

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides **H**

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement



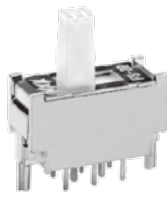
## AS Series ..... H4

0.4VA Logic Level  
Straight, Right Angle & Vertical PC



## CS Series ..... H10

3A Power Level  
Straight PC  
PCB Mount



## FS Series ..... H14

High Frequency  
90MHz to 1GHz  
Straight PC



## JS01, JS03 Series ..... H18

Extended & Piano Actuated DIP Slides  
25mA @ 24V DC  
Straight PC



## JS02, JS04 SMT Series ..... H24

Ultra-miniature 25mA DIP Slide  
Gull Wing Terminals  
4- & 8-position



**MS Series** ..... H30

6A Power Level & 0.4VA Logic Level  
Solder Lug, Straight PC, Right Angle & Vertical PC  
Panel Mount, PCB Mount, & Bracket Mount



**MS Illuminated Series** ..... H38

6A Power Level  
LED Illumination  
Solder Lug & Straight PC  
PCB Mount & Flat Frame Mount



**SM Series** ..... H42

Ultra-miniature  
500mA or 1.0mA  
Straight PC



**SS Series** ..... H44

0.1A Power Level & 0.4VA Logic Level  
Top & Side Actuated  
PCB Mount



**SS Illuminated Series** ..... H49

0.1A Power Level  
LED Illumination  
Top & Side Actuation  
PCB Mount



**SS3 SMT Series** ..... H53

Ultra-miniature 0.4VA Logic Level  
Side Actuated

Toggle

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

**H** Slides

Tactiles

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# General Specifications

## Electrical Capacity (Resistive Load)

**Logic Level:** 0.4VA maximum @ 28V AC/DC maximum  
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)  
Note: Find additional explanation of operating range in Supplement section.

## Other Ratings

**Contact Resistance:** 50 milliohms maximum  
**Insulation Resistance:** 500 megohms minimum @ 500V DC  
**Dielectric Strength:** 500V AC minimum for 1 minute minimum  
**Mechanical Life:** 50,000 operations minimum  
**Electrical Life:** 50,000 operations minimum  
**Nominal Operating Force:** 2.55N  
**Contact Timing:** Nonshorting (break-before-make)  
**Travel:** Pretravel: .082" (2.1mm); Overtravel: .016" (0.4mm); Total Travel: .098" (2.5mm)

## Materials & Finishes

**Actuator:** Glass fiber reinforced polyamide  
**Upper Case Housing:** Carbon blended polyacetal (antistatic)  
**Lower Case Housing:** Glass fiber reinforced polyamide  
**Support Bracket:** Tin plated phosphor bronze  
**Movable Contact:** Phosphor bronze with gold plating  
**Stationary Contacts:** Brass with gold plating  
**Terminals:** Brass with gold plating

## Environmental Data

**Operating Temperature Range:** -30°C through +85°C (-22°F through +185°F)  
**Humidity:** 90 ~ 95% humidity for 192 hours @ 40°C (104°F)  
**Vibration:** 10 ~ 60Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 5 minutes; 3 right angled directions for 30 minutes  
**Shock:** 50G (490m/s<sup>2</sup>) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

## PCB Processing

**Soldering:** Wave Soldering Recommended. See Profile A in Supplement section.  
Manual Soldering: for single pole see Profile B in Supplement section; for double pole see Profile A.  
**Cleaning:** These devices are not process sealed. Hand clean locally using alcohol based solution.

## Standards & Certifications

The A Series slides have not been tested for UL recognition or CSA certification. These switches are designed for use in a low-voltage, low-current, logic-level circuit. When used as intended in a logic-level circuit, the results do not produce hazardous energy.

# Distinctive Characteristics

Subminiature size (1/3 size of Series M switches) saves space on PC boards.

Specifically developed for logic-level applications.

Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability and unparalleled logic-level reliability. (Additional STC details in Terms & Acronyms; see Supplement section.)

