



# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 96725. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 96725 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 96725 User guide HANNA INSTRUMENTS HI 96725 Operating instructions HANNA INSTRUMENTS HI 96725 Instructions for use HANNA INSTRUMENTS HI 96725 Instruction manual HANNA INSTRUMENTS HI 96725

**INSTRUCTION MANUAL**  
**HI 96705**  
**Silica ISM**

**Dear Customer,**  
Thank you for choosing a Hanna product. This manual will provide you with the necessary information for the correct use of the instrument. Please read it carefully before using the meter. If you need additional technical information, do not hesitate to contact us at [info@hannainst.com](mailto:info@hannainst.com).

**Preliminary examination:**  
Please examine this product carefully. Make sure that the instrument is not damaged. If any damage is noted during shipment, please notify your dealer.  
Check HI 96705 for defects before it is supplied complete with:  
• Test Sample Container and Cap;  
• 9V Battery;  
• Instruction Manual.  
**Note:** Some of packing material will give you some that the instrument will be correctly. Any defective item must be returned in its original packaging.

**For more details about spare parts and accessories see "Accessories".**

Technical specifications:	
Range	0.00 to 2.00 mg/L
Resolution	0.01 mg/L
Accuracy	±0.03 mg/L ± 3% of reading @ 25°C
Typical EMC Dev.	± 0.03 mg/L
Light Source	Incandescent lamp
Light Detector	Photo-transistor with narrow band interference filter @ 418 nm
Method	Absorption of the 418 nm DSSP wavelength of the sample. The correlation between light and sample concentration is 1:1 mg/L in the sample.
Environment	0 to 50°C (32 to 122°F); non-95% RH non-condensing
Battery Type	1 x 9V
Auto-Start off	After 15" of non-use in measurement mode, after 1 hour of non-use in calibration mode, with lock button available.
Dimensions	192 x 104 x 48 mm (7.6 x 4.1 x 1.9")
Weight	340 g (12.1 oz.)

**Functional description:**

1. On/Off key: press to enter ODP mode. In calibration mode press to exit the mode and back.
2. CAL CHECK key: press to perform the calibration of the meter, or press and hold for three seconds to enter calibration mode.
3. ZERO/CFM key: press to zero the meter prior to measurement, to confirm initial values or to confirm before calibration starts.
4. READ/TIMER key: in measurement mode, press to make a measurement, or press and hold for three seconds to start a pre-programmed, maximum time to measurement, in ODP mode press to view the next screen.
5. ON/OFF key: to turn the meter on and off.
6. Liquid Crystal Display (LCD).
7. Graphs display indicator.
8. Graphs indicator.

**DISPLAY ELEMENTS DESCRIPTION:**

1. The measuring values (range, units, direction), appears during different phases of use or reading measurement.
2. Error messages and warnings.
3. The battery low indicator (the shape size of the battery).
4. The language appears when an internal check is in progress.
5. Status messages.
6. The measurement appears when the module that is reading.
7. The sample size and time taken appear when a data is displayed.
8. Four digit max display.
9. Absorbance unit.
10. New light readability display.

**Errors and warnings:**

**ON ZERO READING:**  
**Err**  
Light High: There is too much light to perform a measurement. Please check the proportion of the size counts.  
**Err**  
Light Low: There is not enough light to perform a measurement. Please check the proportion of the size counts.  
**Err**  
No Light: The instrument cannot collect the light beam. Please check that the sample does not contain any debris.

**ON SAMPLE READING:**  
**Err**  
Inverted samples: The sample and the size counts are inverted.  
**Err**  
Zero: A zero reading was not taken. Follow the instructions of the measurement procedure for reading the meter.  
**Err**  
Over Range: A blinking "000" indicates that the sample absorbance is higher than the one software. Check the proportion and make sure you use the correct sample for absorbance (solid) and measurement.

**DISPLAY CALIBRATION PROCEDURE:**  
**Err**  
Standard Low: The standard reading is less than expected.  
**Err**  
Standard High: The standard reading is higher than expected.

**OTHER ERRORS AND WARNINGS:**  
**Err**  
Cap error: Appears when external light enters in the module cell. Assure that the sample cap is present.

