## Mechanical Vacuum Switches

## Adjustable Mechanical Vacuum Switch

## VS-4 \& 5 Series, SX-4 \& 5 Series, SX-4 \& 5SB Series



## Vacuum Switches:

Vaccon vacuum switches are ideal in automated systems to generate a low current electrical signal for input to a PLC or other logic controllers. The adjustable switches are normally open, diaphragm operated, and contain low-stress deflecting contacts instead of sliding or pivoting parts for high reliability and long life.

## Switch Options:

- Housings for ease of mounting on vacuum pumps
- Sub base for ease of installation on non-Vaccon vacuum pumps
- Spade connectors
- 2 vacuum level ranges: VS-4, SX-4, SX-4SB - 2"-14"Hg [68-474mbar] and VS-5, SX-5, SX-5SB - 7.4"-29.7"Hg [251mbar - 1 Bar]

Adjustable Mechanical Vacuum Switch: VS-4 \& VS-5

Ideal Applications:

- Robotic applications
- Assembly applications
- Control applications
- Monitoring applications

Features/Benefits:

- Accurate and reliable repeatability utilizes low stress deflecting contacts
- Compact and lightweight - operates in any position
- Economical - diaphragm operated - long life
- Easy to install - 12" flying leads, 24 AWG



## Mechanical Vacuum Switches

Adjustable Mechanical Vacuum Switch: SX-4 \& SX-5 (Switch with housing)


| Model \# | Dimensions |  |  |  |  |  |  |  |  |  |  |  |  | Weight | Lead <br> Length |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A | B | C | D | E | F | H | J | K | L | M | $N$ |  |  |
| SX-4 or | in. | 10-32 F | 0.13 | 1.00 | 1.47 | 0.12 | 0.89 | 0.25 | 0.69 | 0.50 | 0.74 | 0.50 | 0.25 | 1.502 | 12 |
| SX-5 | mm | 10-32 F | 3.3 | 25.4 | 37.3 | 3.0 | 22.6 | 6.4 | 17.5 | 12.7 | 18.8 | 12.7 | 6.4 | 43 g | 305 |

Adjustable Mechanical Vacuum Switch: SX-4SB \& SX-5SB (Switch with housing and sub base)


| Model \# | Dimensions |  |  |  |  |  |  |  |  |  |  |  |  |  | Weight | Lead <br> Length |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A | B | C | D | E | F | H | J | K | L | M | N | P |  |  |
| $\begin{gathered} \text { SX4-SB or } \\ \text { SX5-SB } \end{gathered}$ | in. | 10-32 F | 0.21 | 1.00 | 2.65 | 0.19 | 0.81 | 0.25 | 1.36 | 0.50 | 0.93 | 0.50 | 0.61 | 2.15 | 2.102 | 12 |
|  | mm | 10-32 F | 5.3 | 25.4 | 67.3 | 4.8 | 20.6 | 6.4 | 34.5 | 12.7 | 23.6 | 12.7 | 15.5 | 54.6 | 60 g | 305 |

Wiring Schematic for VS-4, VS-5, SX-4, SX-5, SX-4SB, SX-5SB


Important Notice For All VS-4, VS-5, SX-4, SX-5, SX-4SB, SX-5SB

1. The electrical current flows from one terminal through the rivet to the contact blade and from the other terminal through the rivet to the adjustment blade.
2. The adjustment screw is in contact with the diaphragm and is part of the electrical circuit.
3. To avoid potential shock, use an insulated screwdriver when making adjustments.

VS-4, VS-5, SX-4, SX-5, SX-4SB, SX-5SB Specifications:

| Specifications | VS-4 | VS-5 | SX-4, SX-4SB | SX-5, SX-5SB |
| :---: | :---: | :---: | :---: | :---: |
| Rated Vacuum Range: | $\begin{gathered} 2 " \text { to } 14.8 \mathrm{Hg} \\ {[-68 \text { to }-500 \mathrm{mbar}]} \end{gathered}$ | $\begin{gathered} \text { 7.4" to } 30 \mathrm{Hg} \\ {[-250 \text { to }-1015 \mathrm{mbar}]} \end{gathered}$ | $\begin{gathered} \text { 2" to } 14.8 \mathrm{Hg} \\ {[-68 \text { to }-500 \mathrm{mbar}]} \end{gathered}$ | $\begin{gathered} 7.4 \text { " to } 30 \mathrm{Hg} \\ {[-250 \text { to }-1015 \mathrm{mbar}]} \end{gathered}$ |
| Proof Pressure: | N/A |  |  |  |
| Burst Pressure: | 25 PSI [1.7 bar] |  |  |  |
| Media: | Non-Corrosive, Dry Gases |  |  |  |
| Switch Type: | Differential Pressure, Mechanical Diaphragm |  |  |  |
| Sensing/Switching Material: | Gold Plated, Phosphor Bronze |  |  |  |
| Output: | SPST - N0 |  |  |  |
| Electrical Connection: | 2 Wire - 24 AWG 1' [0.3M] |  |  |  |
| Hysteresis: | 0.5\% Full Scale |  |  |  |
| Max. Switch Voltage Load: | 24 VDC/500 VAC |  |  |  |
| Max. Switched Current Load: | 20 mA |  |  |  |
| Display: | NONE |  |  |  |
| Switch Indication: | NONE |  |  |  |
| IP Protection: | NONE |  |  |  |
| Operating Temperature: | $-40^{\circ} \mathrm{F}$ to $250^{\circ} \mathrm{F}\left[-40^{\circ} \mathrm{C}\right.$ to $120^{\circ} \mathrm{C}$ ] |  |  |  |
| Operating Humidity: | 35 to 85\% RH (No Condensation) |  |  |  |
| Mechanical Life: | 100,000,000 Cycles |  |  |  |
| Construction: | GF Polyester/Polyurethane |  | GF Polyester/Polyurethane/Anodized Aluminum |  |
| Fitting/Connection: | 3/16" Barb |  | 10-32 Female, Face Seal mount |  |
| Weight: | 0.50 oz [14g] |  | SX-4 \& 5-1.5 oz [43g], SX-4 \& 5SB - 2 oz [57g] |  |
| Safety and Environmental Compliance: | RoHS |  |  |  |

## How to Specify:

For switch only: Order by model number, i.e. SX-5
For factory-installed switch on Vaccon pump: Order Vaccon pump number and switch number, i.e., VP20-150M-SX-4.
For Spade switch: Order by model number with (-Spade) extension i.e. VS-4-Spade