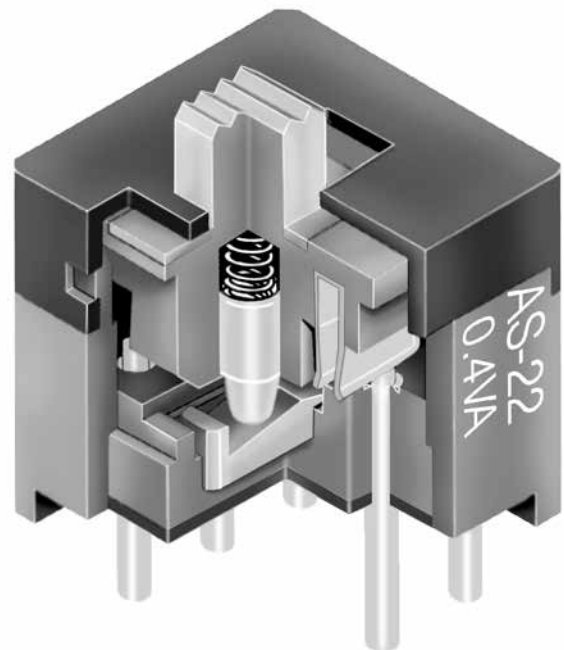
Available in various actuator lengths.

Antistatic superstructure of carbon blended polyacetal prevents static discharge to the contacts.

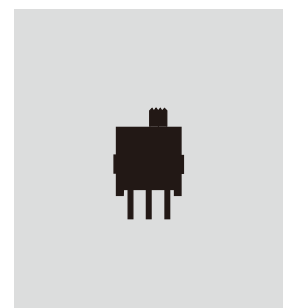
Molded-in, epoxy sealed or ultrasonically welded terminals lock out flux, solvents, and other contaminants.

.100" x .100" (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grid spacing.

Matching indicators available.



Actual Size



## TYPICAL SWITCH ORDERING EXAMPLE

**AS**      **2**      **2**      **A**      **H**

Poles		Circuits				Actuators		PC Terminals		
1	SPST SPDT	1	ON	NONE	OFF	A	.098" (2.5mm) Long		P	Straight
2	DPDT SP3T	2	ON	NONE	ON	B	Flush		*B	Straight with Bracket
		3	ON	OFF	ON	C	.150" (3.8mm) Long		*H	Right Angle with Bracket
		4	ON	ON	ON				*V	Vertical with Bracket

\* Bracketed models are ESD protected

### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**AS22AH**




DPDT  
ON-NONE-ON Circuit

.098" (2.5mm) Long  
Actuator



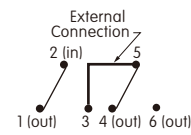
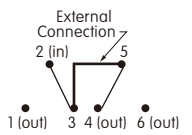
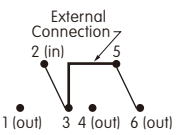
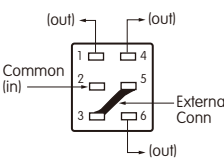
Right Angle PC Terminals

## POLES & CIRCUITS

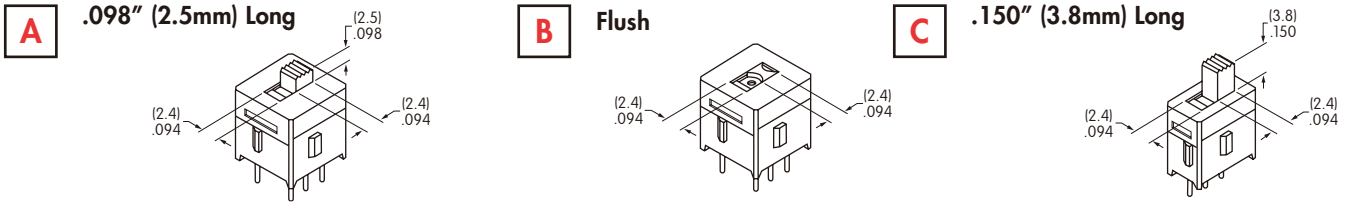
		Slide Position			Connected Terminals			Throw & Schematics
Pole	Model	Left	Center	Right	Left	Center	Right	
SP	<b>AS11</b>	ON	NONE	OFF	3-1	OPEN	OPEN	SPST 
SP	<b>AS12</b> <b>AS13</b>	ON ON	NONE OFF	ON ON	2-1 2-1	OPEN OPEN	2-3 2-3	SPDT 
DP	<b>AS22</b> <b>AS23</b>	ON ON	NONE OFF	ON ON	2-1 5-4 2-1 5-4	OPEN OPEN	2-3 5-6 2-3 5-6	DPDT 

Note: Terminal numbers are not actually on the switch.

