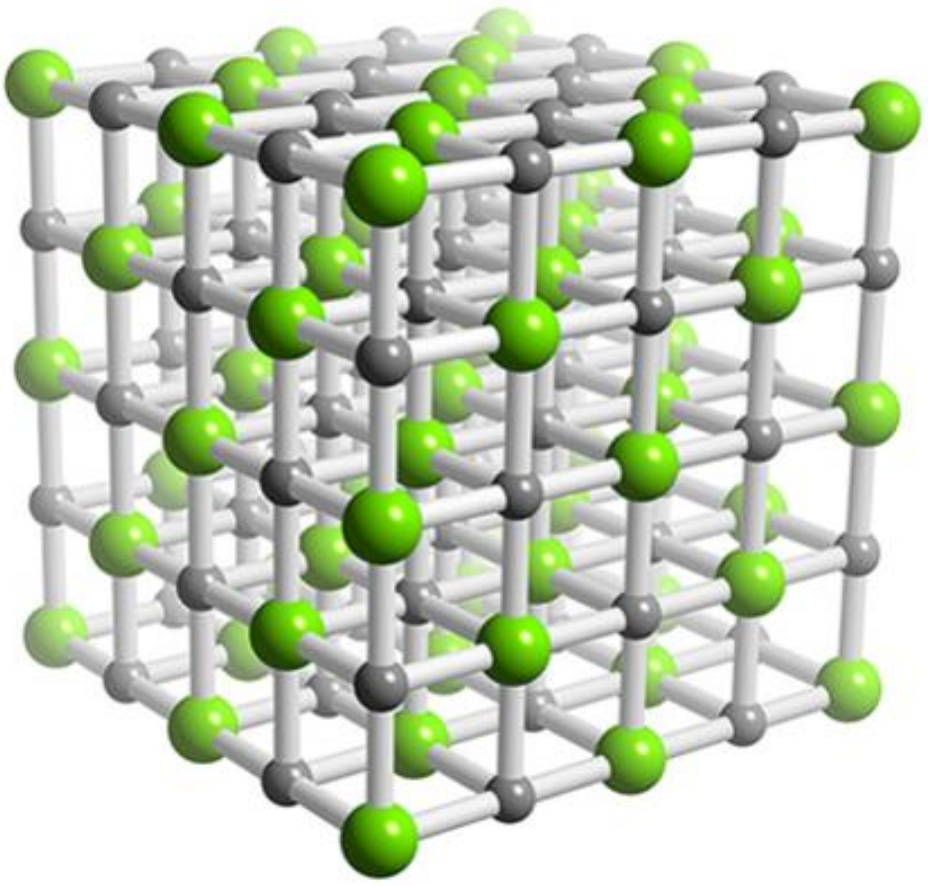
DBR Sal



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Technical specifications

Instrument	DBR Salt
Measurement units	Salinity, Temperature
Measurement range	Salinity: 0,0% - 28,0% Temperature: 0,0 °C – 70,0 °C
Resolution	Salinity: 0,1% Temperature: 0,1 °C
Accuracy	Salinity: ± 0,2 % Temperature: ± 1,0 °C
Temperature compensation	ATC (10 °C – 60 °C)
Backlight	Automatic brightness control (20 seconds)
Auto shut-Off	2 minutes
Measurement time	About 5 seconds
Volume	About 0,5 mL
Data store	Up to 20
Usage enviroment	10 °C – 40 °C
Batteries	2 x 1,5 V AAA Alcaline
Size	58 x 36 x 122 mm
Weight	150 g (including batteries and protective covers)

Before starting

1. Use the instrument in a dry and shaded environment.
2. Do not use organic solvents (acetone, benzene, plant diluents, diesel fuel, etc.) to clean the instrument. This can cause the instrument to malfunction.
3. Remove the sample from the glass prism using soft absorbent paper such that the glass is not scratched.
4. Do not use metal objects (for example spoons, needles, etc.) to place the sample on the glass prism.
5. Although the instrument is resistant to water by rinsing it with running water, do not immerse the instrument completely in water.

