

Primo Series

EC and TDS Testers with
Automatic Temperature
Compensation

Dear Customer,
Thank you for choosing a Hanna Instruments product.
Please read this instruction manual carefully before using these instruments. This manual will provide you with the necessary information for correct use of these instruments, as well as a precise idea of their versatility.
If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com or view our worldwide contact list at www.hannainst.com.

PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully. If any damage has occurred during shipment, please contact your local Hanna Instruments Office.

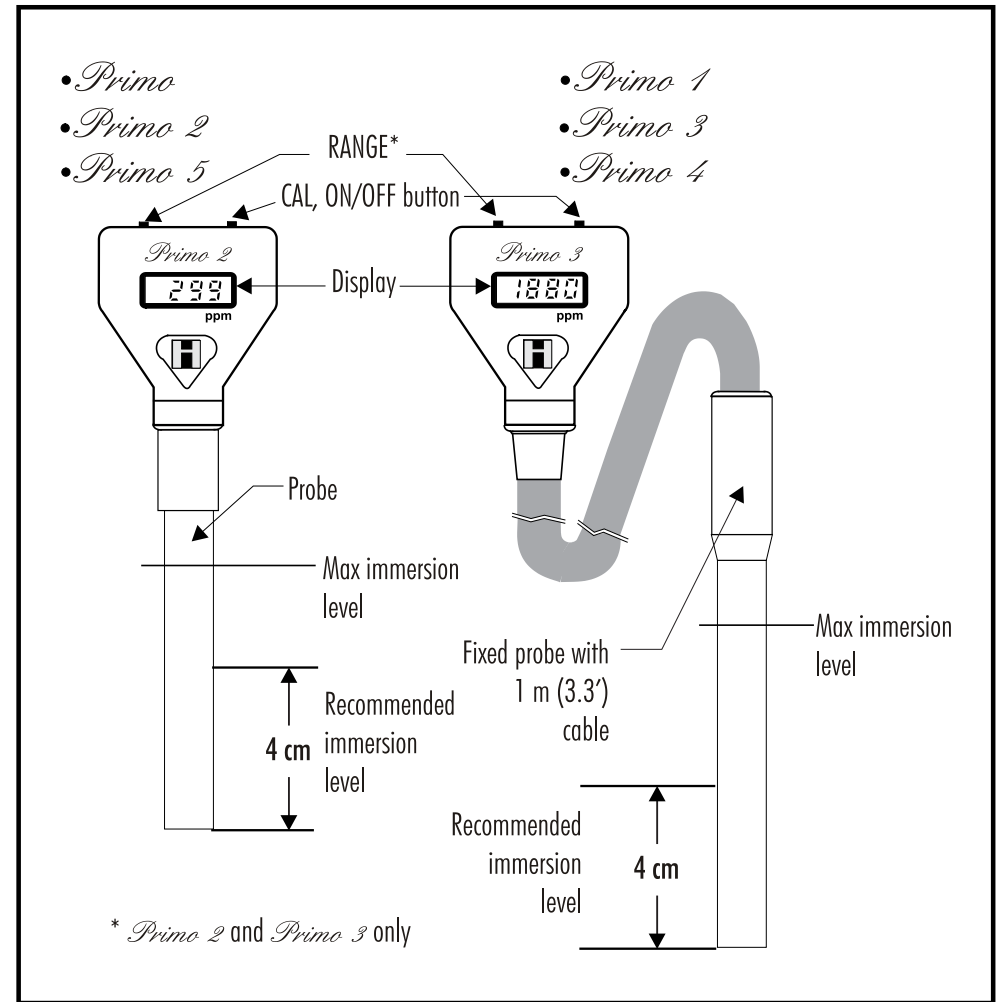
Each meter is supplied with batteries and instructions.

Note: Preserve all packing material until the instrument has been observed to function correctly. Any defective item must be returned in its original packing.

ACCESSORIES

HI70031P	1413 $\mu\text{S}/\text{cm}$ solution, 20 mL sachet, 25 pcs
HI70032P	1382 ppm solution, 20 mL sachet, 25 pcs
HI70039P	5000 $\mu\text{S}/\text{cm}$ solution, 20 mL sachet, 25 pcs
HI7031L	1413 $\mu\text{S}/\text{cm}$ solution, 500 mL bottle
HI7032L	1382 ppm solution, 500 mL bottle
HI7039L	5000 $\mu\text{S}/\text{cm}$ solution, 500 mL bottle

