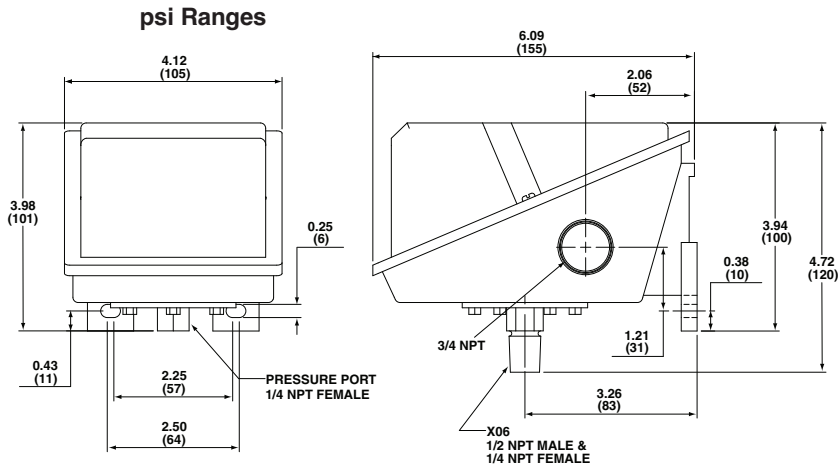


**Installation and Maintenance Instructions  
for ASHCROFT® High Pressure L-Series  
Snap Action Switches with Buna N, Viton and  
Teflon Diaphragms for Pressure Control**



2.7 lbs.

**STANDARD RANGES**  
\*1000, 2000, 3000 psi

**OPERATION**

The ASHCROFT® pressure control is a precision device which features a snap action switch. Fixed deadband is available with single or dual SPDT independently adjustable switches with various electrical ratings. Adjustable deadband is available with SPDT switch with various electrical ratings. Several wetted material constructions for compatibility with pressure media may be obtained.

Series LP-S switches have a fixed deadband which will be within the limits noted on the nameplate.

Series LP-D switches may be set to operate simultaneously or up to 85 percent of the range apart. The deadband of each switch will be within the limits noted on the nameplate.

Series LP-A switches may be set to operate with any deadband within the limits shown on the nameplate.

**MOUNTING**

The "L" Series ASHCROFT snap action pressure switch has a NEMA-4 enclosure which is an epoxy coated aluminum casting.

Two holes in the integral bracket are used to surface mount the control. Location of these holes is shown on the general dimension drawings. An optional pipe mounting bracket is also available. Mount on a vibration free surface or pipe in any orientation. When tightening control to pressure line, always use the wrench flats or hex on the pressure connection. **NEVER TIGHTEN BY TWISTING THE CASE.**

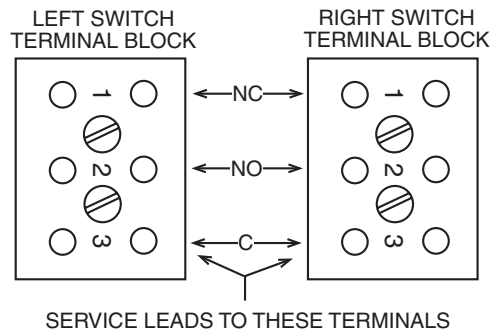
**CONDUIT CONNECTIONS**

One 3/4 NPT hole fitted with a shipping plug, and two additional knock outs are provided. The knockouts may be removed by placing a screwdriver in the slot and rapping sharply with a hammer. It is recommended that Teflon tape or other sealant be used on conduit bushings or plug threads to ensure integrity of the enclosure.

**ELECTRICAL CONNECTION**

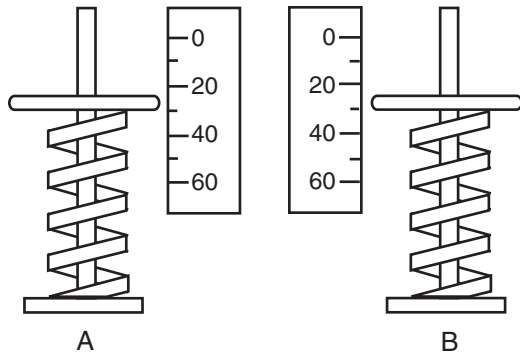
Remove cover, held in place by two screws.