Overview of the instrument

Prism

Glass reading prism

Display

Backlight LCD display

Store/Recall

Save the readings and recall them for viewing



On/Off and Start

Short pressure = instrument switch-on
Pressure of 2 seconds = switching off the instrument

Press to make the measurement

Zero

Place 0.5 mL of distilled water in the prism, then press the Zero key to calibrate the zero

Cell compartment

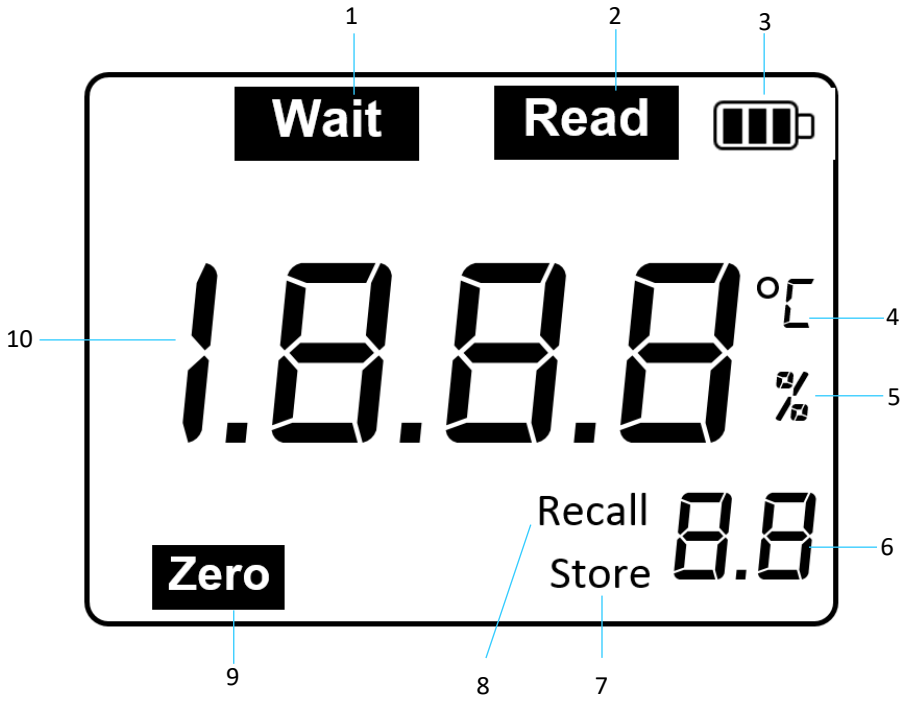
Remove the protective cover to replace the batteries

Other components:

- Protection cover

- Plastic dropper to place the sample on the prism

Display



1. Measurement icon
2. Measurement icon completed
3. Battery status indicator
4. Unit of measurement of temperature
5. Unit of measurement of the Salinity
6. Progressive number of the saved data
7. Save icon
8. Data recall icon
9. Zero calibration icon
10. Measured value

Buttons and functions

START	*Press to turn the meter on or to take a measurement* *Press and hold 2 seconds to turn off the instrument*
STORE/RECALL	*Press to save the measurements and press and hold for two seconds to recall the saved data*
ZERO	*Press zero to perform a zero calibration*
START + ZERO	*Press the two keys together to display the temperature*

Battery replacement

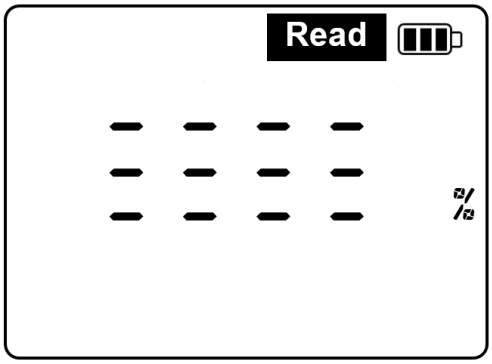
When the display shows the low battery symbol replace them as they may cause errors in the readings.

Remove the rubber protection and open the battery compartment following the instructions engraved on the instrument (opening the compartment and towards batteries). Reposition the battery compartment cover correctly, replace the protective cover.

Interference from light sources

The image on the right depicts the instrument screen if too much light is present in the environment.

In this case, to avoid the problem it is necessary to position the hand above the reading prism and press the START key again to perform the measurement.

