**No Compensation (NoTC)**: For actual conductivity or TDS measurement, the temperature value shown on the secondary LCD is not taken into account.

Cell constant is selectable between 0.5 and 1.700. TDS factor is selectable between 0.40 and 0.80.

The HI 2300 also provides users with GLP capabilities. Good Laboratory Practice (GLP) is a set of functions that allows storage and retrieval of data regarding the status of the system. After a successful calibration, the meter automatically stores the date and time of calibration, the calibration solution used and the resulting cell constant value. All this information can be later recalled by the user. Other features include a lock range function and stability indicator.

For PC communication, use the optional HI 92000 software and HI 920013 USB cable. The software is provided with an exclusive online guide of all the commands available and allows data printing, plotting and exporting.


**Last calibration date**


**Last calibration year**


**Last calibration time**


**Cell constant value (K)**


**Offset value**


| SPECIFICATIONS | | HI 2300 |
|---|---|---|
| Range | EC | 0.00 to 29.99 µS/cm;<br>30.0 to 299.9 µS/cm;<br>300 to 2999 µS/cm;<br>3.00 to 29.99 mS/cm;<br>30.0 to 200.0 mS/cm;<br>up to 500.0 mS/cm (actual EC)* |
| | TDS | 0.00 to 14.99 mg/L (ppm);<br>15.0 to 149.9 mg/L (ppm);<br>150 to 1499 mg/L (ppm);<br>1.50 to 14.99 g/L (ppt);<br>15.0 to 100.0 g/L (ppt);<br>up to 400.0 g/L (actual TDS)*,<br>with 0.80 conversion factor |
| | NaCl | 0.0 to 400.0% |
| | Temperature | -20.0 to 120.0°C |
| Resolution | EC | 0.01 µS/cm; 0.1 µS/cm; 1 µS/cm; 0.01 mS/cm; 0.1 mS/cm |
| | TDS | 0.01 mg/L; 0.1 mg/L; 1 mg/L; 0.01 g/L; 0.1 g/L |
| | NaCl | 0.1% |
| | Temperature | 0.1°C |
| Accuracy | EC | ±1% of reading ± (0.05 µS/cm or 1 digit) |
| | TDS | ±1% of reading ± (0.03 mg/L or 1 digit) |
| | NaCl | ±1% of reading |
| | Temperature | ±0.4°C |
| Calibration | EC | automatic, one point with six memorized values<br>(84, 1413, 5000, 12880, 80000, 111800 µS/cm) |
| | NaCl | one point, with HI 7037 calibration solution |
| | Temperature | two point, at 0 and 50°C |
| Temperature Compensation | | automatic or manual from -20.0 to 120.0°C |
| Temperature Coefficient | | selectable from 0.00 to 6.00%/°C (EC and TDS only) |
| TDS Conversion Factor | | selectable from 0.40 to 0.80 (default value: 0.50) |
| Probe | | HI 76310 platinum, four ring conductivity/TDS probe with internal temperature sensor and 1 m (3.3') cable (included) |
| PC Connectivity | | opto-isolated USB |
| Logging | | log on demand, 500 samples |
| Auto-off | | after five minutes of non-use (can be disabled) |
| Power Supply | | 12 VDC adapter (included) |
| Environment | | 0 to 50°C (32 to 122°F); RH max 95% |
| Dimensions | | 235 x 218 x 108 mm (9.2 x 8.5 x 4.2") |
| Weight | | 1.3 kg (2.9 lbs.) |

* with temperature compensation function disabled

## ORDERING INFORMATION

**HI 2300-01** (115V) and **HI 2300-02** (230V) is supplied with HI 76310 conductivity probe, 12 VDC adapter and instructions.

## PROBES

| | |
|---|---|
| **HI 76310** | Platinum, four ring conductivity/ TDS probe with internal temperature sensor and 1 m (3.3') cable |

## SOLUTIONS

| | |
|---|---|
| **HI 7030L** | 12880 µS/cm calibration solution, 500 mL |
| **HI 7031L** | 1413 µS/cm calibration solution, 500 mL |
| **HI 7033L** | 84 µS/cm calibration solution, 500 mL |
| **HI 7034L** | 80000 µS/cm calibration solution, 500 mL |
| **HI 7035L** | 111800 µS/cm calibration solution, 500 mL |
| **HI 7039L** | 5000 µS/cm calibration solution, 500 mL |
| **HI 7037L** | Salinity solution, 500 mL |
| **HI 7061L** | Electrode cleaning solution, 500 mL |

## ACCESSORIES

| | |
|---|---|
| **HI 92000** | Windows® compatible software |
| **HI 920013** | USB cable for PC connection |
| **HI 76404N** | Electrode holder |

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**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

## www.wolflabs.co.uk


Tel : 01759 301142

Fax : 01759 301143

sales@wolflabs.co.uk


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