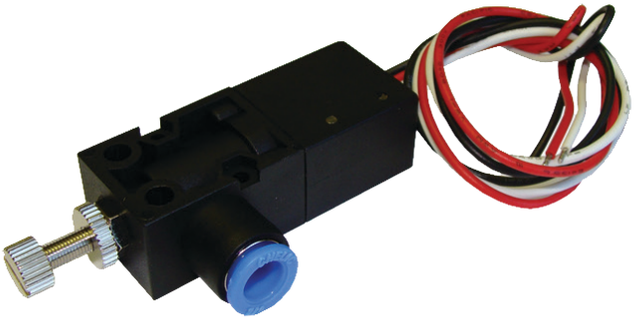
VACUFORCE®

# VACUUM SWITCHES

# VAS VACUUM SWITCH

- Diaphragm vacuum switch
- Compact size
- Lightweight
- Inch port sizes 5/32”, 1/4 & 5/16
- Metric port sizes 4, 6 & 8mm
- Fully adjustable



| VAS | 10 | 06 |
|---|---|---|
| Series | Body Size | Vacuum Port Ø |

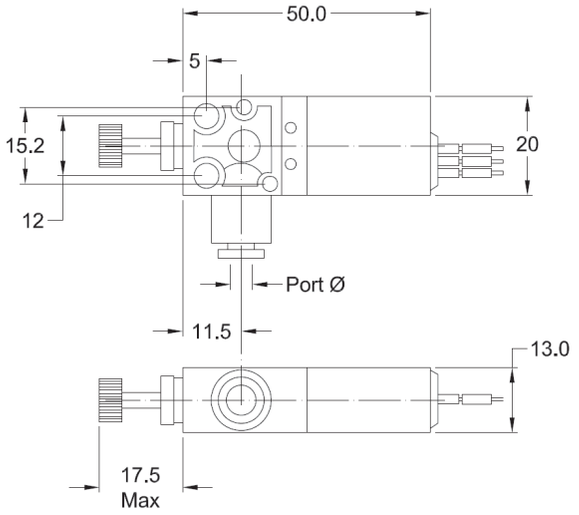
| Body Size |
|---|
| 10 |

| Vacuum Port Ø | |
|---|---|
| 04 | 4mm (5/32") |
| 06 | 6mm |
| 08 | 8mm (5/16") |
| 1/4 | 1/4” |

## SPECIFICATIONS

| Model | Vacuum Connection | Adjustment Range | Accuracy | Hysterisis | Electrical Rating |
|---|---|---|---|---|---|
| VAS1004 | 4mm / 5/32” | 4.5-12”Hg | 0.05kPa (1.5”Hg) | 10kPa (3”Hg) | AC125V - 5A |
| VAS1006 | 6mm | | | | |
| VAS1014 | 1/4” | | | | |
| VAS1008 | 8mm / 5/16” | | | | |

## DIMENSIONS (mm)

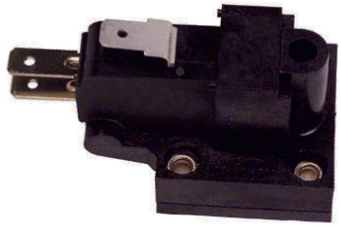


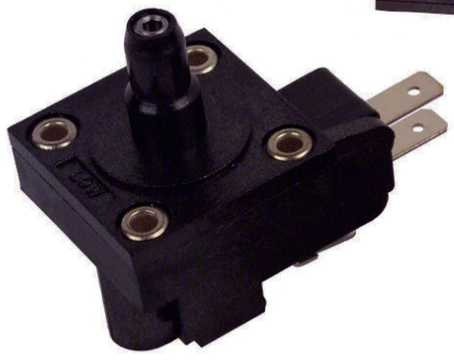

*This vacuum switch is also part of the Vacuforce VABS vacuum venturi/switch combination. More details of this combination part can be found in the vacuum venturi section of the Vacuforce main catalogue.*



