



# ELECTRIC & PNEUMATIC SWITCHES

## Features

- Switch modules available normally open or normally closed
- Wide range of mounting configurations available
- Actuators with or without an air pressure indicator
- Standard manual override or Pneumatic Actuation Only (Manual Override Blocked)
- Interfaces pneumatic signals with manual signals via the same devices, saving space and cost, adding safety and convenience
- 4 bright colors for visibility and operator recognition
- Can actuate as many as 12 switches



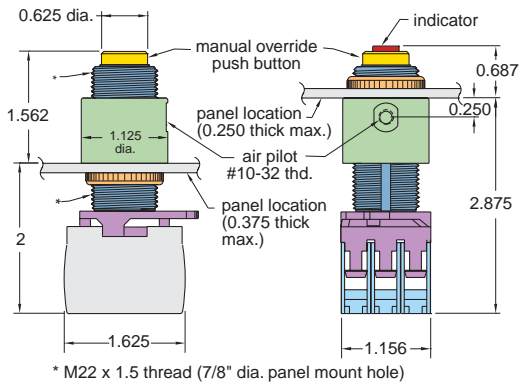
Medium: Air

Operating Pressure: Approx. 10 psig plus 1.5 psig per switch

Max. Operating Pressure: 150 psig

### Construction:

Activator Housing - Nickel-plated brass, Anodized aluminum, Nylon  
 Internal Parts - Delrin®  
 Seals - Buna-N rubber  
 Mounting - M22 x 1.5 male thread for panel mount through 7/8" dia. hole



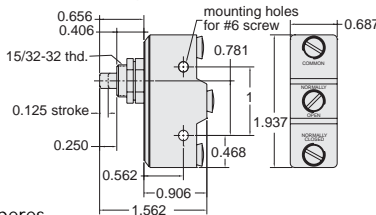
### Part No. Description

Part No.	Description	Push Button Color
AS-BN	Manual Override	Black
AS-GN	Manual Override	Green
AS-RN	Manual Override	Red
AS-YN	Manual Override	Yellow
AS-BN-A	Air Actuation Only	Black
AS-GN-A	Air Actuation Only	Green
AS-RN-A	Air Actuation Only	Red
AS-YN-A	Air Actuation Only	Yellow

### Push Buttons with Indicator Indicator Color

AS-BG	Manual Override	Black
AS-BR	Manual Override	Green
AS-BY	Manual Override	Red
AS-BW	Manual Override	Yellow
AS-BG-A	Air Actuation Only	Green
AS-BR-A	Air Actuation Only	Red
AS-BY-A	Air Actuation Only	Yellow
AS-BW-A	Air Actuation Only	White

## Single Pole Electrical Switch



Stem Travel: 1/8"

Rating A.C.: 120 volts - 15 amperes  
 240 volts - 15 amperes  
 480 volts - 15 amperes

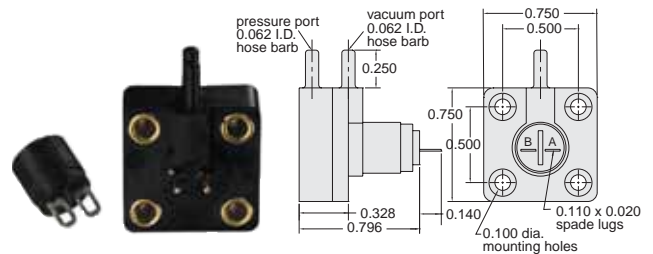
Rating D.C.: 125 volts - 0.5 amperes  
 250 volts - 0.25 amperes

Mounting: 15/32-32 thread; nut and lockwashers furnished, also two 0.140" dia. mounting holes in body

Approvals: UL and CE

Part No.	Description
ES-1	Single Pole, Double Throw Snap-Action Electrical Switch
ES-1-GP	Single Pole, Double Throw Snap-Action Electrical Switch with Gold-Plated Contact
15601	Terminal Cover

## Pneumatic Electric Switches



Electrical Rating: 60 ma. AC resistive 40 ma. DC resistive @ 120 volts

Switching Speed: 125 Hz, normally open

Actuating Pressure: 3" H<sub>2</sub>O 10% pressure vacuum, or DP

Maximum Pressure: 8 psig (continuous)

Construction: ABS plastic case gold plated contacts natural rubber diaphragm

Use: for interfacing fluidic or other low pressure air signals with electronic circuitry dual inputs operates on pressure, vacuum, or differential pressure signals

Part No.	Description
5100-3-NO	Pneumatic Electric Switch, Normally-Open Contacts
5100-3-NC	Pneumatic Electric Switch, Normally-Closed Contacts

## Air-2-Electric® Air Switches and Mounting Clips

The Air-2-Electric system can handle multiple switches; using line voltage, as many as 12 switches can be actuated. Switch modules are available in normally open or normally closed models. Air-2-Electric actuators are available with a number of feature options such as a manual override and an air pressure indicator and in a variety of colors.

