

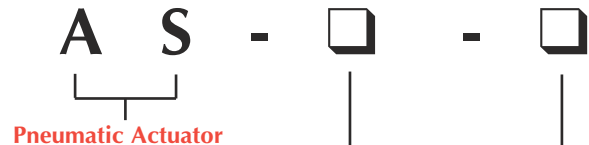


# AIR-2-ELECTRIC® SWITCHES

## 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
- 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
- Low operating pressure requirements: approx. 10 psig

## Air-2-Electric® Pneumatic Actuators Numbering System



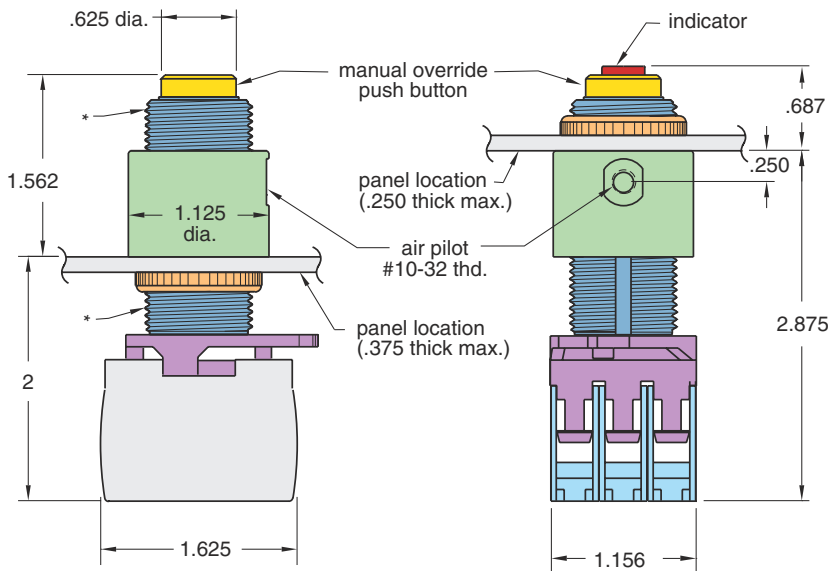
### Push Button Color/ Indicator Color:

- |                   |                          |
|-------------------|--------------------------|
| BG - Black/Green  | BN - Black/No Indicator  |
| BR - Black/Red    | GN - Green/No Indicator  |
| BY - Black/Yellow | RN - Red/No Indicator    |
| BW - Black/White  | YN - Yellow/No Indicator |

**Blank** - Pneumatic Actuation with Manual Override (Standard)

**A** - Pneumatic Actuation Only (Manual Override Blocked)

## Air-2-Electric® System Dimensions



\* M22 x 1.5 thread (7/8" dia. panel mount hole)

**Medium:** Air

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

**Max. Operating Pressure:** 150 psig

**Temperature Range:** 32° - 140° F

**Port:** 10-32

### 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" diameter hole

## Air-2-Electric® Pneumatic Actuators



### Push Button

- Manual Override**  
 AS-BN - Black\*  
 AS-GN - Green  
 AS-RN - Red  
 AS-YN - Yellow

- Air Actuation Only**  
 AS-BN-A - Black  
 AS-GN-A - Green  
 AS-RN-A - Red  
 AS-YN-A - Yellow

\* Push button color



### Push Button with Indicator

- Manual Override**  
 AS-BG - Green\*\*  
 AS-BR - Red  
 AS-BY - Yellow  
 AS-BW - White

- Air Actuation Only**  
 AS-BG-A - Green  
 AS-BR-A - Red  
 AS-BY-A - Yellow  
 AS-BW-A - White

