

Repeatability, Accuracy and Maintenance for Pressure Switches

REPEATABILITY

Repeatability is the maximum set point deviation of a single pressure switch under one given set of environmental and operational conditions. Since adjustable pressure switches can be set at any discrete set point within its given adjustable range this is the most common performance criteria stated by the manufacturer. A general repeatability statement is that a ITT Neo-Dyn pressure switch will repeat within $\pm 0.5\%$ of its set point when set in the upper 80% of its adjustable range for set points above 10 psig. Exceptions to this statement could include piston sensor pressure switches and switches whose adjustable range is inches of water.

ACCURACY

Accuracy is a term generally associated with analog instruments such as transducers and transmitters. Since a pressure switch is meant to give a contact opening or closure at a discrete set point an accuracy statement can only be given if all operational and environmental conditions are clearly defined. For example, what is the accuracy of an Neo-Dyn model 100P12C3 when set at 150 psig increasing pressure when cycled between 150 psig and 130 psig for 500 cycles over a temperature range of +40 to +160 degrees Fahrenheit at a cycle rate of 15 cycles per minute. Again, the model, the operational and environmental conditions must all be defined. ITT Neo-Dyn can provide limited testing on some of its models under various test conditions.

MAINTENANCE

Under normal circumstances ITT Neo-Dyn pressure switches do not require maintenance or re-calibration. For critical applications or those where the switches are used in a severe environment, it is suggested a calibration check be performed at intervals based upon actual in service stability data.

For more information, please visit www.neodyn.com