# PSF VACUUM SWITCH

- Adjustable vacuum from -0.1kPa to -83kPa (-3” H2O to -332"H2O)
- Snap action basic switch, up to 25A*, 125/250 VAC
- 1/8NPT Vacuum port
- Small size, lightweight, low cost
- Dependable long life of 10,000,000+ cycles





**PSF109S-NPT-81-330**

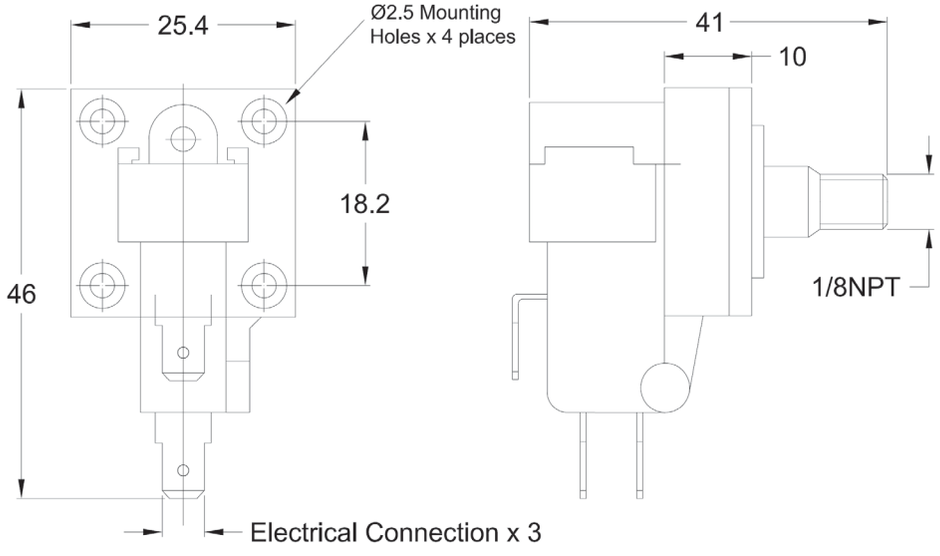
Part Number

## SPECIFICATIONS

| MECHANICAL SPECIFICATIONS | |
|---|---|
| Standard Tolerance | +/-20% |
| Switch Type | Normally Open or Normally Closed |
| Switching Medium | Air |
| Operating Temperature | 4 - 65ºC / 40-150ºF |

| PHYSICAL SPECIFICATIONS | |
|---|---|
| Case Material | Polycarbonate |
| Vacuum Port | 1/8NPT Male |
| Diaphragm Material | Polyurethane |
| Electrical Terminals | 0.187' x 0.020" Spade Terminal |
| Weight | 20g |

| ELECTRICAL SPECIFICATIONS | |
|---|---|
| Current Rating | 15A |
| Operating Voltage | 125/250VAC |



# LF20 VACUUM SWITCH



- OEM type diaphragm vacuum switch
- Compact size
- Air and liquid compliant
- 1/8NPT Male vacuum port
- Factory set point
- Tamper free construction

The LF20 pressure switch is specifically designed to stand up to extended duty applications. This switch is factory set but capable of field adjustment. It features different diaphragms for compatibility with a wide variety of fluids, and various terminations. Among the outstanding design benefits are its durable construction, compact size, and enhanced set point integrity. It can be widely used for pool and spa, anti-skid braking systems, water pump systems, and dental air compressors, heavy construction, off road equipments and other pressure control systems.

| Model Number | Switch Point | Type | Rubber Boot | Connection Port |
|---|---|---|---|---|
| LF20-V-31111B-15"HG | 15"Hg | Normally Closed | Included | 1/8NPT |
| LF20-V-32111B-15"HG | 15"Hg | Normally Open | | |