On all units except one with terminal blocks – wire directly to the switch according to circuit requirements. Units with terminal blocks – wire directly to terminal blocks as required. Terminals are marked common (C), normally open (NO) and normally closed (NC).



### SETPPOINT ADJUSTMENTS

Setpoints are changed by means of the setpoint adjusters. The LP-S single switch has one adjuster and the LP-A adjustable deadband and LP-D dual switch each have two adjusters. On switches with two adjusters, the one on the left is referred to as "A" and the right one is referred to as "B"; see illustration. Setpoints can be adjusted from 15 to 100 percent of full range on increasing pressure.



### SERIES LP-S SINGLE SWITCH

Remove cover. For setpoint adjustment on either increasing or decreasing pressure to within  $\pm 1\%$  of nominal range, mount the switch on a calibration stand and use a suitable reference such as an ASHCROFT® Duragauge or test gauge. Monitor switch with a light or meter. Pressurize the system to the required setpoint pressure.

If setpoint is on increasing pressure, turn adjuster so that switch operates (if common – normally closed circuit is being monitored light goes off). If setpoint is on decreasing pressure, turn adjuster so that switch resets (if common – normally closed circuit is being monitored light comes on). When the setpoint has been achieved, raise and lower the pressure to ensure that the setpoint is correct.

The deadband (difference between the operate and reset pressures) may be verified at this time to be between the values noted on the nameplate label.

### SERIES LP-D DUAL SWITCH

Remove cover. For setpoint adjustment on either increasing or decreasing pressure to within  $\pm 1\%$  of nominal range, mount the switch on a calibration stand and use a suitable reference such as an ASHCROFT® Duragauge or test gauge. Monitor switch with a light or meter.

Pressurize the system to the required higher setpoint pressure and turn adjuster "B" until the switch operates or resets as required. See discussion of increasing or decreasing pressure setpoints and deadband verification under Series LP-S Single Switch. When the setpoint has been achieved, raise and lower the pressure to ensure that the setpoint is correct. Then reduce system pressure to the required lower setpoint pressure and turn adjuster "A" until the switch operates or resets as required. Verify this setpoint by raising and lowering pressure. Now increase system pressure to higher setpoint and make final adjustment on "B."

### SERIES LP-A ADJUSTABLE DEADBAND SWITCH

Remove cover. Adjuster "B" controls the operating point of the switch on increasing pressure. Adjuster "A" controls the re-setpoint of the switch on decreasing pressure.

For accurate setpoint adjustment, mount the switch on a calibration stand and use a suitable reference such as an ASHCROFT® Duragauge or test gauge. Monitor switch with a light or meter. Pressurize the system to the required setpoint pressure. Turn adjuster "B" until switch operates. Then lower pressure to the re-setpoint, turn adjuster "A" until the switch resets. Now increase pressure to the operating point and make final adjustment on "B". Raise and lower pressure to ensure that the setpoint and re-setpoint are correct.

### SOME PRECAUTIONS TO OBSERVE

Do not loosen the screws holding the precision switch element(s) or mounting bracket in place.

Nameplate *PROOF* pressure should not be exceeded. Intermittent operation up to proof pressure is permissible, however, some change of setpoint may be noted.

### CAUTIONS TO OBSERVE

#### Switch Applications On Continuous Static Pressure:

Pressure switches that contain BUNA, VITON or TEFLON diaphragms can experience some amount of compression set of the diaphragm in high static pressure applications. This compression set has the potential to shift the switch setpoint while in service. The setpoint can shift by approximately 2% (typically less than 1%) from the original setting. To assure optimal long term setting accuracy, Ashcroft recommends the switch setting be checked after 30 Days in service and reset if necessary. As with any calibrated instrument, Ashcroft recommends regular inspection of operation and setpoint setting.