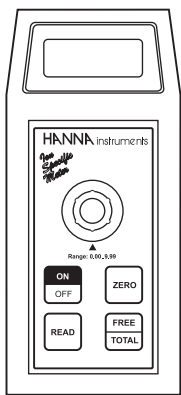


Instruction Manual

HI 93711 Free & Total Chlorine ISM



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 techserv@hannacan.com.

This instrument is in compliance with CE directives EN 50081-1 and EN 50082-1.

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.

Each Ion Specific Meter is supplied complete with

- 9V Battery
- Two Sample Cuvets and Caps
- One Transport Cap

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

The HI 93711 meter measures the free and total chlorine (Cl₂) content in water and wastewater.

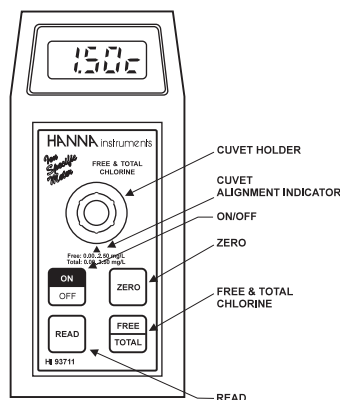
The meter uses an exclusive positive-locking system to ensure that the cuvet is in the same place every time it is placed into the measurement cell.

The reagents are in liquid and powder form and are supplied in bottles and in packets. The amount of reagent is precisely dosed to ensure maximum repeatability.

Display codes aid the user in routine operations.

The meters have an auto-shut off feature that will turn the instrument off after 10 minutes of non-use.

SPECIFICATIONS



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Range	Free Cl ₂ 0.00 to 2.50 mg/L Total Cl ₂ 0.00 to 3.50 mg/L
Resolution	0.01 mg/L
Accuracy	±0.03 mg/L ±3% of reading
Typical EMC Deviation	±0.01 mg/L
Light Source	Light Emitting Diode @ 555 nm
Method	Adaptation of the EPA recommended DPD method 330.5. The reaction between the chlorine and the DPD reagent causes a pink tint in the sample
Light Detector	Silicon Photocell
Environment	0 to 50°C (32 to 122°F); max 95% RH non-condensing
Battery Type/Life	1 x 9 volt/40 hours
Auto-Shut off	After 10' of non-use
Dimensions	180 x 83 x 46 mm (7.1 x 3.3 x 1.8")
Weight	290 g (10 oz.).

REQUIRED REAGENTS

POWDER:

Code	Unit	Description	Quantity
HI 93701-0	Free Cl ₂	DPD	1 packet
HI 93711-0	Total Cl ₂	DPD	1 packet

LIQUID:

Code	Unit	Description	Quantity
HI 93701A-T	Free and Total Cl ₂	DPD1 indicator	3 drops
HI 93701B-T	Free and Total Cl ₂	DPD1 buffer	3 drops
HI 93701C	Total Cl ₂ only	DPD3 solution	1 drop

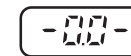
DISPLAY CODE GUIDE



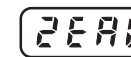
This indicates that the meter is in a ready state and zeroing can be performed.



Sampling in Progress. This prompt appears each time the meter is performing a measurement.



This indicates that the meter is in a zeroed state and measurement can be performed.



A zero reading was not taken. Insert a sample before adding reagent and press ZERO.



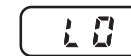
Under range. A blinking "0.00" indicates that the sample absorbs less light than the zero reference. Check the procedure and make sure you use the same cuvet for reference (zero) and measurement.



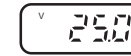
Over range. A flashing value higher than the maximum concentration readable (see specifications) indicates that the sample absorbs too much light, meaning that the concentration is too high. Dilute the sample.



Light over range. The cuvet is not inserted correctly and an excess ambient light is reaching the detector. If the cover is properly installed, then contact your dealer or the nearest Hanna Customer Service Center.



Light under range. The zero sample is too dark for proper zeroing. If this is not the case, contact your dealer or the nearest Hanna Customer Service Center.



The "V" indicates that the battery voltage is getting low and the battery needs to be replaced.



This indicates that the battery is dead and must be replaced.

Note: once this indication is displayed, the meter will lockup. Change the battery to restart.



WARRANTY

HI 93711 is warranted for two years against defects in workmanship and materials when used for its intended purpose and maintained according to instructions.

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.

To validate your warranty, fill out and return the enclosed warranty card within 14 days from the date of purchase.

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Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice.