\*\* Indicator Color

## 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.

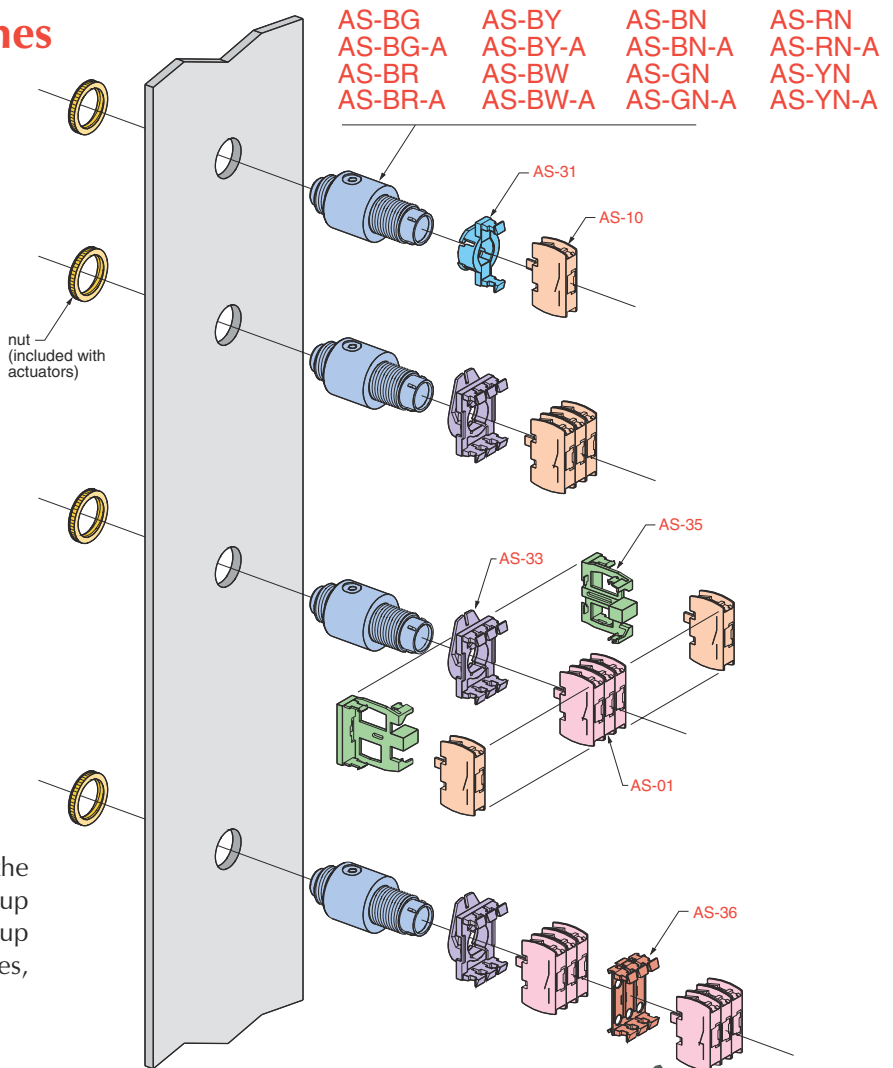


**AS-31 - Single Clip**

**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	Nom. Operating Voltage (VAC) (50-60 Hz)	110	220	440	110	Single phase	0.5
	Nom. Operating Current (A)	8	6.5	3.5	220	Single phase	1.0
DC	Nom. Operating Voltage (VDC)	12	24		220/440	3-phase	3.0
	Nom. Operating Current (A)	4	1.5		440/480	3-phase	5.0
<b>Electrical Life</b>		<b>220 V (50-60 Hz)</b>		<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  
**Temperature Range:** 32° - 230° F  
**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 ±12% or 1 psi 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

**Switch Terminals:**

- SAS:** **0** no switch  
**1** 110 series Q.C.  
**MAS:** **0** no switch  
**2** 187 series Q.C.  
**3** screw terminals

**Actuation Pressure\***

- 06** 6 psig  
**20** 20 psig  
**40** 41 psig  
**65** 65 psig

**Deactuation Pressure\***

- 06** 5 psig  
**20** 18 psig  
**40** 36 psig  
**65** 58 psig

**Inlet Port:**

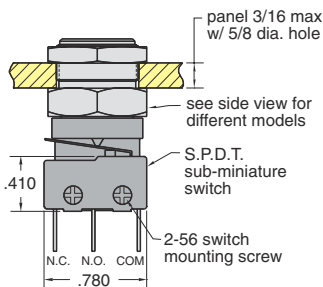
- Blank** 10-32 thd  
**F** 1/8 NPT female  
**P** 1/8 NPT male  
**M5** M5 x 0.8 thd

