



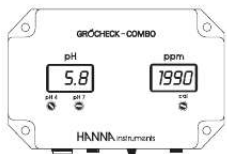
# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 981405N. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 981405N in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

**User manual HANNA INSTRUMENTS HI 981405N**  
**User guide HANNA INSTRUMENTS HI 981405N**  
**Operating instructions HANNA INSTRUMENTS HI 981405N**  
**Instructions for use HANNA INSTRUMENTS HI 981405N**  
**Instruction manual HANNA INSTRUMENTS HI 981405N**

**Instruction Manual**  
**GRÖCHECK - COMBO**  
(HI 981404N and HI 981405N)

**pH & TDS/EC Monitors**



**WARRANTY**

HI 981404N and HI 981405N are warranted for two years against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. The probes are warranted for a period of six months. This warranty is limited to repair or replacement free of charge.

Damage due to accidents, misuse, tampering or lack of prescribed maintenance are not covered. If service is required, contact the dealer from whom you purchased the instrument. If under warranty, report the model number, date of purchase, serial number and the nature of the failure. If the repair is not covered by the warranty, you will be notified of the charges incurred. If the instrument is to be returned to Hanna Instruments, first obtain a Returned Goods Authorization Number from the Customer Service department and then send it with shipment costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.

All rights are reserved. Reproduction in whole or in part is prohibited without the written consent of the copyright owner, Hanna Instruments.

Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice.

Dear Customer,  
Thank you for choosing a Hanna product. Please read carefully this instruction manual before using the meter.  
If you need additional technical information, do not hesitate to e-mail us at [tech@hannainst.com](mailto:tech@hannainst.com). These instruments are in compliance with the CE directives.

**PRELIMINARY EXAMINATION**

Remove the instrument from the packing material and examine it carefully. If any damage has occurred during shipment, immediately notify your Dealer or the nearest Hanna Customer Service Center.

- Each meter is supplied complete with:
- HI 1286 pH electrode
  - HI 1283 grounding probe
  - Conductivity probe
  - HI 7634 for HI 981404N & HI 7632 for HI 981405N
  - Calibration screwdriver
  - 12 Vdc power adapter and instructions

Note: Conserve all packing material until the instrument has been observed to function correctly. Any defective item must be returned in its original packing.

**GENERAL DESCRIPTION**

HI 981404N (pH and TDS) and HI 981405N (pH and EC) are specially designed to meet the needs of simple continuous monitoring.

You can simply install the meter above the sample to be tested for continuous measurement.

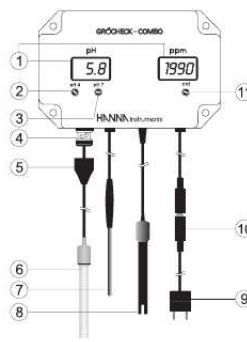
The HI 1286 gel-filled pH electrode features a waterproof sheath to protect BNC connector against humidity and vapours. Moreover, the unique design of the electrode provides longer life in aggressive solutions.

The meter is equipped with two large LCDs for easy-to-read measurements even from a distance.

Measurements are accurate and the meters can be calibrated at one or two points for pH, and at a single point for TDS and EC.

You no longer need to worry about battery changes because these units run without interruption on 12 Vdc power supply.

**FUNCTIONAL DESCRIPTION**



1. Liquid Crystal Displays
2. "pH 4" calibration trimmer
3. "pH 7" calibration trimmer
4. BNC connector
5. Protective sheath
6. HI 1286 pH electrode
7. HI 1283 grounding probe
8. HI 7632 or HI 7634 probe (depending on model)
9. 12 Vdc power adapter
10. Power supply connector
11. EC or TDS calibration trimmer

**SPECIFICATIONS**

| Common Specifications    |   |
|--------------------------|---|
| Range                    | 0.0 to 14.0 pH  |
| Resolution               | 0.1 pH  |
| Accuracy (@ 25°C/77°F)   | ±0.2 pH   |
| Calibration              | Manual, 1 or 2 point  |
| Probes                   | HI 1286 pH electrode (included) and HI 1283 grounding probe (fixed) |
| Environment              | 0 to 50°C (32 to 122°F); RH max 95%                                 |
| Power Supply             | 12 Vdc adapter (included)   |
| Dimensions               | 160 x 110 x 35 mm (6.3 x 4.3 x 1.4")                                |
| Weight                   | 300 g (10.6 oz.)  |
| HI 981404N only          |   |
| Range                    | 0 to 1990 mg/L (ppm)  |
| Resolution               | 10 mg/L (ppm)   |
| Accuracy (@ 25°C/77°F)   | ±2% f.s.  |
| TDS Factor               | 0.7 ppm = 1 µS/cm   |
| Temperature Compensation | Automatic, 5 to 50°C (41 to 122°F)                                  |
| Calibration              | Manual, 1 point   |
| TDS Probe                | HI 7634 (fixed)   |
| HI 981405N only          |   |
| Range                    | 0.00 to 9.99 mS/cm  |
| Resolution               | 0.01 mS/cm  |
| Accuracy (@ 25°C/77°F)   | ±2% f.s.  |
| Temperature Compensation | Automatic, 5 to 50°C (41 to 122°F)                                  |
| Calibration              | Manual, 1 point   |
| EC Probe                 | HI 7632 (fixed)   |

**Recommendations for Users**  
Before using this product, make sure that it is entirely suitable for the environment in which it is used. Operation of this instrument in residential areas could cause unacceptable interference to radio and TV equipment.  
The distillate on the end of the electrode is sensitive to electrostatic discharges. Avoid touching the bulb and lines. During operation, ESD water stops should be worn to avoid possible damage to the electrode by electrostatic discharges.  
Always maintain the electrode in the supplied equipment may degrade the instrument's EMC performance. To avoid electrical shock, do not use this instrument when voltage at the measurement site exceeds 24 V ac or 60 V dc. To avoid damage to the device, do not perform any measurement in microwave ovens.



