

Quick Start Guide

Orion 420Aplus pH Meter

All meter functions are described in detail in the accompanying instruction manual. For calibration and measurement only, a few steps are required. Step-by-step instructions are given in this guide.

Meter Overview

1. Results are displayed in the large main field of the display.
2. Mode is indicated by ▼ along the bottom of the display corresponding to the legend below it.
3. Some of the keys on the keypad have multiple functions. Their primary functions are labeled in white. For those with secondary functions, these functions are labeled in green, and are accessed by pressing **2nd** then the function.
4. The parameters in the setup menu are preset to typical values and usually do not require changing. Please see instruction manual if changing parameters is necessary.
5. If you want to escape the sequence you are in, or you are not sure of which function you are in, pressing **measure** will take you to the MEASURE mode where you can start again.

Meter Connections

Power

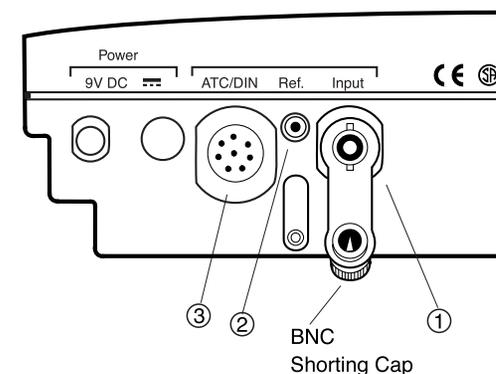
1. Plug line adapter into an appropriate wall outlet.
2. Plug line adapter firmly into power input on rear panel of meter.

Electrode Connections

1. Remove BNC shorting cap.
2. Attach electrode with BNC connector by sliding BNC connector onto electrode input (1), then push down and turn clockwise to lock into position.

NOTE: If using a combination electrode with a BNC connector, the reference electrode input (2) is not used.

3. Attach ATC probe with DIN connector by sliding the DIN connector into the ATC probe input (3) until firmly in place.



pH Measurement Overview

pH measurement is easy and accurate with the Orion 420Aplus. The meter/electrode system is calibrated with one to three buffers that bracket your sample pH.

For better accuracy, at least a two buffer calibration is recommended.

The autocalibration feature automatically recognizes 4.01, 7.00, and 10.01 buffers. For best results, an ATC probe is recommended to compensate for temperature variation.

pH Autocalibration with Two Buffers

NOTE: Do not scroll values when using autocalibration.

1. With power on, select the pH mode, by pressing **mode** until ▼, the mode indicator, is aligned with the pH legend along bottom of display.
2. Place electrode(s) into pH 7 buffer and stir moderately.
3. Press **2nd** then **cal** to begin calibration. The date and time of the last calibration will be displayed.
4. When “READY” is displayed beside the reading, indicating electrode stability, the reading will flash. Press **yes**. The buffer value is stored and meter display freezes for three seconds. The meter automatically switches to buffer two, indicated by the “P2” on the display.
5. Remove electrode(s) from first buffer. Rinse with deionized water.
6. Place electrode(s) into second buffer and stir moderately.
7. When “READY” is displayed beside the reading, indicating electrode stability, the reading will flash. Press **yes**. The buffer value is stored and meter display freezes for three seconds. (If the third buffer is preferred, repeat step 5, 6, and 7. Slope will automatically display on meter. For two buffer autocalibration, continue to next step.)
8. After the second buffer value has been entered, press **measure**. The electrode slope will be displayed. SLP appears in the lower field while the actual electrode slope, in percent, appears in the main field.

The meter automatically advances to the MEASURE mode. MEASURE is displayed above the main field.
9. Remove electrode(s) from buffer. Rinse with deionized water. Place electrode(s) into sample. When “READY” is displayed beside the reading, record the sample results.

Environmental Instruments

Water Analysis

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