## SPECIFICATIONS

| Model | Vacuum Connection |
|---|---|
| Maximum Over Pressure | 150psi(g) |
| Burst Pressure | 500 psi(g) |
| Operating Temperature Range | -40ºF to +176ºF (-40ºC to +80ºC) |
| Switch Type | Direct action, blade contact |
| Electrical Rating | 120/240VAC, 375VA<br>120VVAC, 5.8FLA-34.8LRA 240VAC 2.9FLA-15LRA<br>24VAC/DC, 3A |
| Dielectric Strength | 750 VRMS across open contacts |
| | 1550 VRMS terminal to fitting |
| Terminals | 1/4" Spade Connection |
| Connection | 1/8NPT (other connection types available, please inquire) |

## DIMENSIONS (mm)




## ASSEMBLY



LF20 Switch  Rubber Boot  Assembled

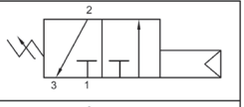
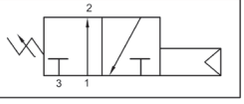
# AVS PNEUMATIC VACUUM SWITCH

- Typically used in an all pneumatic circuit
- Can be used as an energy saving device for vacuum venturi systems
- 1/8NPT and G1/8 Male vacuum port
- 4mm (5/32") Pneumatic connection ports
- Field adjustable




## SPECIFICATIONS

| Model Number | Vacuum Switch Range | Type | Signal Pressure Range | Temperature Rating | Hysteresis | Weight |
|---|---|---|---|---|---|---|
| AVS-212 | -15kPa to -95kPa (4.5-28.5"Hg) | Normally Closed | 1.5-8bar (23-120psi) | -10ºC to 60ºC (14ºF - 140ºF) | 12kPa (3"Hg) | 44g (1.5oz) |
| AVS-213 | -10kPa to -95kPa (3-28.5"Hg) | Normally Open | | | 3kPa (0.1"Hg) | |

| | |
|---|---|
| AVS-212NC |  |
| AVS-213NO |  |



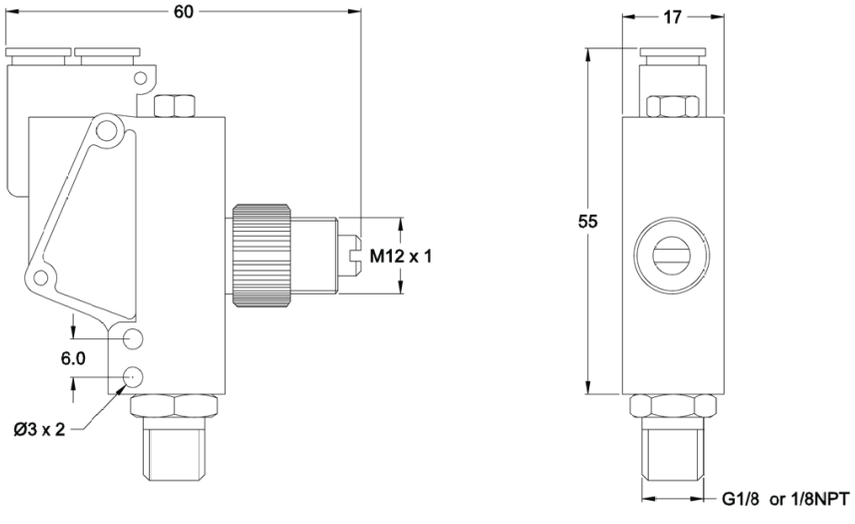
### NORMALLY CLOSED FUNCTION

Compressed air is supplied to port (1). As the vacuum increases the path between ports (1) and (2) remain closed. Once the vacuum set point is reached, the ports connect passing air through the switch.

### NORMALLY OPEN FUNCTION

Compressed air is supplied to port (1). As the vacuum is increasing the path between ports (1) and (2) remain open with signal air passing through the switch. Once the vacuum set point is reached, the ports close stopping the flow of signal air.