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

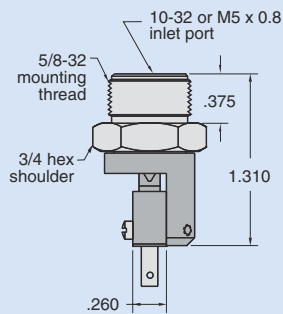
Pressure Actuated

Mechanically Actuated

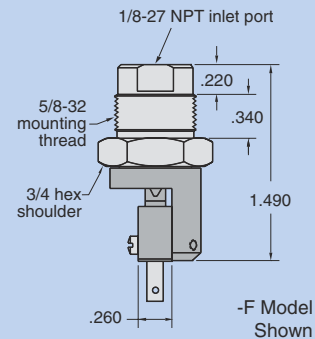
## SAS Model



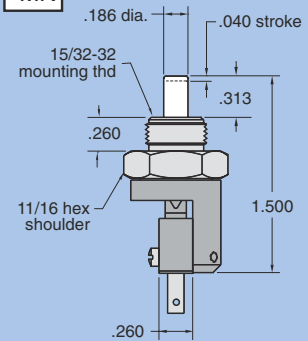
### STD. & -M5



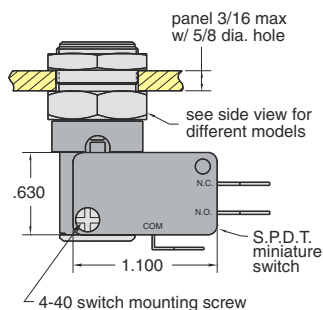
### -F & -P



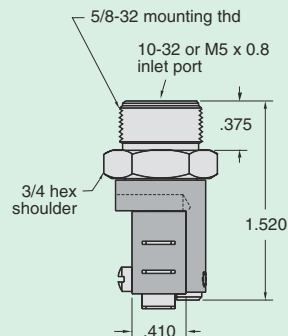
### -MN



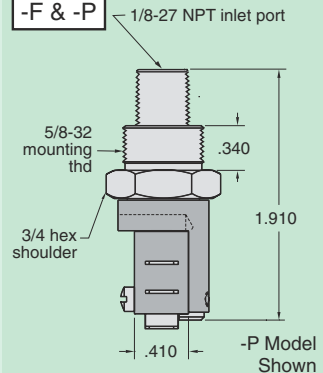
## MAS Model



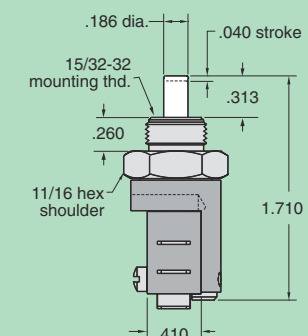
### STD. & -M5



### -F & -P



### -MN



## ES-1

### Single pole, double throw snap-action electrical switch



**Stem Travel:** 1/8"

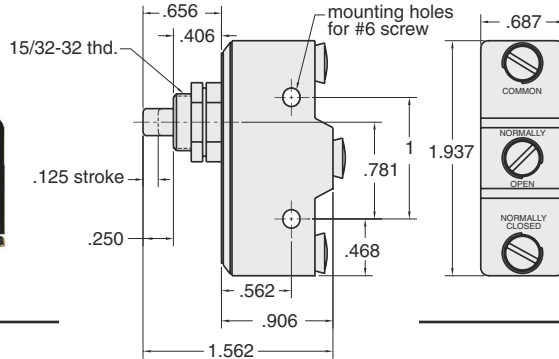
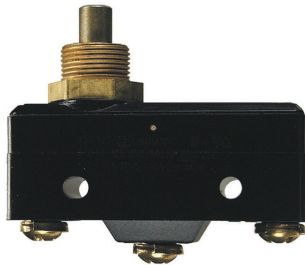
**Rating A.C.:** 120 volts - 15 amperes  
240 volts - 15 amperes  
480 volts - 15 amperes

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

**Mounting:** 15/32-32 thread; nut and lockwashers furnished, also two .140" dia. mounting holes in body

**Temperature Range:** 32° to 230° F

**Approvals:** UL and CE



15601



**Type:** Terminal cover for ES-1 (optional)

**Note:** Specify ES-1GP for gold plated contact.

## 5100-3 NO 5100-3 NC

### Pneumatic electric switch



**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)

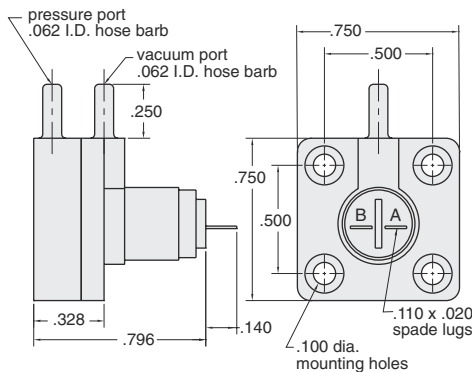
**Construction:** ABS plastic case gold plated contacts natural rubber diaphragm

**Options:** 5100 N.O. contacts normally open  
5100 N.C. contacts normally closed

**Weight:** 4 grams

**Temperature Range:** 32° to 230° F

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



## Did you know...

Clippard Instrument Laboratory, Inc. began as a manufacturer of radio coils and test instruments in 1941.