### For 3 Throw (3-On)

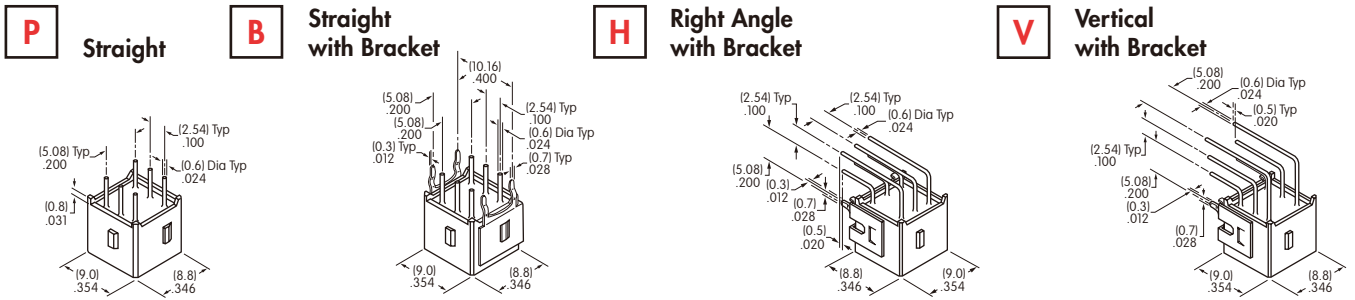
Connected Terminals & Schematics					External Connection
Pole	Model	Left	Center	Right	
SP	<b>AS24</b>	ON 	ON 	ON 	The SP3T model utilizes a double pole base.  External connections must be made during field installation. 
		2-1 5-4	2-3 5-4	2-3 5-6	

ACTUATORS



Actuator Color: Gray standard; contact factory for other colors.

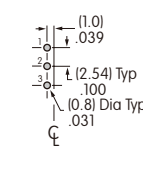
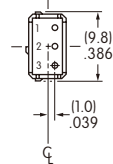
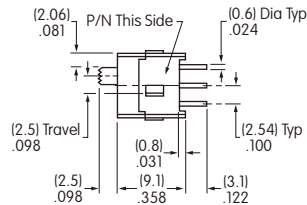
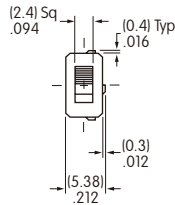
PC TERMINALS



Use of a support bracket is recommended to increase PCB mounting strength and stability.

TYPICAL SWITCH DIMENSIONS

Single Pole



Actuator shown in LEFT position

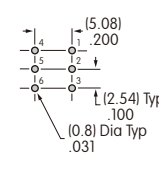
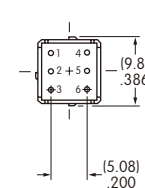
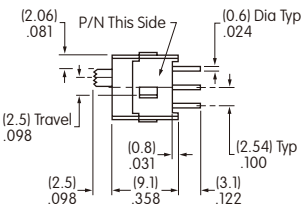
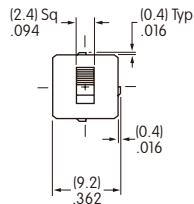
Single throw models do not have terminal 2.

Straight PC



AS12AP

Double Pole



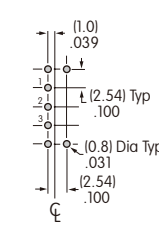
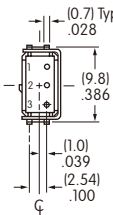
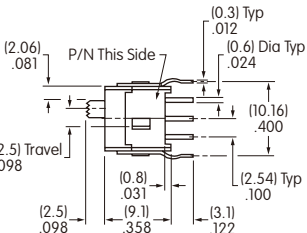
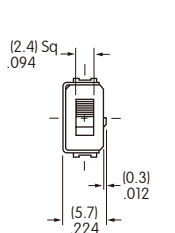
Actuator shown in LEFT position

