

## INSTRUCTION MANUAL

# HI 96732

## Dissolved Oxygen 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 e-mail us at [tech@hannainst.com](mailto:tech@hannainst.com).

### Preliminary examination:

Please examine this product carefully. Make sure that the instrument is not damaged. If any damage occurred during shipment, please notify your Dealer.

Each HI 96732 Ion Selective Meter is supplied complete with:

- Two Sample Cuvettes and Caps
- 9V Battery
- Instruction Manual

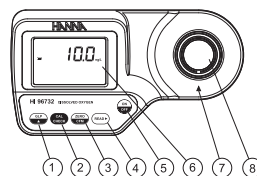
**Note:** Save all packing material until you are sure that the instrument works correctly. Any defective item must be returned in its original packing.

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

### Technical specifications:

Range	0.0 to 10.0 mg/L
Resolution	0.1 mg/L
Accuracy	±0.4 mg/L ±3% of reading @ 25°C
Typical EMC Dev.	±0.1 mg/L
Light Source	Light Emitting Diode
Light Detector	Silicon Photocell with 466 nm filter
Method	Adaptation of the Standard Methods for Examination of Water and Wastewater (18 <sup>th</sup> edition), azide modified Winkler method. The reaction between dissolved oxygen and the reagent causes a yellow tint in the sample.
Environment	0 to 50°C (32 to 122°F); max 95% RH non-condensing
Battery Type	1 x 9 volt
Auto-Shut off	After 10' of non-use in measurement mode; after 1 hour of non-use in calibration mode; with last reading reminder.
Dimensions	192 x 104 x 69 mm (7.6 x 4.1 x 2.7")
Weight	360 g (12.7 oz.).

### Functional description:



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/▶ key: In *measurement mode*, press to make a 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:



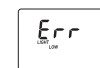
1. The measuring scheme (lamp, cuvette, detector), appears during different phases of zero or reading measurement
2. Error messages and warnings
3. The battery icon indicates the charge state of the battery
4. The hourglass appears when an internal check is in progress
5. Status messages
6. The chronometer 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

### Errors and warnings:

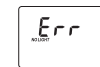
#### ON ZERO READING:



**Light High:** There is too much light to perform a measurement. Please check the preparation of the zero cuvette.

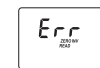


**Light Low:** There is not enough light to perform a measurement. Please check the preparation of the zero cuvette.

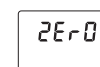


**No Light:** The instrument cannot adjust the light level. Please check that the sample does not contain any debris.

#### ON SAMPLE READING:



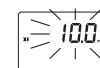
**Inverted cuvettes:** The sample and the zero cuvette are inverted.



**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.

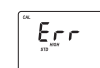


**Over Range:** A flashing value of the maximum concentration indicates an over range condition. The concentration of the sample is beyond the programmed range: dilute the sample and re-run the test.

#### DURING CALIBRATION PROCEDURE:

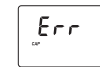


**Standard Low:** The standard reading is less than expected.



**Standard High:** The standard reading is higher than expected.

#### OTHER ERRORS AND WARNINGS:



**Cap error:** Appears when external light enters in the analysis cell. Assure that the cuvette cap is present.



**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, normal operation of the instrument will be interrupted. Change the battery and restart the meter.

### Measurement procedure:

#### Measurement

**1**

1• Turn the meter on by pressing ON/OFF.

**2**

2• When the beeper sounds briefly and the LCD displays dashes, the meter is ready. The blinking "ZERO" indicates that the instrument needs to be zeroed first.

**3**

3• Fill one 60 mL glass bottle completely with the unreacted sample. Replace the cap and ensure that a small part of the sample spills over.

**4**

4• Remove the cap and add 5 drops of HI 93732A-0 and 5 drops of HI 93732B-0. Add some more sample, to fill the bottle completely. Replace the cap again and ensure that a part of the sample spills over. This is to make sure that no air bubbles have been trapped inside, which would corrupt the reading.

**5**

5• Invert several times the bottle. The sample becomes orange-yellow and a flocculant agent will appear. Let the sample stand and the flocculant agent will start to settle.

**6**

6• After approximately 2 minutes, when the upper half of the bottle becomes limpid, add 10 drops of HI 93732C-0.

**7**

7• Replace the cap and invert the bottle until dissolution of the settled flocculant is complete. The sample is ready for measurement when it is yellow and completely limpid.

**8**

8• Fill the cuvette up to the mark with 10 mL of the unreacted (original) sample, and replace the cap. This is the blank.

**9**

9• Place the cuvette into the holder and ensure that the notch on the cap is positioned securely into the groove.

**10**

10• Press ZERO/CFM and the lamp, cuvette and detector icons will appear on the display, depending on the measurement phase. After a few seconds the display will show "0.0". The meter is now zeroed and ready for measurement. Remove the cuvette.

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