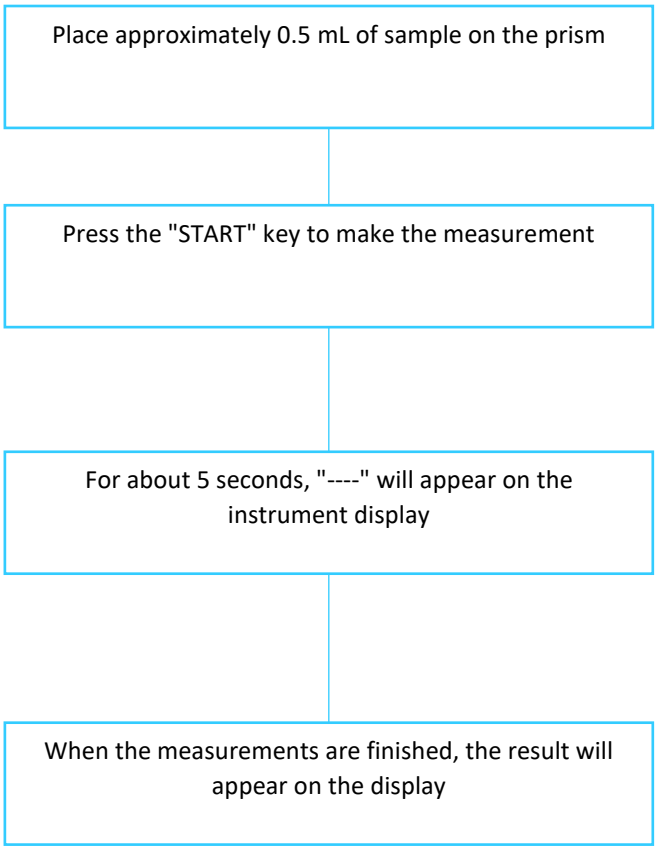


Zero calibration

1. Make sure the prism surface is clean.
2. Place 0.5 mL of distilled water on the surface of the prism and press the "START" key.
3. At the end of the operation, the value of "0.0%" should be shown on the display; if this value is not displayed, a zero calibration must be performed.
4. Press the "ZERO" key to start zero calibration.
5. The zero calibration is completed if the display shows the value of "0.0%".

If the display shows "Er2" it means that the water used for calibration is not distilled.

Measurement method



Warnings

Do not use metal objects as they may damage the glass prism on which the sample is placed.

Remove and clean the prism surface after each use.

Do not use hot water to clean the prism. Use cotton or absorbent paper soaked with water.

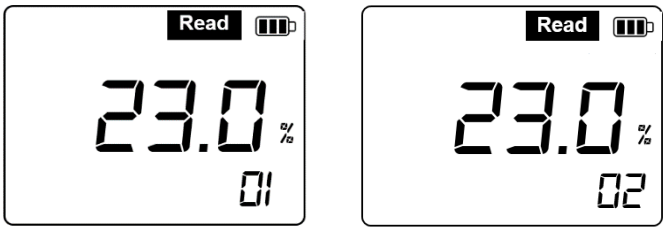
*If after a measurement the display shows "----" cover the prism with one hand and repeat the measurement by pressing the "**START**" key.*

Data storage and recall

Data storage

After making a measurement, press the "Store / Recall" key to store the data.

The icon of the progressive number of the data will increase by one, this means that the instrument has memorized the value.

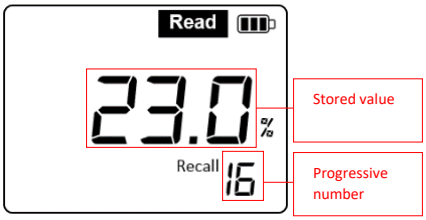


Once the limit of 20 saved data has been reached, the next reading will overwrite the saved measure "01".

Recall data

Store/Recall

*During the measurement screen press the "**Store / Recall**"*



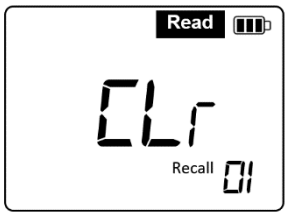
A flashing "Recall" message will appear and the progressive number of the last saved measurement will be displayed at the bottom right.

Store/Recall

+

Zero

*To delete the saved data, enter the data recall mode and press and hold the "**Store / Recall**" and "**Zero**" buttons simultaneously for 2 seconds*



The word "CLr" will flash on the screen, after a few seconds it will disappear and means that the memory has been erased successfully.

Temperature

This function is useful for checking the temperature after a measurement or after zero calibration.

Press the "***START***" and "***ZERO***" keys together.

Keep them pressed to display the instrument temperature on the display.

It can only be displayed while the keys are pressed, once the instrument is released, it will return to measurement mode.



Error messages

Error	Description
The instrument does not turn on	Check the polarity of the batteries Change the batteries
Air	Sample not present on the prism
Lo	Measure below the instrument range
Hi	Measure beyond the instrument range
Lob	Low battery
⁝ ⁝ ⁝ ⁝	There is too much light in the environment
Er2	Incorrect zero correction
Er3	Temperature error



Electrical and electronic equipment with this symbol can not be disposed of in public landfills.

In compliance with WEEE Directive 2012/19 /EU, European users of electrical and electronic equipment can return the equipment used when purchasing a new one to the Distributor or to the Manufacturer.

The illegal disposal of electrical and electronic equipment is punished with a pecuniary administrative sanction.