**Measurement procedures:**

1. Turn the meter on by pressing ON/OFF.
2. When the battery is nearly empty, the LCD display flashes. The meter is ready. The display "0000" indicates that the instrument needs to be recalibrated.
3. Fill one cuvette with 10 ml of standard sample, up to the mark and replace the cap.
4. Add 5 drops of HI 93251A stabilizing reagent. Replace the cap and seal the vial.
5. Wait for 5 minutes, call the number of concentration of the sample and the corresponding standard solution. The display will show "0.00".
6. Wait for 5 minutes. This is the blank.
7. Place the cuvette over the sample holder and assure that the mark on the cap is positioned correctly over the prism.
8. Press ZERO/CFM and the range, units and direction will appear on the display, depending on the measurement phase.
9. Add a few samples to the display will show "0.00". The meter is now ready and ready for measurement. Remove the cuvette.
10. Add one portion of the HI 93251A reagent and, suggest and shake until it has dissolved.
11. Replace the cuvette into the holder and assure that the mark on the cap is positioned correctly over the prism.
12. Press and hold READ/TIMER for three seconds and the display will show the calibration zero to measurement or absorbance unit. It takes and press READ/TIMER to enable "Zero" indicates the end of calibration period. It will cause the range, units and direction will appear on the display, depending on the measurement phase.

**Other icons and symbols:**  
Cooling lamp: The instrument waits for the lamp to cool down.  
Battery low: The battery must be replaced soon.  
Dead battery: This indicates that the battery is dead and must be replaced. Once this indication is displayed, several portions of the instrument will be interrupted. Change the battery and reset the meter.



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### Manual abstract:

This manual will provide you with the necessary information for the correct use of the instrument. 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). Functional description: Errors and warnings: ON ZERO READING:

Light High: There is too much light to perform a measurement. Please check the preparation of the zero cuvette. Light Low: There is not enough light to perform a measurement. Please check the preparation of the zero cuvette. No Light: The instrument cannot adjust the light level. Please check that the sample does not contain any debris.

ON SAMPLE READING: Inverted cuvettes: The sample and the zero cuvette are inverted. 3 4 Zero: A zero reading was not taken. Follow the instructions of the measurement procedure for zeroing the meter. Under range: A blinking "0.00" indicates that the sample absorbs less light than the zero reference.

Check the procedure and make sure you use the same cuvette for reference (zero) and measurement. Over Range: A flashing value of the maximum concentration indicates an over range condition. The concentration of the sample is beyond the programmed range: dilute the sample and re-run the test.

DURING CALIBRATION PROCEDURE: Standard Low: The standard reading is less than expected. @@@@Make sure that the instrument is not damaged.

If any damage occurred during shipment, please notify your Dealer. @@Any defective item must be returned in its original packing. @@Once this indication is displayed, normal operation of the instrument will be interrupted. Change the battery and restart the meter. Measurement procedure: Measurement

Technical specifications: Range Resolution Accuracy Typical EMC Dev. Light Source Light Detector Method 0.00 to 2.00 mg/L 0.01 mg/L  $\pm 0.03$  mg/L  $\pm 3\%$  of reading @ 25°C  $\pm 0$ .

01 mg/L Tungsten Lamp Silicon Photocell with narrow band interference filter @ 610 nm Adaptation of the ASTM D859 method of heteropoly blue method. The reaction between silica and reagents causes a blue tint in the sample. 0 to 50°C (32 to 122°F); max 95% RH non-condensing 1 x 9 volt After 10' of non-use in measurement mode; after 1 hour of non-use in calibration mode; with last reading reminder. 192 x 104 x 69 mm (7.6 x 4.1 x 2.7") 360 g (12.7 oz.). 1. GLP/ key: press to enter GLP mode. In calibration mode press to edit the date and time. 2. CAL CHECK key: press to perform the validation of the meter, or press and hold for three seconds to enter calibration mode. 3.

ZERO/CFM key: press to zero the meter prior to measurement, to confirm edited values or to confirm factory calibration restore. 4. READ/ /TIMER key: In measurement mode, press to make a measurement, or press and hold for three seconds to start a pre-programmed countdown prior to measurement. In GLP mode press to view the next screen. 5.

