

# TRANS INSTRUMENTS

INSTRUMENTS FOR THE PROFESSIONAL

## SENZ PH OPERATION (MANUAL)

### PRODUCT SPECIFICATION

OPERATING RANGE	0~14pH
RESOLUTION	0.1pH
ACCURACY	±0.2pH
BATTERY	4x1.5V BUTTON CELL (ALKALINE A76 OR EQUIV.)
BATTERY LIFE	APPROX. 150 HOURS (CONTINUOUS USE)
AUTO SHUT-OFF	APPROX. 15 MIN.
OPERATING TEMPERATURE	0°~50°C

pH is one of the most frequently test parameter in any applications involving water. Each industry has its own regulatory requirement for the monitoring and controlling of pH value.

Maintaining pH value is important in the quality control of various production processes.

Countless applications include leather production, chemical processing, food processing, beauty product inspection, water production, chemical inspection and waste water inspection prior to disposal.



TRANS INSTRUMENTS  
www.transinstruments.com

ISO 9001 Certified Firm

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

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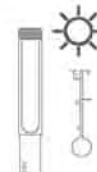
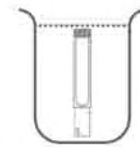
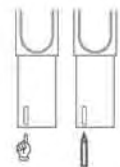
### Senz pH (Scientific)

for Education . Food processing . waste control . various industries

0.1 pH resolution - Auto End-point - One-Touch calibration

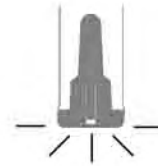
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### INSTALLING BATTERY CAP

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.



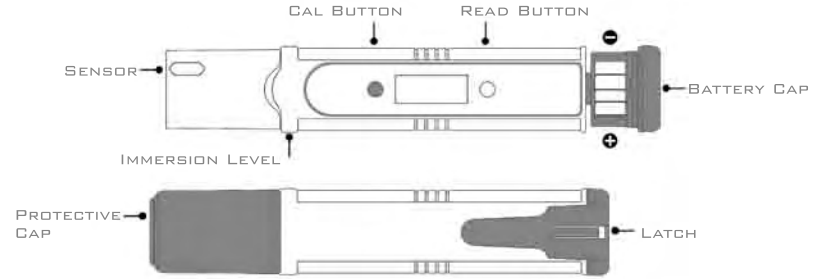
### BATTERY CAP INSTALLATION

### 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.



### PRODUCT FEATURE



### PRECAUTIONS IN HANDLING

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

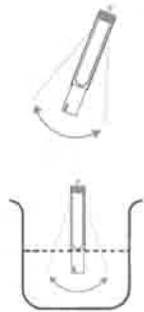
Do not submerge the unit underwater. Though the unit is water resistant, it cannot come under high pressure underwater. If it is dropped into water, retrieve it immediately and wipe dry with a cloth.

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 you would use a mercury thermometer, every time before each measurement.
4. Dip the sensor into liquid, shake to remove bubbles. Wait for a stable endpoint reading to establish where display will stop with a beep.
5. Press the READ button to make another auto-lock measurement.
6. If the glass sensor is dry, a slow response will result with 2 to 3 digit off on repeated measurement. Dip the sensor area in a cup of water for 30 to 60 minutes before testing again.
7. To switch off the tester, hold-down the READ button for 3 seconds.
8. Always rinse, shake dry sensor and replace with protective cap before storing.



### MAKING MEASUREMENT WITHOUT AUTO-LOCK

1. To disable auto-lock measurement, remove the unit from water, press and hold down both the READ button and CAL button until a blinking small 'A' sign on right corner of the display disappear.
2. Make measurement usual.
3. Here you can freeze the display by pressing the READ button once. Pressing a second time will release it. Whenever the display is blinking, it means the unit is continuously measuring.
4. To enable the auto-lock feature again, press and hold down both the READ button and CAL button until the 'A' sign re-appear.



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 or high purity water. If these tests were required, then the use of a high-end specialized electrode is required.

### KNOWN INTERFERENCE

The pH sensor measures hydrogen ion activity in solution. If a solution is not stable, (e.g. tap water immediately taken from the tap) an erroneous reading may result. This is because water contain active substance like chlorine, which interferes with the hydrogen ion activity. To maintain an accurate reading, take measurement only from water left overnight. Avoid measuring in moving liquid. Scoop liquid in a cup for measurement if possible.

### MEASURING HIGH VISCOSITY LIQUID

If tests were made in high viscosity liquid, clean the probe area by soaking in warm water for 10 to 15 minutes then flush with tap water. Do not attempt to wipe the reference electrode as this may clog up the reference junction. If the reference junction is clog, it will result in sluggish and inaccurate reading.

### MEASURING PASTE AND CREAM

It is not recommended to measure in cream or paste as this may clog the reference junction and ruin the reference electrode after only one test.

### MEASURING DISTILLED WATER

Measurement in distilled water or low ionic strength liquid may result in unstable or non-repeatable readings. This is because high purity water causes high resistance over the sensing electrode. Measure liquid with a conductivity not below 100µS.

## CALIBRATION

**NOTE: Regular calibration is necessary to maintain its accuracy. Depending on usage, perform a check once a week if it is used once daily; check or calibrate once a month if it is used once weekly. If multiple uses are required daily, then daily check or calibration before tests will ensure its accuracy.**

This tester is factory calibrated. But due to prolong storage, the unit must be re-calibrated before use. Soak the sensor in tap water for 10 minutes prior to calibration..

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

**At anytime, pressing the READ button a few times will cancel and exit the calibration mode.**

1. Use only pH7.0 buffer solution for calibration. The attached satchel is for single use only.


**Standard Buffer Solution : pH 7.00      Order Code : SP0701**

2. Remove protective cap. Always rinse sensor area with water, shake tester in the same way you would use a mercury thermometer before each and every test.
3. Cut open the shorter side of the pH7 satchel and slide the sensor area till it is fully immersed. Tap or jiggle a little to remove bubbles.
4. Hold on to the satchel, then press and hold down CAL button until it displays CAL then 7.0 in a blinking mode. Wait for a stabilized end-point reading when the display stops with a beep. Calibration is completed.
5. Rinse the sensor area thoroughly with water before continue testing.

### CALIBRATION USING pH4 OR pH10 BUFFER:

1. Make sure you have the correct calibration buffer solution and dip the sensor into it.
2. Press and hold the CAL button until CAL appear, then 7.0 displayed. Within 3 seconds press the CAL button once to switch to 4.0 standard, pressing a second time will show 10.0 and the third time back to 7.0 in a cyclical sequence. Display must match the standard solution you are about to calibrate.
3. Wait for a stabilized endpoint reading when display stops with a beep. Calibration completed.

## ERROR CODE & MAINTENANCE

- When **Err** appears during measurement or calibration, it means a stable reading cannot be established. This could due to a dry sensor. Try soak the sensor in a cup of water for 1 hour and re-test. When **E7**, **E4** or **E10** appear during calibration, it could mean a wrong standard solution is used. Otherwise, the sensor could be damaged or expired.
- Keep in mind that all pH sensors age with time and usage. Therefore, re-calibration is necessary to maintain accurate reading.
- 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 pH 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.