



# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 983302N. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 983302N 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 983302N**  
**User guide HANNA INSTRUMENTS HI 983302N**  
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### Instruction Manual

**EC** GRÖC'HEK & **TDS** GRÖC'HEK  
HI 983302N HI 983301N  
HI 983301N/S

**On-line, Waterproof  
EC-TDS meter with large LCD**



**HANNA**  
instruments  
www.hannainst.com

### WARRANTY

EC and TDS GRÖC'HEK 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 accident, 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.

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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. This manual will provide you with the necessary information for a correct operation. Please read it carefully 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.

The meters are supplied with:

- HI 7634 probe (HI 983302N)
- HI 7634 probe (HI 983301N and HI 983301N/S)
- 1413 µS/cm calibration solution (20 mL) for HI 983302N
- 1500 ppm calibration solution (20 mL) for HI 983301N
- 1382 ppm calibration solution (20 mL) for HI 983301N/S
- 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

EC and TDS GRÖC'HEK are instruments specially designed to meet the needs of growers in greenhouses hydroponic applications. They are equipped with a large display for an easy reading also from distance.

You can simply hang the meter right above the sample to be tested for continuous measurement and the unit will run without interruption on 12 Vdc power supply.

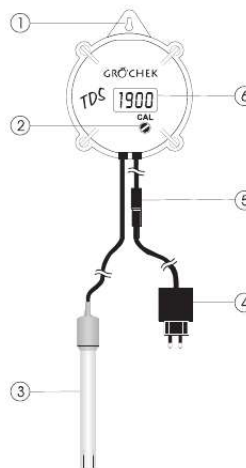
The housing has been completely sealed against vapors and humidity.

The meters are supplied with a probe that automatically compensates for the temperature variation. The probe is easy to clean and requires little maintenance.

Measurements are highly accurate and the meters can be calibrated at one point.

In addition, the two TDS GRÖC'HEK use a specially devised formula which perfectly reflects the needs of growers. In fact, the TDS factor of the HI 983301N model is 0.7 while for the HI 983301N/S is 0.5.

### FUNCTIONAL DESCRIPTION



1. Molded eye
2. Calibration trimmer
3. Probe (HI 7632 or HI 7634, depending on model)
4. 12 Vdc power adapter
5. Power supply connector
6. Liquid Crystal Display (LCD)

### SPECIFICATIONS

EC GRÖC'HEK – HI 983302N	
Range	0.00 to 9.99 mS/cm
Resolution	0.01 mS/cm
Accuracy (@ 25°C/77°F)	± 2% f.s.
Typical EMC Deviation	± 2% f.s.
Temp. Compensation	Automatic 5 to 50°C (41 to 122°F)
Calibration	Manual with one trimmer
Probe	HI 7632 (fixed)
Casing	IP54
Power supply	12 Vdc; adapter (included)
Dimensions	86 x 110 x 43 mm (3.4 x 4.3 x 1.7")
Weight	215 g (7.6 oz)

TDS GRÖC'HEK – HI 983301N & HI 983301N/S	
Range	0 to 1990 mg/L (ppm)
Resolution	10 mg/L (ppm)
Accuracy (@ 25°C/77°F)	± 2% f.s.
Typical EMC Deviation	± 2% f.s.
TDS Factor	0.7 (HI 983301N) 0.5 (HI 983301N/S)
Temp. Compensation	Automatic 5 to 50°C (41 to 122°F)
Calibration	Manual with one trimmer
Probe	HI 7634 (fixed)
Casing	IP54
Power supply	12 Vdc; adapter (included)
Dimensions	86 x 110 x 43 mm (3.4 x 4.3 x 1.7")
Weight	215 g (7.6 oz)



