

5.4 Resolution

The resolution of a sensor is the smallest change it can detect in the quantity that it is measuring. For example, many inexpensive kitchen scales have high resolution, meaning that they can display small changes in weight. If the smallest change in weight they can display is 0.01 gram, then that is the resolution of that scale.

Most newer sensors have much better resolution than either precision or accuracy. A kitchen scale may display weights with a resolution of 0.01 g, while the precision and accuracy likely are at best 1 gram. So the ability of the scale to display weights with very high resolution does not necessarily provide any usable information.

When looking at specifications for sensors, do not let high resolution fool you: it means nothing if the high resolution is not matched by both high precision and high accuracy.