## DIMENSIONS (mm)



# AP25 & AP30 PRESURE SENSOR

- Solid state digital vacuum & pressure switches
- Two types AP25 and AP30
- Suitable for vacuum and pressure use
- Selectable pressure units, kPa, bar, psi, mmHg
- IP65 Insulation



AP25



AP30

| AP25 | V | 01 | QD |
|---|---|---|---|

| Series |
|---|
| AP25 |
| AP30 |

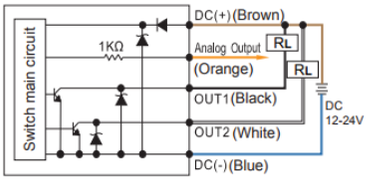
| Type | |
|---|---|
| C | Compound |
| P | Pressure |
| V | Vacuum |

| Output | |
|---|---|
| 01 | 2 x NPN + 1 x Analogue |
| 02 | 2 x NPN |
| 03 | 2 x PNP + 1 x Analogue |
| 04 | 2 x PNP |

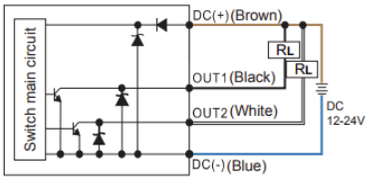
| Connection | |
|---|---|
| | 600mm Lead |
| QD | M8 Male non analogue only |

| SPECIFICATIONS | |
|---|---|
| Media | Non lubricated dry air or non corrosive gas |
| Over Pressure | 3bar (45psi) |
| Electrical Connection | M8 4 Pin male connector (analogue use 6ft lead wire) |
| Operating Voltage | 12 – 24VDC ±10% |
| Current Consumption | ≤55mA |
| Display | 4 Digit 7 Segment Red LED |
| Display Units | kPa, MPa, kgf/cm², bar, psi, inHg, mmHg, mmH2O |
| Repeatability | ≤2% F.S ± 1 digit |
| Hysteresis | Adjustable |
| Response Time | ≤2.5ms (chatter proof selectable 24, 192 & 768ms) |
| Indicator | OUT1 = Green LED OUT2 = Red LED |
| Analogue Output | 1 to 5V ≤ ±5% F.S Linearity ≤ ±1% F.S |
| Insulation | AP25 - IP65, AP30 - IP40 |
| Ambient Temperature | 0-50ºC (32-122ºF) |
| Vacuum / Pressure Port | G1/8 & 1/8NPT Female |
| Shock Resistance | 980m/s (100G) 3 times in each direction X,Y & Z |
| Weight 71g 35g | AP25 - 71g, AP30 - 35g |

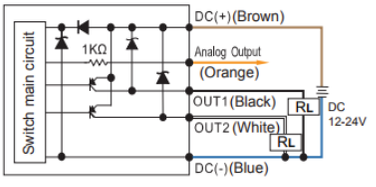
**NPN Output & Analog Output**



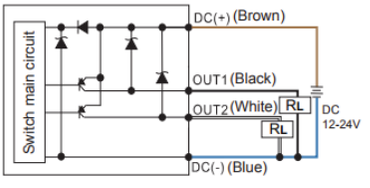

**NPN Output**



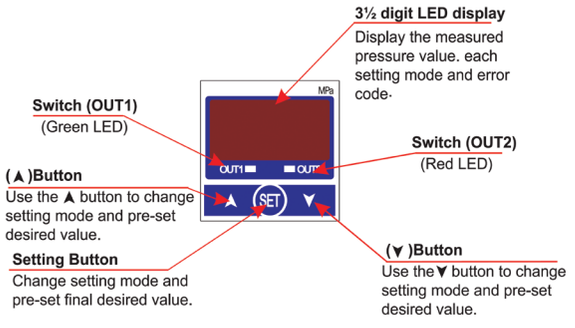

**PNP Output & Analog Output**

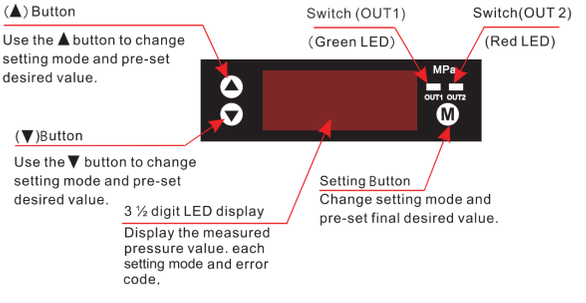



**PNP Output**




## Panel Instructions



# AP10 PRESSURE SENSOR

- Solid state digital vacuum & pressure switches
- Suitable for vacuum and pressure use
- Miniature design
- Stem and thread connection ports



| AP10 | V | 01 | 1/4 | C |
|---|---|---|---|---|
| Series | Type | Output | Vacuum Port | Electrical Connection |

