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You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 9813-5. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 9813-5 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

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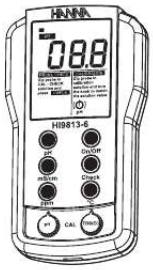
Instruction Manual

HI 9813-5 & HI 9813-6 Portable pH/EC/TDS/°C Meters



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Manual abstract:

h a n n a i n s t . c o m 1 Dear Customer, Thank you for choosing a Hanna product. Please read this instruction manual carefully before using the meter. This manual will provide you with the necessary information for correct use of the instrument, as well as a precise idea of its versatility. If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com. WARRANTY HI 9813-5 and HI 9813-6 are guaranteed for two years against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. Electrodes and probes are guaranteed for six months. This warranty is limited to repair or replacement free of charge. Damage due to accidents, misuse, tampering or lack of prescribed maintenance is 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 problem. 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 Technical Service department and then send it with shipping costs prepaid. When shipping any instrument, make sure it is properly packed for complete protection.

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..... 14 2 PRELIMINARY EXAMINATION Remove the instrument from the packing material and examine it carefully to make sure that no damage has occurred during shipment. If noticeable damage is found, notify your dealer. Each meter is supplied with: · Combination probe with 8-pin DIN connector & 1 m (3.3') cable: · HI 1285-5, pH/EC/TDS/°C probe, for HI 9813-5 · HI 1285-6, pH/EC/TDS/°C probe with Cal-CheckTM for HI 9813-6 · HI 70007 pH 7.

01 sachet, 1 pc · HI 70031 1413 S/cm (1.413 mS/cm) sachet, 1 pc · HI 70442 1500 ppm sachet, 1 pc · HI 700661 cleaning solution sachet, 2 pcs · HI 50021 check solution sachet, 2 pcs (for HI 9813-6 only) · Instruction manual · 1 x 9V alkaline battery. Note: Save all packing material until you are sure that the instrument functions correctly. Any defective items must be returned in the original packing together with the supplied accessories. GENERAL DESCRIPTION HI 9813-5 and HI 9813-6 are complete, versatile and splash-proof portable combination meters designed with the utmost precision and simplicity. Both models provide measurements of pH, EC and TDS ranges, which can be easily selected using a membrane keypad on the front panel. Conductivity measurements are automatically compensated for temperature changes with a built-in temperature sensor. The temperature coefficient is fixed at 2%/°C. · HI 9813-5 is a pH/EC/TDS meter designed for simplicity of use in taking pH, mS/cm, ppm and temperature in the °C scale measurements. Suited for hydroponics, greenhouses, farming and ground water applications.
@@@@mS/cm ±2% f.s. ppm ±0.5 °C ±0.1 pH ±2% f.
s. mS/cm ±2% f.s. @@@@@@@@@@Turn the meter on by pressing the On/Off key. @@@@· Select the pH mode.
@@The display shows the pH value. @@@@@@@@@@@@@· Select the °C mode. @@@@@@@@@@b) At least once a month. c) After testing aggressive chemicals. d) Where extreme accuracy is required. e) Whenever the CAL-CHECK test fails (HI 9813-6 only). PREPARATION Pour small quantities of pH 7.01 (HI 7007) or pH 4.01 (HI 7004) or pH 10.01 (HI 7010) solution into a clean beaker.

To obtain accurate readings, use pH 7.01 (HI 7007) if you are going to measure neutral or close to neutral samples, pH 4.01 (HI 7004) if you are going to measure acidic samples or pH 10.01 (HI 7010) for alkaline measurements. If you need to calibrate to NBS standards, use pH 6.86 (HI 7006) instead of pH 7.01 and pH 9.18 (HI 7009) instead of pH 10.01. PROCEDURE · Connect the probe and switch the meter on, then press the pH key to display pH measurement.
· Remove the protective cap from the probe, rinse and immerse it in the buffer and stir gently. Wait a couple of minutes for the reading to stabilize. · Take the temperature of the buffer solution, e.g. 10.
0°C, as follow: select the °C mode and read the displayed value. · Adjust the pH calibration knob until the LCD shows the pH value at the above temperature (see the pH versus temperature chart). · The pH calibration is now complete. Notes: · The probe should be submerged approximately 4 cm (1½") into the

solution. The thermometer has to be located close to the probe.
· If turning the knob the needed value can not be reached, clean the probe (see the "Probe Maintenance" section). If also after the probe cleaning the value can not be reached, replace the probe. 9 pH VALUES AT VARIOUS TEMPERATURES For temperature compensation during calibration, please refer to the following chart. TEMP ºC 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 ºF 32 41 50 59 68 77 86 95 104 113 122 pH VALUES 4.01 6.86 4.01 4.00 4.00 4.00 4.

00 4.01 4.02 4.03 4.04 4.05 4.06 6.98 6.95 6.92 6.
90 6.88 6.86 6.85 6.84 6.
84 6.83 6.83 6.84 6.84 6.
84 6.85 7.01 9.18 7.13 7.10 7.07 7.05 7.03 7.01 7.

00 6.99 6.98 6.98 6.98 6.98 6.98 6.99 6.99 9.46 9.
39 9.33 9.27 9.22 9.18 9.
14 9.11 9.07 9.04 9.01 8.
99 8.97 8.95 8.93 10.01 10.32 10.24 10.18 10.12 10.06 10.

01 9.96 9.92 9.88 9.85 9.82 9.79 9.77 9.76 9.75 131 4.
08 140 149 158 4.09 4.11 4.12 For instance, if the buffer temperature is 25°C, the display should show pH 4.0 or 7.
0 or 10.0. If the buffer temperature is 10°C, the display should show pH 4.0 or 7.0 or 10.
1. 10 EC/TDS CALIBRATION Accessories needed: · Use HI 70031 (1413 S/cm = 1.413 mS/cm) EC calibration solution or HI 70442 (1500 ppm) TDS calibration solution. Note: The conversion between EC and TDS is made by a built-in circuit, hence it is requested to calibrate the meter only in EC or TDS range. The other range is thus automatically calibrated. PROCEDURE · Pour approximately 4 cm (1½") of a conductivity calibration solution (e.g. HI 7031) into a beaker. If possible, use plastic beaker to minimize any EMC interference. · Immerse the probe in the solution.

@@@@· Press the mS/cm (or ppm) key. @@@@It is recommended to replace the battery immediately. When the battery level is so low that it may cause unreliable measurements, the meter turns off. Battery replacement must only take place in a nonhazardous area using a 9V alkaline battery. Unscrew the three screws on the rear of the meter, remove the battery compartment cover and replace the 9V battery with a new one while observing its polarity. Make sure the battery contacts are tight and secure before replacing the cover. PROBE MAINTENANCE PERIODIC MAINTENANCE Inspect the probe and thments when voltages at the measurement surface exceed 24 VAC or 60 VDC.

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To avoid damages or burns, do not perform any measurement in microwave ovens. Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice. 15 Hanna Instruments Inc.

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