



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 83141. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 83141 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 83141 User guide HANNA INSTRUMENTS HI 83141 Operating instructions HANNA INSTRUMENTS HI 83141 Instructions for use HANNA INSTRUMENTS HI 83141 Instruction manual HANNA INSTRUMENTS HI 83141

Instruction Manual

HI 83141
Portable pH/mV/°C meter



HANNA
instruments
www.hannainst.com

WARRANTY

All Hanna Instruments meters are warranted for two years against defects in workmanship and materials when used for their intended purpose and maintained according to instructions.

The electrodes and 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.

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 the correct operation of the meter. 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. This instrument is in compliance with the CE directives.

PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully to make sure that no damage has occurred during shipment. If there is any damage, notify your Dealer. The meter is supplied complete with:

- HI 1230B plastic-body, double-junction, gel, combination pH electrode with BNC and 1 m cable
- HI 7669AW temperature probe with 1 m cable
- 1 x 9V battery, screwdriver 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.

ACCESSORIES

HI 1230B Plastic body, double-junction, gel, combination pH-electrode with BNC connector and 1 m cable

HI 13131B Glass-body, refillable, combination platinum ORP-electrode with BNC connector and 1 m cable

HI 7669AW Temperature probe with 1 m screened cable

HI 7004M pH 4.01 buffer solution, 230 ml bottle

HI 7006M pH 6.86 buffer solution, 230 ml bottle

HI 7007M pH 7.01 buffer solution, 230 ml bottle

HI 7009M pH 9.18 buffer solution, 230 ml bottle

HI 7010M pH 10.01 buffer solution, 230 ml bottle

HI 70300M Storage solution, 230 ml bottle

HI 7061M Cleaning solution, 230 ml bottle

HI 7091M Reducing pretreatment solution, 230 ml bottle

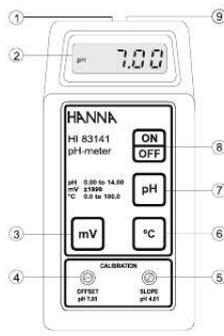
HI 7092M Oxidizing pretreatment solution, 230 ml bottle

HI 731326 Calibration screwdriver (20 pcs)

HI 76405 Electrode holder

Consult the Hanna General Catalog for a complete and wide selection of electrodes.

FUNCTIONAL DESCRIPTION



- 1) BNC connector for pH (or ORP) electrode.
- 2) Liquid Crystal Display.
- 3) mV key, to display the mV (ORP) readings when using an ORP electrode or the mV equivalent to pH values when using a pH electrode.
- 4) Trimmer for pH OFFSET calibration.
- 5) Trimmer for pH SLOPE calibration.
- 6) °C key, to display the temperature measurement.
- 7) pH key, to display the pH value.
- 8) ON/OFF key.
- 9) Socket for HI 7669AW temperature probe.

SPECIFICATIONS

Range	0.00 to 14.00 pH ±1.999 mV 0.0 to 100.0 °C
Resolution	0.01 pH / 1 mV / 0.1 °C
Accuracy (@20°C/68°F)	±0.01 pH / ±1 mV ±0.4 °C
Typical EMC Deviation	±0.07 pH / ±5 mV / ±1 °C
pH Calibration	Manual, at 2 points, through offset and slope trimmers
Offset Calibration	±1 pH
Slope Calibration	from 85 to 105%
ORP Calibration	Factory calibrated
Temperature Calibration	Factory calibrated
Temperature Compensation	Automatic, from 0 to 70 °C
Probes (included)	HI 1230B pH-electrode HI 7669AW temperature probe
Battery type	1 x 9V alkaline
Battery Life	100 hours of continuous use
Environment	0 to 50 °C (32 to 122 °F); max 95% RH non-condensing
Dimensions	164 x 76 x 45 mm (6.5 x 3.0 x 1.8")
Weight	180 g (6.3 oz.)

Recommendations for Use:

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 a significant interference to radiated TV equipment, requiring the operator to take necessary steps to react to interference. The glass bulb at the end of the electrode is sensitive to electrostatic discharges. Avoid touching this glass bulb at all times.

To maintain the EMC performance of equipment, the recommended calibration in the user's manual must be used. Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance.

To avoid electric shock, do not use these instruments when water or other measurement solutions are used. To avoid damage to users, do not perform any measurement in low voltage areas.