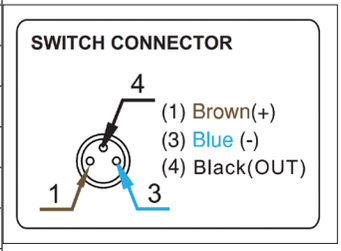
| Type | |
|---|---|
| P | Pressure |
| V | Vacuum |

| Output | |
|---|---|
| 02 | 2 x NPN |
| 04 | 2 x PNP |

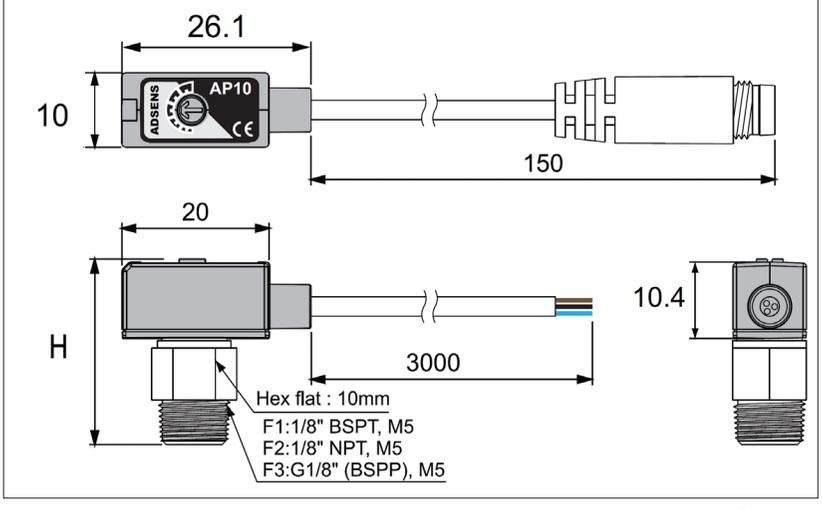
| Vacuum Port | |
|---|---|
| 1/4 | Ø1/4" Stem |
| R4 | Ø4mm Stem |
| R6 | Ø6mm Stem |
| F1 | 1/8BSPT |
| F2 | 1/8NPT |
| M5 | M5x0.8 |

| Electrical Connection | |
|---|---|
| | 9ft Lead |
| C | M8 3 Pin Male |

| SPECIFICATIONS | |
|---|---|
| Media | Non lubricated dry air or non corrosive gas |
| Maximum Over Pressure | AP10V - 6bar (87psi), AP10P - 14bar (217psi) |
| Electrical Connection | M8 3 Pin male connector or 9ft lead wire |
| Operating Voltage | 10.8 – 30VDC (includes ripple voltage) |
| Load Current | 90mA max. |
| Repeatability | ≤1% F.S ± 1 digit |
| Hysteresis | 3% F.S. max |
| Response Time | ≤2.5ms (chatter proof selectable 24, 192 & 768ms) |
| Indicator | Red LED turns on |
| Insulation | IP40 |
| Ambient Temp. | 0-60ºC (32-140ºF) |
| Vacuum / Pressure Port | Push In Stem for Fitting or 1/8NPT Male |
| Shock Resistance | 980m/s (100G) 3 times in each direction X,Y & Z |
| Weight | 50g with 9ft cable |




## DIMENSIONS (mm)




| Height (H) | | |
|---|---|---|
| 1/4 | Ø1/4" Stem | 30mm |
| R4 | Ø4mm Stem | 32mm |
| R6 | Ø6mm Stem | 30mm |
| F1 | 1/8BSPT | 25mm |
| F2 | 1/8NPT | |
| M5 | M5x0.8 | 23mm |