ON/OFF key: to turn the meter on and off. 6. Liquid Crystal Display (LCD) 7. Cuvette alignment indicator 8. Cuvette holder DISPLAY ELEMENTS DESCRIPTION: 2 6 7 8 9 Environment Battery Type Auto-Shut off Dimensions Weight [www.hannainst.com](http://www.hannainst.com) 1. The measuring scheme (lamp, cuvette, detector), appears during different phases of zero or reading measurement 2. Error messages and warnings 3. The battery icon indicates the charge state of the battery 4.

The hourglass appears when an internal check is in progress 5. Status messages 6. The chronometer appears when the reaction timer is running 7. The month, day and date icons appear when a date is displayed 8. Four digit main display 9. Measuring units 10. Four digit secondary display Standard High: The standard reading is higher than expected. 10 OTHER ERRORS AND WARNINGS: Cap error: Appears when external light enters in the analysis cell. Assure that the cuvette cap is present. 11 12 1. Turn the meter on by pressing ON/OFF.

@@@The blinking "ZERO" indicates that the instrument needs to be zeroed first. 3. Fill one cuvette with 10 mL of unreacted sample, up to the mark and replace the cap. 4. Add 6 drops of HI 93705A molybdate reagent. Replace the cap and swirl the solution. @@6. Wait for 1 minute.

This is the blank. @@@@The meter is now zeroed and ready for measurement. Remove the cuvette. @@@@An audible "beep" indicates the end of countdown period. @@@@Phosphate above 75 mg/L (causes an 11% reduction in reading).

13 Sulfide and high concentration of iron. @@@@In both cases the year number is blinking, ready for date input. 12-Press GLP/ to edit the desired year (2009-2099). @@@@Now the display will show the month blinking. 14-Press GLP/ to edit the desired month (01-12). @@1. Press GLP/ to enter GLP mode. @@1. Turn the meter on by pressing ON/OFF. @@@@The display will show "CAL" during calibration procedure. @@The instrument asks for confirmation of user calibration delete. @@This warranty is limited to repair or replacement free of charge.

@@If service is required, contact your dealer. 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. To validate your warranty, fill out and return the enclosed warranty card within 14 days from the date of purchase. Recommendations for Users Before using these products, make sure that they are entirely suitable for your specific application and for the environment in which they are used. Operation of these instruments may cause unacceptable interferences to other electronic equipments, this requiring the operator to take all necessary steps to correct interferences. Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance. To avoid damages or burns, do not put the instrument in microwave oven.

For yours and the instrument safety do not use or store the instrument in hazardous environments. 14-15 or 4. The instrument briefly indicates "donE" upon restoration of factory calibration prior to returning to measurement mode. Validation and Calibration procedures Warning: do not validate or calibrate the instrument with standard solutions other than the Hanna CAL CHECKTM Standards, otherwise erroneous results will be obtained. For accurate validation and calibration results, please perform tests at room temperature (18 to 25°C; 64.5 to 77.

°F). Use the Hanna CAL CHECKTM cuvettes (see "Accessories") to validate or calibrate instruments. 4 15-When the correct month has been set, press ZERO/CFM or READ/ /TIMER to confirm. Now the display will show the day blinking. 16-Press GLP/ to edit the desired day (01-31).



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If the key is kept pressed, the day number is automatically increased. Note: It is possible to change the editing from day to year and to month by pressing READ/TIMER. 17 Press ZERO/CFM to save the calibration date. 17 18 Battery management To save the battery, the instrument shuts down after 10 minutes of non-use in measurement mode and after 1 hour of non-use in calibration mode. @@@@The instrument displays a battery indicator with three levels as follows: · 3 lines for 100 % capacity · 2 lines for 66 % capacity · 1 line for 33 % capacity · Battery icon blinking if the capacity is under 10 %. If the battery is empty and accurate measurements can't be taken any more, the instrument shows "dEAd bAtt" and turns off. To restart the instrument, the battery must be replaced with a fresh one. To replace the instrument's battery, follow the steps: · Turn the instrument off by pressing ON/OFF. · Turn the instrument upside down and remove the battery cover by turning it counterclockwise. 4 · Place the CAL CHECK™ Standard 5-6 HI 96705-11 Cuvette A into the cuvette holder and ensure that the notch on the cap is positioned securely into the groove.

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