### Air Switches

**AS-01 - Normally Closed**

**AS-10 - Normally Open**



### Mounting Clips

The single clip mounts one switch to the pneumatic actuator. The front clip mounts up to three switches. Add side clips to mount up to five switches. For six to twelve switches, add a 2nd row clip to the front clip.

Note: The 2nd row clip will not mount where side clips are attached.

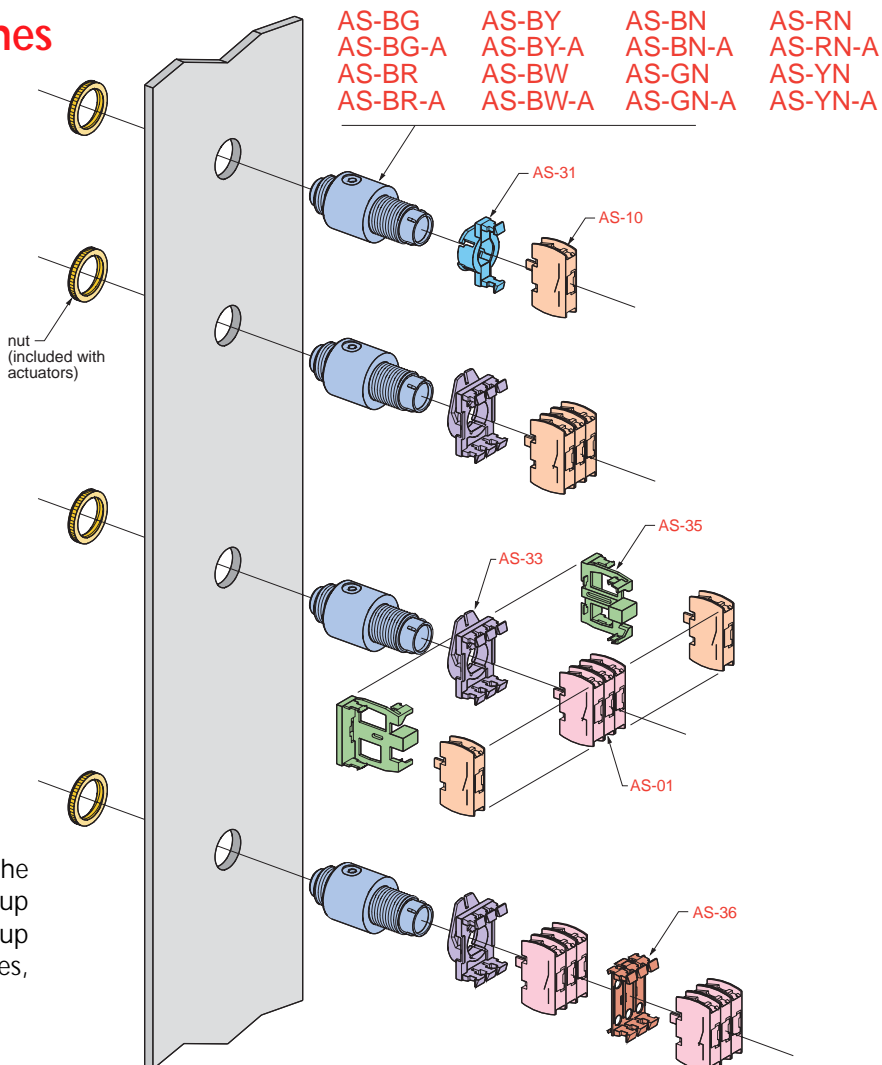


**AS-31 - Single Clip**

**AS-33 - Front Clip**

**AS-35 - Side Clip**

**AS-36 - 2nd Row Clip**



SWITCH MODULES AS-01 AND AS-10					Electrical and Mechanical Characteristics		
<b>Electrical Performance</b>					<b>Voltage</b>		<b>Motor Horsepower</b>
AC	nominal Operating Voltage (VAC) (50-60 Hz)	110	220	440	110	Single phase	0.5
	nominal Operating Current (A)	8	6.5	3.5	220	Single phase	1.0
DC	nominal Operating Voltage (VDC)	12	24		220/240	3-phase	3.0
	nominal Operating Current (A)	4	1.5		440/480	3-phase	5.0
<b>Electrical Life</b>		220 V (50-60 Hz)			<b>Approvals</b>		
Operating Current (A)		6	2				
No. of Operations		1 x 10 <sup>6</sup>	3 x 10 <sup>6</sup>				
<b>Mechanical Life</b>		3 x 10 <sup>6</sup> cycles			<b>Connection</b> Screw terminals suitable for field wiring # 14-12 AWG		
<b>WARNING</b> Caution should be taken to assure the conformation of all applicable standard codes and installation procedures. Proper design engineering procedures should be used to guard against the accidental actuation of the switches. Manual overrides or other precautionary measures should be considered.							