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Manual abstract:

This manual will provide you with the necessary information for the correct operation of the meter. 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. If there is any damage, notify your Dealer. Any defective item must be returned in its original packing. www.hannainst.com WARRANTY All Hanna Instruments meters are warranted for two years against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. The electrodes and 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. ACCESSORIES HI 1230B

Plastic body, double-junction, gel, combination pHelectrode with BNC connector and 1 m cable HI 3131B Glass-body, refillable, combination platinum ORPelectrode with BNC connector and 1 m cable HI 7669AW Temperature probe with 1 m screened cable HI 7004M pH 4.01 buffer solution, 230 ml bottle HI 7006M pH 6.86 buffer solution, 230 ml bottle HI 7007M pH 7.

01 buffer solution, 230 ml bottle HI 7009M pH 9.18 buffer solution, 230 ml bottle HI 7010M pH 10.01 buffer solution, 230 ml bottle HI 70300M Storage solution, 230 ml bottle HI 7061M Cleaning solution, 230 ml bottle HI 7091M Reducing pretreatment solution, 230 ml bottle HI 7092M Oxidizing pretreatment solution, 230 ml bottle HI 731326 Calibration screwdriver (20 pcs) HI 76405 Electrode holder Consult the Hanna General Catalog for a complete and wide selection of electrodes. 1) BNC connector for pH (or ORP) electrode. 2) Liquid Crystal Display. 3) mV key, to display the mV (ORP) readings when using an ORP electrode or the mV equivalent to pH values when using a pH electrode. 4) Trimmer for pH OFFSET calibration. 5) Trimmer for pH SLOPE calibration.

6) °C key, to display the temperature measurement. 7) pH key, to display the pH value.

8) ON/OFF key. 9) Socket for HI 7669AW temperature probe. 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 area could cause unacceptable interference to radio and TV equipment, requiring the operator to take all necessary steps to correct interference. The glass bulb at the end of the electrode is sensitive to electrostatic discharges.

Avoid touching this glass bulb at all times. At least once a month. c) After testing aggressive chemicals. d) Where extreme accuracy is required. A low battery level may also result in unreliable measurements.

It is recommended to replace the battery immediately. Select the pH mode. The display will show the pH value automatically compensated for temperature variations. In order to take accurate pH measurements, make sure that the instrument has been calibrated for pH before use. If measurements are taken in different samples successively, it is recommended to rinse the electrode thoroughly to avoid crosscontamination.

After cleaning, rinse the electrode with some of the sample to be measured. To take temperature measurements make sure the temperature probe is connected to the meter, immerse it in the sample to be measured and press the °C key to enter the temperature mode. Note: If the temperature probe is not connected, the pH reading will be compensated at 25°C. To take ORP (mV) measurements connect an ORP electrode (optional) to the BNC connector on the top of the meter, submerge the tip (at least 4 cm/1½") into the solution, enter the "mV" mode by pressing the mV key and wait a few minutes for the reading to stabilize.

Preparation Pour small quantities of pH7.

01 (HI 7007) and pH4.01 (HI 7004) buffer solutions into two clean beakers. For accurate calibration use two beakers for each buffer solution, the first one for rinsing the tip of the electrode, the second one for calibration. In this way contamination of the buffers is minimized. To obtain accurate readings, use pH7.01 (HI 7007) and pH4.01 (HI 7004) buffers for measuring acidic samples, or pH7.01 (HI 7007) and pH10.01 (HI 7010) for alkaline measurements. If a calibration with NBS standards is needed, use pH6.

86 (HI 7006) instead of pH7.01 and pH9.18 (HI 7009) instead of pH10.01. The pH calibration is now complete. Unscrew the 3 screws on the back of the meter, remove the battery cover and replace the battery while paying attention to its polarity. Procedure · Connect pH electrode and temperature probe to the meter and switch it ON. · Press the °C key to display °C the temperature of the buffer (e.g. 20°C).

· Press the pH key to read pH values. Stir gently and wait for a couple of minutes. · Adjust the OFFSET trimmer on the lower left of the front panel until LCD shows the pH value at the noted temperature. pH pH VALUES AT VARIOUS TEMPERATURES TEMP °C 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 pH VALUES 7.01 7.

13 7.10 7.07 7.04 7.03 7.

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