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<http://yourpdfguides.com/dref/2865956>

**Manual abstract:**

Please read carefully this instruction manual before using the meter. If you need additional technical information, do not hesitate to e-mail us at [tech@hannainst.com](mailto:tech@hannainst.com). These instruments are in compliance with the directives. FUNCTIONAL DESCRIPTION SPECIFICATIONS Common Specifications Range Resolution Accuracy (@ 25°C/77°F) Calibration Probes 0.0 to 14.0 pH 0.1 pH ±0.2 pH Manual, 1 or 2 point HI 1286 pH electrode (included) and HI 1283 grounding probe (fixed) 12 Vdc adapter (included) 160 x 110 x 35 mm (6.3 x 4.3 x 1.4") 300 g (10.6 oz.) HI 981404N only 0 to 1990 mg/L (ppm) 10 mg/L (ppm) ±2% f.s.

Any defective item must be returned in its original packing. Environment 0 to 50°C (32 to 122°F); RH max 95% Power Supply Dimensions Weight Range Resolution Accuracy (@ 25°C/77°F) TDS Factor Temperature Compensation Calibration TDS Probe 1. 2. 3. 4.

5. 6. 7. 8. 9. 10. 11. Liquid Crystal Displays "pH 4" calibration trimmer "pH 7" calibration trimmer BNC connector Protective sheath HI 1286 pH electrode HI 1283 grounding probe HI 7632 or HI 7634 probe (depending on model) 12 Vdc power adapter Power supply connector EC or TDS calibration trimmer [www.hannainst.com](http://www.hannainst.com) WARRANTY HI 981404N and HI 981405N are warranted for two years against defects in workmanship and materials when used for their intended purpose and maintained according to instructions.

The probes are warranted for a period of six months. This warranty is limited to repair or replacement free of charge. Damages due to accidents, misuse, tampering or lack of prescribed maintenance are not covered. If service is required, contact the dealer from whom you purchased the instrument. If under warranty, report the model number, date of purchase, serial number and the nature of the failure. If the repair is not covered by the warranty, you will be notified of the charges incurred. If the instrument is to be returned to Hanna Instruments, first obtain a Returned Goods Authorization Number from the Customer Service department and then send it with shipment costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection. GENERAL DESCRIPTION HI 981404N (pH and TDS) and HI 981405N (pH and EC) are specially designed to meet the needs of simple continuous monitoring. You can simply install the meter above the sample to be tested for continuous measurement.

The HI 1286 gel-filled pH electrode features a waterproof sheath to protect BNC connector against humidity and vapours. Moreover, the unique design of the electrode provides longer life in aggressive solutions. The meter is equipped with two large LCDs for easy-to-read measurements even from a distance.

Avoid touching the bulb at all times. If possible, use plastic beakers to minimize any EMC interference.

Tap the probe gently on the bottom, then shake it to make sure no air bubbles have remained trapped. With the supplied screwdriver, adjust the calibration trimmer until the display shows 1.41 mS/cm (HI 981405N) or 1500 ppm (HI 981404N). Calibration is now complete. CONDUCTIVITY PROBE MAINTENANCE The following cleaning procedure is recommended at least once a month: Immerse the tip of the probe in HI 7061 cleaning solution for half an hour.

If a more thorough cleaning is required, brush the metal pins with very fine sandpaper. After cleaning, rinse the probe with tap water. TAKING MEASUREMENTS Turn the meter on by connecting the 12 Vdc power adapter to the meter and the mains. Remove the protective cap from the pH electrode. Immerse the tips (4cm/1½") of pH electrode, conductivity and grounding probes into the sample. For better accuracy, the probes should not touch or stand close to the vessel's walls or bottom. The two LCDs will show the pH and EC (or TDS) values. Any initial variation may be due to the pH electrode conditioning and EC/TDS temperature compensation. Allow the readings to stabilize. CALIBRATION The instrument must be recalibrated whenever: a) After cleaning or replacing the probe b) Where high accuracy is required c) At least once a month pH CALIBRATION Pour small quantities of pH 7.

0 (HI 7007) and pH 4.0 (HI 7004) or pH 10.0 (HI 7010) solution into two clean beakers. For accurate calibration use two beakers for each buffer solution, the first one for rinsing the tip of the electrode and the second one for calibration. Turn the meter on. Stir gently and wait for the reading to stabilize. Stir gently. CE DECLARATION OF CONFORMITY pH ELECTRODE MAINTENANCE When not in use, rinse the electrode with water and store it with a few drops of storage (HI 70300) or pH7 (HI 7007) solution in the protective cap. Always replace the protective cap after use. DO NOT USE DISTILLED OR DEIONIZED WATER FOR STORAGE PURPOSES.

If the electrode has been left dry, soak the tip in a storage (HI 70300) or pH7 (HI 7007) solution overnight to reactivate it. \* To be replaced by authorized technical personnel only ISTCOMBON R1 05/05 .



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