# PRESSURE ACTUATED SWITCHES



**Medium:** Air  
**Inlet Pressure:** 5 - 150 psig; 0.3 - 10.3 bar  
**Pilot Port:** #10-32, 1/8" NPT, M5  
**Mounting:** External thread and nut for panel, bracket, or bulkhead mounting,  
 5/8 - 32 pressure actuated  
 15/32-32 manually operated  
**Accuracy:** Actuation and deactuation pressures listed are nominal values. Each has a tolerance of  $\pm 12\%$  or 1 psig whichever is greater



**SAS** Sub-Miniature Air Switch  
**MAS** Miniature Air Switch

**Design Series**

**Switch Current Rating:**

- SAS**  
**A** 5A @ 125/250 VAC  
 3A @ 30 VDC/.1A 60 VDC  
**X** no switch  
**MAS**  
**B** 3A @ 125/250 VAC  
 3A @ 30 VDC  
**C** 10A @ 125/250 VAC  
 5A @ 50 VDC  
**X** no switch

**Actuation Pressure\***

- 06** 6 psig/0.4 bar  
**20** 20 psig/1.4 bar  
**40** 41 psig/ 2.8 bar  
**65** 65 psig/4.5 bar  
**MN** Manual

**Deactuation Pressure\***

- 06** 5 psig/0.3 bar  
**20** 18 psig/1.2 bar  
**40** 36 psig/2.5 bar  
**65** 58 psig/ 4.0 bar  
**MN** Manual

**Inlet Port:**

- Blank** #10-32 thd  
**F** 1/8" NPT female  
**P** 1/8" NPT male  
**M5** M5 x 0.8 thd

**Switch Terminals:**

- SAS: 0** no switch  
**1** 110 series Q.C.

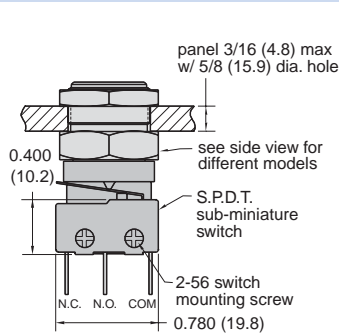
- MAS: 0** no switch  
**2** 187 series Q.C.  
**3** screw terminals

\*Nominal value +/- 12% or 1psi, whichever is greater when used with Clippard switches

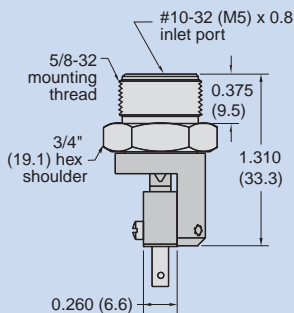
Pressure Actuated

Mechanically Actuated

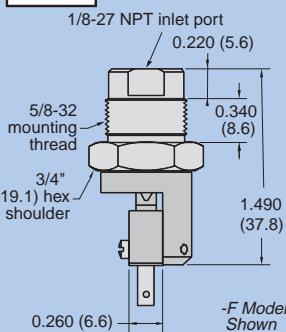
## SAS Model



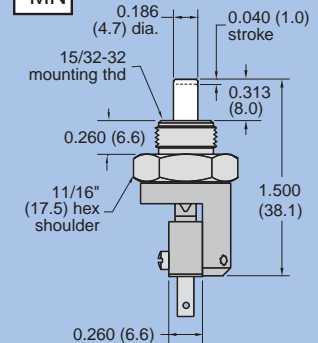
### STD. & -M5



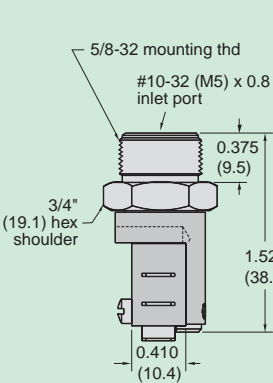
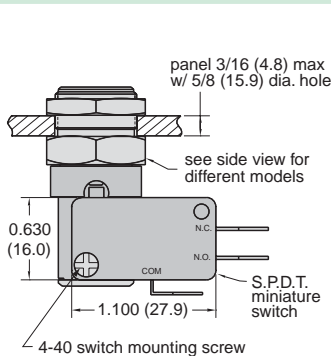
### -F & -P



### -MN



## MAS Model



### -F & -P

