



Hysteresis specifications are often combined with other phenomena such as repeatability, reproducibility, linearity, and dead band as part of the overall product specifications. However, some elements in a data acquisition system, sensors as an example, may have a denominated individual hysteresis behavior that should be considered in determining a total system error budget.

The fundamental phenomenon of hysteresis is the inability of a unit to provide the same output for the same input after the input has had a traversal from upscale to downscale or downscale to upscale with all other errors zero.

For example, consider a pressure sensor with output V_{out-x} for an input pressure of P_x . If the input pressure P_x increases upscale to some new pressure then returns downscale to pressure P_x again, the output may not be V_{out-x} as before, but some different output, V_{out-z} . The difference between V_{out-x} and V_{out-z} is the hysteresis error usually expressed as a percent of full-scale output.

Dataforth recognizes the impact of hysteresis in determining overall system error budgets and includes hysteresis in their signal conditioning modules specifications. All Dataforth modules are 100% sampled tested to guarantee conformity to published specifications.