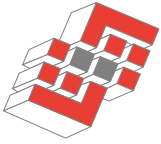


**STRUMENTAZIONE  
INDUSTRIALE SRL**

# **PSM - PSP INSTRUCTION MANUAL**

Adjustable pressure switches with SPDT contacts

Rev. 3 - 03/23

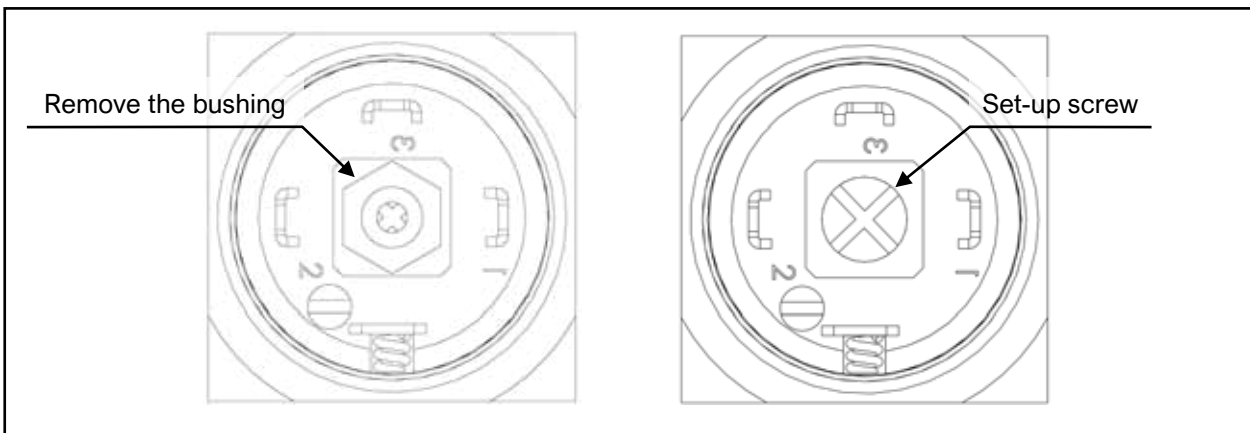


## OVERVIEW



## SWITCHING POINT ADJUSTMENT

The adjustment process requires a suitable pneumatic or hydraulic pressure generator with a pressure transducer or a pressure gauge and an acoustic or visual alarm device to be connected to the electric contacts of the pressure switch. The required set-point value should be read right in the middle of the gauge reading scale. For example, it is recommended to use a pressure transducer from 0 to 10 bar when adjusting a pressure switch at 5 bar.



### Choosing rising or falling set-up

It is not possible to set-up a pressure switch both rising and falling; the chosen type of adjustment shall be based on the application necessities and the performance desired.

A rising adjusted pressure switch have a lower falling switching value, while a falling adjusted pressure switch have a wider reset switching value. These differences in the switching points can vary from a few tenths of bar on low pressure execution to a few bar in high-pressure execution.

### Set-up on Rising

Locate the set-up screw on the top the pressure switch and remove the bushing. Use a screwdriver to rotate the set-up screw: turn clockwise to rise the switching point, turn counter clockwise to reduce the switching point. Once reached the required set-point, starting from a pressure of 0 bar and gradually rising, the contact will switch from Normally Closed to Normally Open or vice versa. Repeat the reading operation twice to check the actuation point, repeating the adjustment process again if necessary.

## Set-up on Falling

Locate the set-up screw on the top the pressure switch and remove the bushing. Use a screwdriver to rotate the set-up screw. If a set-up falling is needed, slowly decrease the pressure from the working pressure to the working value and then decrease pressure slowly checking that the actuation point corresponds to the one required. If the switching point does not correspond to the desired setting, Should the actuation point not correspond to the setting value, increase pressure, from time to time, as to the previous value.

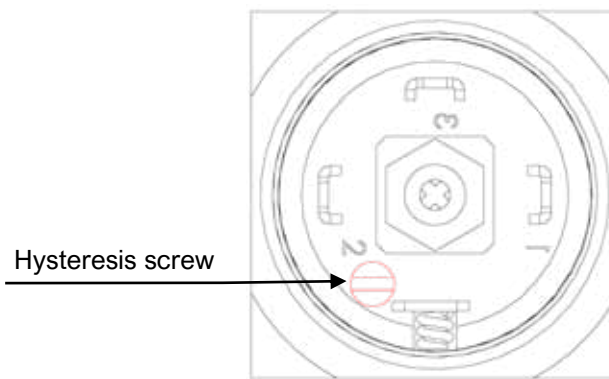
Check the pressure value reading at least two time to be sure of the correct actuation point, and repeat the adjusting process again if necessary.

## HYSTERESIS ADJUSTMENT

The hysteresis is the subtraction between the set-point pressure and the contact resetting pressure.

### Example:

Working pressure starting at 0 bar rising, the pressure switch is set-up at 2.8 bar rising. As the working pressure decreases, the pressure switch contacts reset at 2.1 bar. Then the hysteresis value is 0.7 bar.



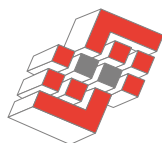
## Set-up the Hysteresis

The hysteresis can be adjusted through the small brass hysteresis screw on the top of the pressure switch. The screw should be adjusted in small steps, as this type of adjustment is very sensitive and could dramatically alter the hysteresis.

Using a thin flat screwdriver, turn the screw clockwise to increase the hysteresis, turn counter-clockwise to decrease it. Adjust the screw in small steps i.e.  $\frac{1}{4}$  of a complete turn at a time. The adjusting range is approximately one complete round of the screw. Check the hysteresis range and continue to adjust it until the desired range is found. Finally, test the reading operation a few times to check the correct actuation point and repeat the process again if needed.

Be careful, as making a too narrow hysteresis will cause a double contact (the N.O. and N.C. contacts will be closed at the same time), making a too wide hysteresis will cause one of the two contacts to never close.

For further information, please [contact](#) our technical office.



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