

SENZ REDOX OPERATION (MANUAL)

PRODUCT SPECIFICATION

OPERATING RANGE	±999mV
RESOLUTION	1 mV
ACCURACY	±20mV
BATTERY	4x1.5V BUTTON CELL (ALKALINE LR44 OR EQUIV.)
BATTERY LIFE	APPROX. 150 HOURS (CONTINUOUS USE)
AUTO SHUT-OFF	APPROX. 15 MIN.
OPERATING TEMPERATURE	0°~50°C

Oxidation Reduction Potential or Redox, is used to monitor the discharge of waste water and disinfection of water.

The WHO standard suggests that public pools or spas should have levels in excess of 720mV to be in good microbia condition.

In harvesting, post-harvest handling, packing and processing of fresh fruits and vegetables, water disinfection for such processes requires appropriate Redox potential to be monitored.

Redox measurement is becoming a standard in industrial, commercial and farming activities.

The Senz Redox tester is specially designed for general application.



Water resistant - floats on water - drop shock - simple to use

TRANS INSTRUMENTS

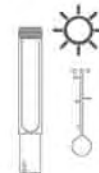
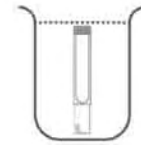
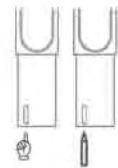
Senz Redox (Scientific)

for Pool & Spa . Chlorination control . Ozone control for aquaria

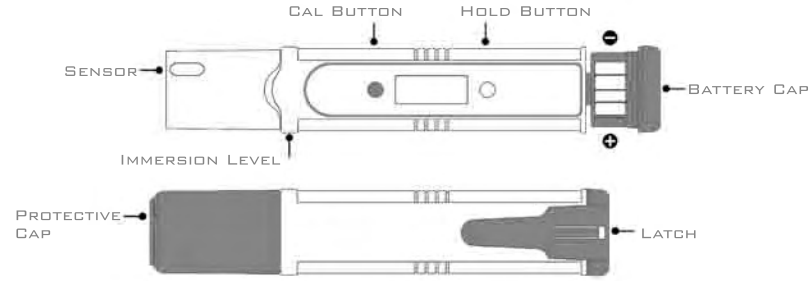
1 mV resolution - Hold function - One-Touch calibration

Water resistant - floats on water - drop shock - simple to use

ISO 9001 Certified Firm



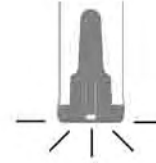
PRODUCT FEATURE



BATTERY CAP INSTALLATION

INSTALLING BATTERY CAP

This unit is shipped with the battery cap open. Close the battery cap by pressing Cap on on a hard surface until the latch **clicks**, indicating a secure lock.



REPLACING BATTERIES

1. Lift latch with a pen or mini screwdriver. **DO NOT PULL** latch out completely.
2. Use the thumb to push Cap forward.
3. Hold the battery cap and separate it from the meter.
4. Replace all batteries according to polarity.



PRECAUTIONS IN HANDLING

Do not touch, rub or scratch the sensor. It is very delicate and might break or loose its sensitivity.

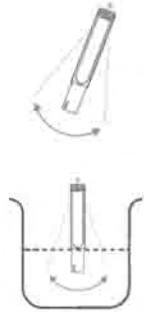
Do not submerge the unit underwater. Though the unit is water resistant, it cannot come under high pressure underwater. If it is dropped into water, retrieve it immediately and wipe dry with a cloth.

Do not store unit without the protective cap or under high temperature and direct sunlight. This will shorten the life span of the meter and cause premature expiry of the sensor.

Do not clean unit with thinner or solvents. This will damage the unit. Use only mild detergent on damp cloth to clean and rinse unit if needed.

MAKING MEASUREMENT

1. Remove protective cap and press READ button once to switch on.
2. Display will appear blinking. Random readings or "- - -" displayed are normal when sensor is not in contact with liquid.
3. Rinse the sensor area with water and shake the tester in the same way with a mercury thermometer, every time before each measurement.
4. Collect sample liquid in a container with at least 4cm or 1½inch level.
5. Dip the sensor into liquid, shake to remove bubbles. Wait for a stable endpoint reading to establish.
6. Depending on the activity of the solution, strong or high oxidizing samples will give a quick stabilised endpoint reading. While weak or low oxidizing samples may require up to 20minutes for a stabilised endpoint reading to establish.
7. If the unit is automatically switched off during measurement, press the READ button to switch on again.
8. When the desired stabilised endpoint reading is attained, Press the READ button once to hold or freeze display, and again to release.
9. To switch off the tester, hold-down the READ button for 3 seconds.
10. Always rinse, shake dry sensor and replace with protective cap before storing.



CALIBRATION

This tester is factory calibrated. Calibration is not required upon opening this package.

But if the electrode is exposed to very strong oxidant or reductant, a memory effect may alter the electrode offset. When readings are in doubt, calibration should be performed with the following steps:

Calibration should be performed at room temperature at about 25°C or 77°F.

1. Use only 475mV standard solution for offset calibration.

Order Code : SO0475 (Standard Solution 475mV)

2. Rinse the sensor with water, shake to remove water the same way with a mercury thermometer.
3. Dip the sensor area into the 475mV calibration solution and shake to remove bubbles.
4. Press and hold down the CAL button until CAL appear.
5. When the standard is recognised, 475 will be displayed in a blinking mode.
6. Wait for a stabilized endpoint reading when display stops with a beep. Calibration completed.
7. Rinse the sensor thoroughly with water before further test.



In the presence of certain radio transmitters, this product may produce erroneous readings. If this occurs then measurements should be repeated at another location.

MEASUREMENT NOTES

This tester is designed for general-purpose use and is not intended for difficult test liquid like oil, paint, solvents, high viscosity liquid.

KNOWN INTERFERENCE

The Redox sensor measures minute milli-volts of oxidation and reductant activities in solution. Solutions with Iron salts and sulfides can influence the net potential which results in erroneous reading.

Avoid measuring in very strong oxidants or reductants as these may poison the platinum sensor and cause a memory effect thus altering the offset value of the sensor.

MEASURING POOL & SPA WATER

Measurement in pool or spa water will require the sample water to have a pH value of between 7.4 to 7.6pH in order to obtain the correct Redox reading.


When the voltage reading is 650 mV, there is sufficient active sanitizing agent in the water to protect swimmers and bathers. Below is a guide for chlorine sanitizing control:

LOW - 600mV

IDEAL - 650mV to 750mV

HIGH - 900mV

ERROR CODE & MAINTENANCE

- When **Err** appears during calibration, it could mean a stable reading cannot be established. This could be due to a dry sensor. Try soaking the sensor in a cup of water for 1 hour and re-test. It could also mean a wrong standard solution is used. Make sure you use only 475mV solution. Otherwise, the sensor could be damaged or expired.
- If the unit is stored for a long period of time, the sensor will become dry. This will result in a slow response to a stable reading. Soaking the sensor area in a cup of tap water or preferably pH7 solution for 30 minutes to 1 hour will restore sensitivity to the sensor.
- When the battery symbol  continuously appears on the display, this indicates a low battery and only 2 hours of continuous use remain. Replace all four batteries according to instructions overleaf.
- Note that the Redox sensor has a limited life span of about 365 tests or 1 year whichever is earlier. When the unit fails to calibrate or responds very slowly, it means that the unit should be replaced. It is not possible to repair a broken or expired sensor.