FUNCTIONAL DESCRIPTION



SPECIFICATIONS

Primo, Primo 2, Primo 5

Range	
Primo	1999 ppm (mg/L)
Primo 2	1999 ppm (mg/L) / 0.0 to 60 °C
Primo 5	1999 μ S/cm
Resolution	
Primo	1 ppm (mg/L)
Primo 2	1 ppm (mg/L) / 0.1 °C
Primo 5	1 μ S/cm
Accuracy (@20 °C/ 68 °C)	
Primo	± 2 % F.S.
Primo 2	± 2 % F.S. / ± 0.5 °C
Primo 5	± 2 % F.S.
Calibration Solution	
Primo	HI70032 (1382 ppm)
Primo 2	HI70032 (1382 ppm)
Primo 5	HI70031 (1413 μ S/cm)
Calibration	
Primo	Automatic, at 1382 ppm
Primo 2	Automatic, at 1382 ppm
Primo 5	Automatic, at 1413 μ S/cm
Temperature Compensation	
Automatic, 0 to 60 °C (32 to 140 °F); $\beta = 2\%/^{\circ}\text{C}$	
Probe	
Direct, fixed	
Environment	
0 to 50 °C (32 to 122 °F); RH max 95%	
Battery Type/ Life	
2 x 1.5V / approx. 200 hours of continuous use auto-off after 5 minutes of non-use	
Dimensions	
180 x 50 x 25 mm (7.1 x 2.0 x 1.0")	
Weight	
50 g (1.8 oz.)	

Primo 1, Primo 3, Primo 4

Range	
Primo 1	1999 ppm (mg/L)
Primo 3	1999 ppm (mg/L) / 0.0 to 60 °C
Primo 4	10.00 mS/cm
Resolution	
Primo 1	1 ppm (mg/L)
Primo 3	1 ppm (mg/L) / 0.1 °C
Primo 4	0.01 mS/cm
Accuracy (@20 °C/ 68 °C)	
Primo 1	± 2 % F.S.
Primo 3	± 2 % F.S. / ± 0.5 °C
Primo 4	± 2 % F.S.
Calibration Solution	
Primo 1	HI70032 (1382 ppm)
Primo 3	HI70032 (1382 ppm)
Primo 4	HI70039 (5000 μ S/cm)
Calibration	
Primo 1	Automatic, at 1382 ppm
Primo 3	Automatic, at 1382 ppm
Primo 4	Automatic, at 5.00 mS/cm
Temperature Compensation	
Automatic, 0 to 60 °C (32 to 140 °F); $\beta = 2\%/^{\circ}\text{C}$	
Probe	
Fixed, with 1 m (3.3') cable	
Environment	
0 to 50 °C (32 to 122 °F); RH max 95%	
Battery Type/ Life	
2 x 1.5V / approx. 200 hours of continuous use auto-off after 5 minutes of non-use	
Dimensions	
66 x 50 x 25 mm (2.6 x 2.0 x 1.0")	
Weight	
115 g (4.1 oz.)	

OPERATION

- Turn the meter on by pressing the **ON/OFF** button.
- Immerse the probe in the sample to be measured, without exceeding the maximum immersion level.
- Stir gently and wait for stable reading. The meter automatically compensates for temperature variations.
- To extend the batteries life, after 5 minutes of non-use the meter provides for auto-off.

CALIBRATION

- Switch the meter on.
- Press and hold the **ON/OFF** button for about 3 seconds. The required calibration solution value will start blinking on the display to indicate that the calibration mode has been entered.

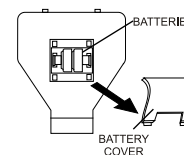
"1382" for *Primo, Primo 1, Primo 2, Primo 3*
 "5.00" for *Primo 4*, and "1413" for *Primo 5*

- Immerse the probe in the proper calibration solution without exceeding the maximum immersion level.
- Stir gently and wait for about 20 seconds.
- Once the display stops blinking, the meter is calibrated and ready for use.

BATTERIES REPLACEMENT

The "Eb" message on the LCD warns the user when the batteries have to be replaced.

Open the battery compartment and replace the both 1.5 V batteries, while observing the correct polarity. Batteries should be replaced only in a non hazardous area using the battery type specified in this instruction sheet.



Important note: Once the batteries have been replaced, turn the meter OFF and then ON again. Wait for about 30 seconds to allow a complete self-test, and then perform a new calibration.

ERROR CODES

	Error in calibration, wrong calibration solution or damaged probe.
	Over range.
	Low battery indication.

Recommendations for Users

Before using this product, make sure it is entirely suitable for your specific application and for the environment in which it is used. Any variation introduced by the user to the supplied equipment may degrade the meters' performance. For yours and the meter's safety do not use or store the meter in hazardous environments.

WARRANTY

The **Primo** series is warranted for one year against defects in workmanship and materials when used for their 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 your local Hanna Instruments Office. 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 shipping costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.