

Ashcroft® Switches**PIP #: SW-PI-57**

Applicable to:

HIGH STATIC OPERATING PRESSURE DIFFERENTIAL PRESSURE SWITCH OPTION XHS

A common parameter in differential pressure switch applications is the static operating (or working) pressure. This is defined as the pressure produced by a stationary fluid. In a typical application, a differential pressure switch is connected across a filter to detect pressure loss due to clogging. The low pressure side of the switch is connected to the downstream side of the filter, where the pressure is lower than the upstream pressure. This is the static operating pressure of the system.

The standard Ashcroft differential pressure switch features good static operating pressure capability for set points 3 psid through 600 psid. For example, our 30 psid range switch has a static operating pressure of 500 psi.

NOW – TRIPLE THE STATIC OPERATING PRESSURE!

However, in some applications, 500 psi is not enough, so we offer option XHS. Using XHS, the operating pressure is extended to 1500 psi, with less effect on set point and deadband as the working pressure changes.

Changes in static operating pressure will cause set point shift and deadband changes in Ashcroft differential pressure switches. This phenomenon is common in differential pressure switches manufactured by most competitors and is often a result of very small differences in parts or dimensions between the high and low side of the switch.

Fig. 1 will help you understand the type and magnitude of the changes expected. This will also illustrate why we need to know the static operating pressure when we factory set a differential pressure switch. It can be used as a guideline in predicting switch performance under changing conditions.

The set point curves indicate directly the typical increase in set point value at corresponding static working pressures. The deadband curves indicate the increase in deadband, also corresponding to static working pressure. This increase should be added to the initial deadband value (if it is known) or to the deadband value found in the product catalogs. Initial values will depend on the switch element selected.

HOW TO ORDER

Option XHS is constructed of an all 316 ST.ST. body and may be ordered with Buna N, or Viton diaphragms. It is available on all B, G, L and P Series switches in ranges 15 and 30 psid. To order, just develop a standard differential pressure switch part number and add XHS:

D424V XHS – 30 psid (or)

LDDN4GGV25 XHS – 30 psid

FIGURE 1. HIGH STATIC LOW SETPOINT – DP CAPSULE

