

Stationary pH probe – Service and calibration

GUIDE FOR INSTALLATION, CALIBRATION AND MAINTENANCE

INSTALLATION

Mount the probe vertically. Ensure that the probe cannot strike against tank walls or other objects during operation. Incorrect installation may reduce electrode lifetime and measurement stability. For suitable mounting solutions, ask for the information sheet on probe holders.

CALIBRATION

Perform calibration regularly to restore measurement accuracy. For best accuracy, calibrate at the same temperature as the process water.

1. Clean and rinse the electrode before calibration
2. Start calibration using pH 7 buffer solution
3. Rinse the electrode with clean water
4. Calibrate using pH 4 buffer solution
5. Rinse the electrode thoroughly after calibration

MAINTENANCE

Regular maintenance is essential to ensure accurate measurements and to prolong electrode lifetime. Cleaning and inspection are required, typically monthly in demanding water conditions, and at least every three months under normal conditions.

Cleaning

- Clean the probe and electrode in soapy water
- Rinse thoroughly with clean water
- Remove deposits carefully; use a very soft brush if needed
- Avoid scratching or damaging the electrode surface

Replacement

The pH electrode has a limited lifetime and cannot be refilled. Replace the electrode if calibration to pH 4 cannot be achieved after cleaning. Typical electrode lifetime is 1–3 years depending on water conditions and maintenance frequency.

STORAGE

Place the protective cap back on the electrode with the internal storage solution. If the liquid has been spilled, refill the cap with a few drops of 3 molar KCl solution. The storage solution keeps the electrode hydrated and prevents damage during storage.

TROUBLESHOOTING

First, ensure that the probe is correctly installed, mounted vertically and cannot strike the tank wall or other objects.



Measurement reacts, but calibration to pH 4 is not possible

Possible cause could be that the electrode is old or contaminated.

Action:

- Clean the electrode in soapy water
- If required, add a small amount of sodium hypochlorite (bleach)
- Rinse thoroughly and retry calibration
- If calibration still fails, replace the electrode

Constant pH 7 reading

Possible causes could be that the cable is damaged, moisture inside the probe or that the electrode is very old or damaged.

Action:

- Visually inspect probe, cable and all connections
- Remove the probe, clean and dry it
- Open the probe and ensure that the interior is completely dry
- If the issue persists, replace the electrode

Local measurement OK, no system measurement

Possible cause could be that there is a cable or connection fault between the local transmitter and the control system.

Action:

- Check wiring and connections
- Measure the mA current in the signal loop