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**Manual abstract:**

This manual will provide you with the necessary information for a correct operation. Please read it carefully 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). @ ±2% f.s. @ ±2% f.s. @ If any damage has occurred during shipment, immediately notify your Dealer or the nearest Hanna Customer Service Center. The meters are supplied with: · HI 7632 probe (HI 983302N) · HI 7634 probe (HI 983301N and HI 983301N/5) · 1413 µS/cm calibration solution (20 mL) for HI 983302N · 1500 ppm calibration solution (20 mL) for HI 983301N · 1382 ppm calibration solution (20 mL) for HI 983301N/5 · 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. Accuracy (@ 25°C/77°F) Typical EMC Deviation Temp. Compensation Calibration Probe Casing Power supply Dimensions Weight TDS Range Resolution Accuracy (@ 25°C/77°F) Typical EMC Deviation TDS Factor Temp. Compensation Calibration Probe 1. 2.

3. 4. 5. 6. Molded eye Calibration trimmer Probe (HI 7632 or HI 7634, depending on model) 12 Vdc power adapter Power supply connector Liquid Crystal Display (LCD) Casing Power supply Dimensions Weight www.

[hannainst.com](http://hannainst.com) WARRANTY EC and TDS 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 accident, 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. @ All rights are reserved.

@ @ @ @ @ The housing has been completely sealed against vapors and humidity. @ The probe is easy to clean and requires little maintenance. @ @ @ @ @ @ @ @ @ @ The tip may lay on the bottom of the beaker. · The LCD will show the EC or TDS value. @ @ @ @ @ If possible, use plastic beakers to minimize any EMC interference. @ @ @ @ @ The tip can lay on the bottom of the beaker. @ @ · Tap the probe gently on the bottom, then shake it while rotating to make sure no air bubbles have remained trapped. · Adjust the calibration trimmer with the supplied screwdriver until the display shows 1.41 (mS) for HI 983302N, 1500 (ppm) for HI 983301N or 1380 (ppm) for HI 983301N/5. · The calibration is now complete and the instrument is ready for use.

The meters should be recalibrated at least once a month and after performing probe cleaning procedure. ACCESSORIES HI 7632 \* Conductivity probe with built-in temperature sensor and 2 m (6.6') cable HI 7634 \* Conductivity probe with built-in temperature sensor and 2 m (6.6') cable HI 70031P 1413 µS/cm calibration solution, 20 mL sachet (25 pcs) HI 70442P 1500 ppm calibration solution, 20 mL sachet (25 pcs) HI 70032P 1382 ppm calibration solution, 20 mL sachet (25 pcs) HI 7031L 1413 µS/cm calibration solution, 500 mL bottle HI 70442L 1500 ppm calibration solution, 500 mL bottle HI 7032L 1382 ppm calibration solution, 500 mL bottle HI 7061L Electrode cleaning solution, 500 mL bottle HI 710005 12 Vdc power adapter, US plug HI 710006 12 Vdc power adapter, European plug HI 710012 12 Vdc power adapter, Australian plug HI 710013 12 Vdc power adapter, Southern Africa plug HI 710014 12 Vdc power adapter, UK plug \* To be replaced by authorized technical personnel only. CE DECLARATION OF CONFORMITY PROBE MAINTENANCE To minimize clogging and provide longer life for the probe, it is recommended to clean it often or at least once a month.

· Immerse the tip of the probe in HI 7061 cleaning solution for one hour or clean it with detergents used to wash irrigation pipelines and fertilizer vessels. · If a more thorough cleaning is required, brush the metal pins with very fine sandpaper. · After cleaning or before storing the probe, rinse it with tap water. Recommendations for Users Before using these products, make sure that they are entirely suitable for the environment in which they are used. Operation of these instruments in residential areas could cause unacceptable interferences to radio and TV equipment.

@ @ @ Avoid touching this metal band at all times. @ @ @ @ To avoid electrical shock, do not use these instruments when voltages at the measurement surface exceed 24 Vac or 60 Vdc. Use plastic beakers to minimize any EMC interferences. To avoid damages or burns, do not perform any measurement in microwave ovens. ISECTDSGR R2 05/05 .



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