

Pi^π Technical Note 06

pH Probe Maintenance

Maintenance Intervals

- Clean when calibration routine reports probe health of less than 95%.
- Replace when cleaning is no longer effective.

Cleaning the Sensor

- Rinse with methyl alcohol to remove coating which should restore the speed of response.
- If methyl alcohol does not restore the response, soak in 0.1 M HCl for 5 minutes. Remove and rinse with water and place 0.1M NaOH for 5 minutes.
- Remove, rinse again, and soak in 4.0pH buffer for 10mins before use.

Calibrating the Sensor



Temperature

Measure the temperature of the pH buffer or test the sample with a thermometer. From the main menu screen, select the pH sensor, press the 'Calibrate' button, and then select 'Calibration'. Confirm that you want to calibrate the temperature and follow the on screen instructions; using the up and down arrows to set the correct value. Having done this once you won't need to re-calibrate the temperature unless you change the sensor or reset the calibration.



pH

Calibration can be performed using standard pH buffers, usually pH 4, 7 and 10. From the main screen select the pH sensor, press the 'Calibrate' button, and then select 'Calibration'. After choosing whether to calibrate the temperature, as per the instructions above, continue to follow the on screen instructions.

You will be asked to place the probes in buffer solutions. To ensure proper calibration, buffers should be at ambient temperature and the probe washed with water between each calibration point. A minimum of two calibration points will be taken, with the option to record up to 5 points in total. The probes should be left in the calibration standard for at least five minutes prior to calibration.

The instrument will ask you to provide the correct pH value at the given temperature. Check the information sheet that came with your pH buffers for this.





Using Phenol Red Test Kit or "Standardisation"

Offset calibration can be performed using a phenol red photometer at pH 6-8. Attempting to perform a test kit calibration outside of this pH range will result in an error.

From the main screen, select the pH sensor, press the 'Calibrate' button, and then select 'Standardisation'. Following the on screen instructions, take a sample of process water and perform the phenol red test as per manufacturers instructions. Enter the test value when requested, to complete the calibration. The display will inform you if calibration was successful and give a reason if not.

Menu Images

13:51:59 Crius - 9146:EB0E:0802:8000 Service

| | | |
|---|--|---|
| Analyser Crius 9146:EB0E:0802:8000 Fri 11 Dec 13:51:59 2015 | Logs   | pH Sensor 1.1 Online 7.00 33.0°C |
| Free Chlorine Sensor 1.2 Online 3.41 mg/l | Total Chlorine Sensor 1.3 Online 6.54 mg/l | PID Controller 1.1 Running 40.0 % Mode: Manual |

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Menu Tiles

13:56:18 Crius - 9146:EB0E:0802:8000 Service

Sensor Overview

pH Sensor 1.1 **7.00** Online 32.9°C

14.00
0.00

| Maintenance | Last | Due |
|--------------------|-------|----------|
| Calibration | Never | Disabled |
| Sensor Replacement | Never | Disabled |

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pH Screen Overview