Straight PC



AS22AP

Single Pole



Actuator shown in LEFT position

Straight PC • Bracket

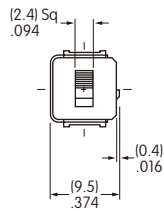


AS12AB

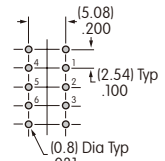
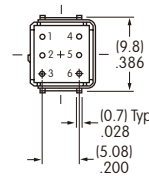
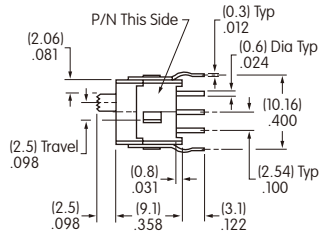
Toggle  
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Pushbuttons  
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Rotaries  
Slides  
Tactiles  
Tilt  
Touch  
Indicators  
Accessories

## TYPICAL SWITCH DIMENSIONS

### Straight PC • Bracket



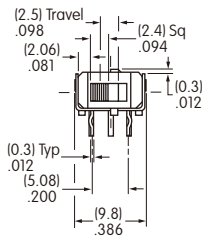
### Double Pole



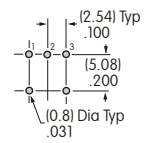
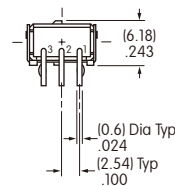
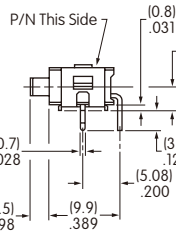
AS22AB

Actuator shown in LEFT position

### Right Angle PC



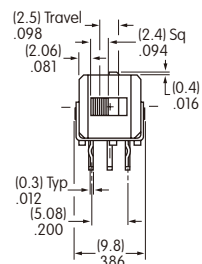
### Single Pole



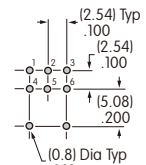
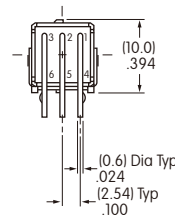
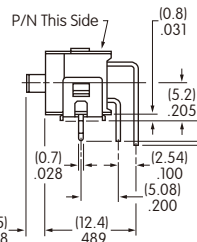
AS12AH

Actuator shown in LEFT position

### Right Angle PC



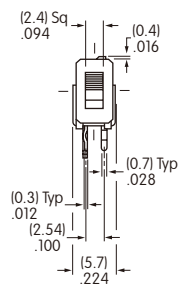
### Double Pole



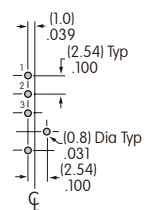
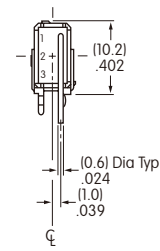
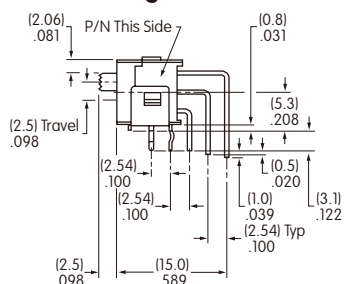
AS22AH

Actuator shown in LEFT position

### Vertical PC



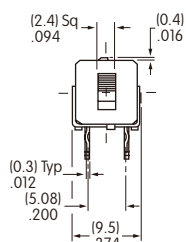
### Single Pole



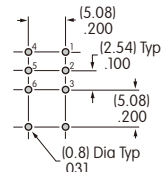
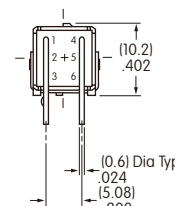
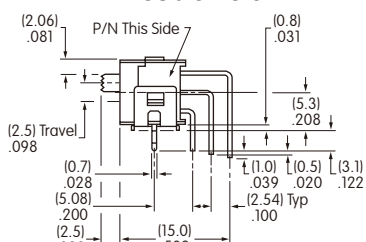
AS12AV

Actuator shown in LEFT position

### Vertical PC



### Double Pole



AS22AV

Actuator shown in LEFT position

Toggles  
Rockers  
Pushbuttons  
Illuminated PB  
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