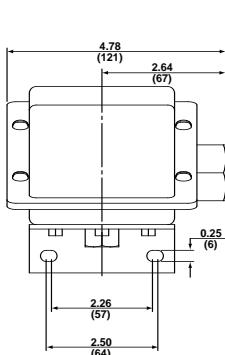


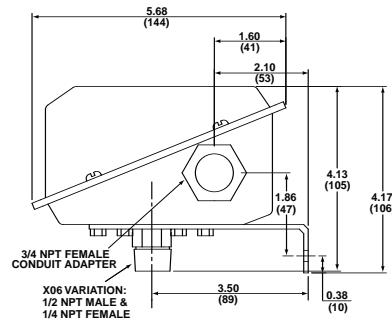
# Installation and Maintenance Instructions for ASHCROFT® G-Series Snap Action Switches for Pressure Control

**ASHCROFT®**

## psi Ranges



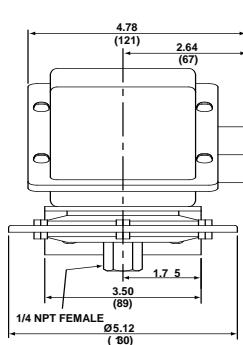
2.8 lbs. (1.3kg)



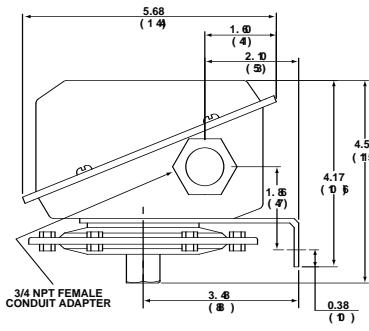
### STANDARD RANGES

15, 20, 30, 60, 100, 200, 400, 600 psi  
\*1000, 2000, 3000 psi  
30°Hg Vac.-0 psi

## in. H<sub>2</sub>O Ranges



3.7 lbs. (1.7kg)



### STANDARD RANGES

30, 60, 100, 150 in.H<sub>2</sub>O  
15°H<sub>2</sub>O Vac.-15°H<sub>2</sub>O

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

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

## MOUNTING

The "G" Series ASHCROFT® snap action pressure switch has a NEMA-4X enclosure which is made of 316 stainless steel.

Two holes in the bracket supplied 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

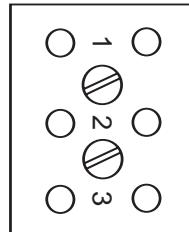
One 3/4 NPSM conduit adapter of 316 stainless steel is provided. It is recommended that Teflon tape or other sealant be used on conduit bushings or plug threads to ensure integrity of the enclosure.

## ELECTRICAL CONNECTION

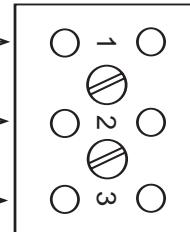
Remove cover, held in place by four screws.

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).

## LEFT SWITCH TERMINAL BLOCK



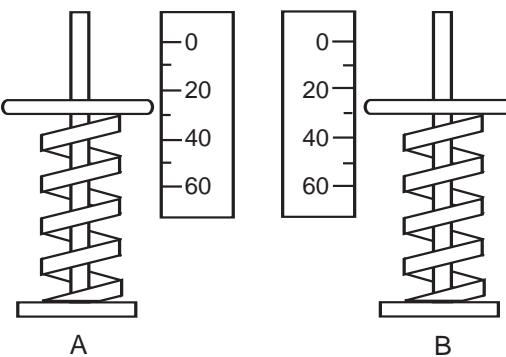
## RIGHT SWITCH TERMINAL BLOCK



SERVICE LEADS TO THESE TERMINALS

## SETPOINT ADJUSTMENTS

Setpoints are changed by means of the setpoint adjusters. The GP-S single switch has one adjuster and the GP-A adjustable deadband and GP-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 20 to 100 percent of full range on increasing pressure.



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## SERIES GP-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 dead band (difference between the operate and reset pressures) may be verified at this time to be between the values noted on the nameplate label.

## SERIES GP-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 GP-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 GP-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.

Operation and correct setpoint actuation should be routinely tested.

**Note** – Since vacuum models are already above setpoint at atmosphere, the Normally Open (NO) circuit will be closed as received.