

Flow chart for sensor readings with averaging

During calibration we want to sample the sensor many times. However, the quality of the readings can be improved by averaging before the values are displayed. Figure 1 is a flow chart of a program that uses averaging for each of the readings that are displayed on the Serial Monitor.

The flow chart consists of a main program on the left, and a user-defined function on the right. The user-defined function performs the reading and averaging. There are two time delays in the user-defined function. The first delay, Δt_1 , occurs immediately after the power to the sensor is turned on. This delay allows the electrical circuit to settle before any readings are attempted. The second delay, Δt_2 , occurs between each reading. We recommend $\Delta t_1 \approx 100$ ms and $\Delta t_2 \approx 10$ ms.

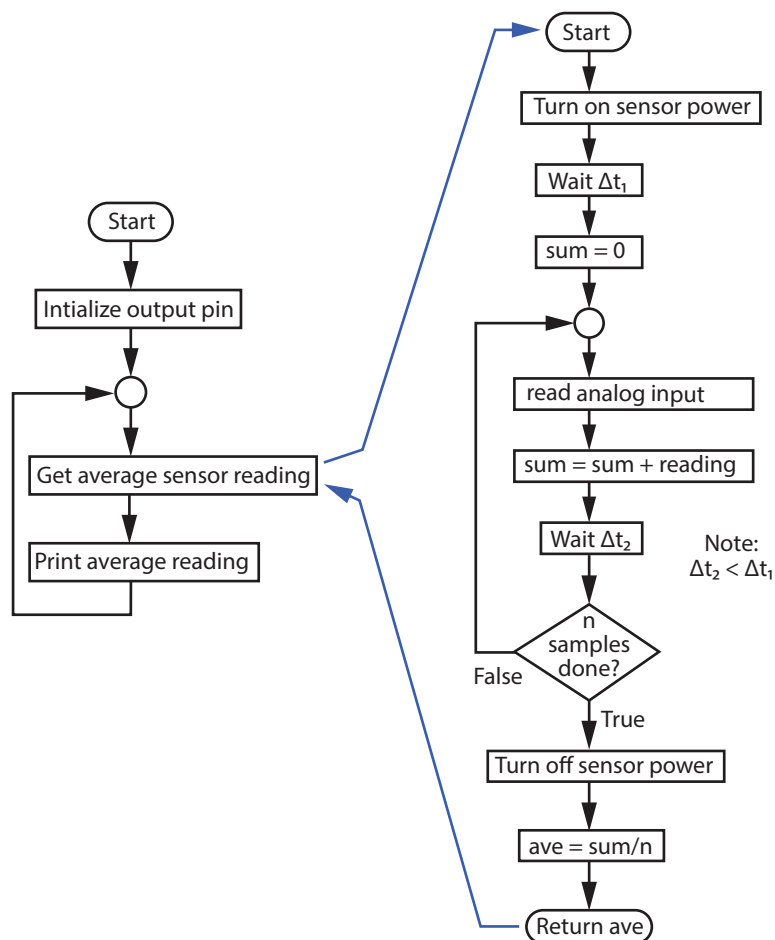


Figure 1 Flow chart for salinity sensor readings with averaging