

# General Specifications

## Electrical Capacity (Resistive Load)

**Logic Level:** 0.4VA maximum @ 28V AC/DC maximum  
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)  
See Supplement section to find explanation of operating range

## Other Ratings

**Contact Resistance:** 80 milliohms maximum  
**Insulation Resistance:** 100 megohms minimum @ 500V DC  
**Dielectric Strength:** 500V AC minimum for 1 minute minimum  
**Mechanical Life:** 30,000 cycles minimum  
**Electrical Life:** 10,000 cycles minimum  
**Nominal Operating Torque:** .026Nm (.234 lb•in) for momentary action models  
.020Nm (.182 lb•in) for maintained action models  
**Contact Timing:** Break-before-make  
**Angle of Throw:** 90° for 2-position & 45° for 3-position

## Materials & Finishes

**Boot:** Polyvinyl chloride  
**Key:** Brass alloy with bright nickel plating;  
brass alloy with bright nickel plating & ABS resin handle  
**Tumbler Barrel:** Polyacetal  
**Bushing:** Zinc alloy with nickel plating  
**Bracket:** Steel with tin plating  
**Base:** Glass fiber reinforced polyamide  
**Movable Contactor:** Beryllium copper with gold plating  
**Stationary Contacts:** Copper with gold plating  
**Terminals:** Brass with tin plating

## Environmental Data

**Operating Temperature Range:** -25°C through +70°C (-13°F through +158°F)  
**Humidity:** 90 ~ 95% humidity for 240 hours @ 40°C (104°F)  
**Vibration:** 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours  
**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 B in Supplement section.  
Manual Soldering: See Profile B in Supplement section.  
**Cleaning:** Automated cleaning. Boot must be on switch during processing.  
See Cleaning specifications in Supplement section.

## Standards & Certifications

These SK Series devices 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.

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

F  
Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

# Distinctive Characteristics

Sealed body construction plus disposable boot protect contacts and allow automated processing.

Molded-in terminals seal out flux, solvents, and other contaminants.

Short body size for space-saving, behind panel dimensions.

Detent mechanism, with its spring-operated steel ball, gives crisp, positive action for accurate switch setting.

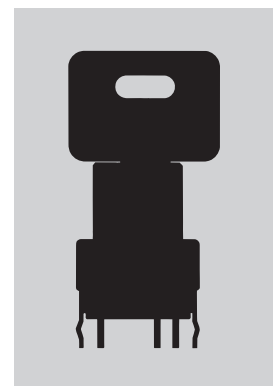
Bifurcated, self-wiping contact mechanism provides unequalled logic-level reliability and smoother, positive detent actuation.

Crimped bracket legs ensure secure PCB mounting and prevent dislodging during automated wave soldering.

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



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

SK

2

4E

G

30

| Poles |              |
|-------|--------------|
| 1     | SPDT<br>SP3T |
| 2     | DPDT<br>DP3T |

| Contact Material |                                 |
|------------------|---------------------------------|
| G                | Gold Rated 0.4VA<br>@ 28V AC/DC |

| Circuits & Key-Removable Positions |        |        |        |                   |
|------------------------------------|--------|--------|--------|-------------------|
| Code                               | Pos. 1 | Pos. 2 | Pos. 3 | Key Removes       |
| 2A                                 | ON     | NONE   | ON     | Positions 1 and 3 |
| 2B                                 | ON     | NONE   | ON     | Position 1        |
| 5B                                 | ON     | NONE   | (ON)   | Position 1        |
| *4D                                | ON     | ON     | ON     | Positions 1, 2, 3 |
| *4E                                | ON     | ON     | ON     | Position 2        |

( ) = Momentary  
\*Can be used as ON-OFF-ON circuit

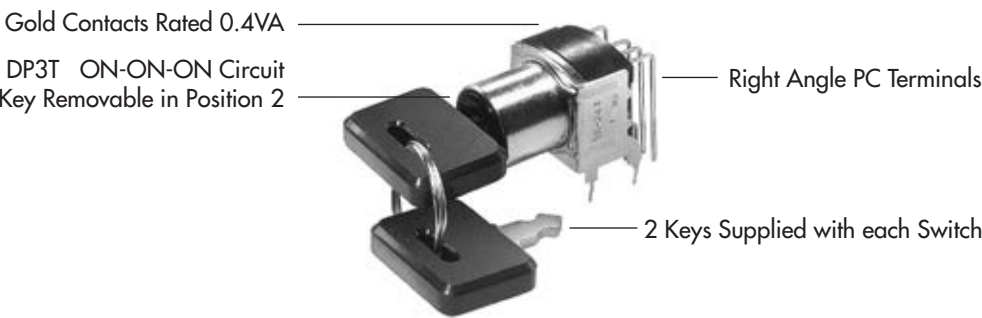
| PC Terminals |                       |
|--------------|-----------------------|
| 13           | Straight with Bracket |
| 30           | Right Angle           |

F

Keylocks

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

SK24EG30



### POLES, CIRCUITS & KEY-REMOVABLE POSITIONS

| Pole & Throw | Model          | Key Positions |              |            | Connected Terminals<br>(Terminal numbers are not on switch) |              |              | Schematic | ◎ = Key Removable<br>• = Not Removable<br>✓ = Maximum Arc |
|--------------|----------------|---------------|--------------|------------|-------------------------------------------------------------|--------------|--------------|-----------|-----------------------------------------------------------|
|              |                | Pos 1         | Pos 2        | Pos 3      | Pos 1                                                       | Pos 2        | Pos 3        |           |                                                           |
| SPDT         | SK12A          | ON            | NONE         | ON         | C1-1                                                        | —            | C1-2         |           |                                                           |
| SPDT<br>SPDT | SK12B<br>SK15B | ON<br>ON      | NONE<br>NONE | ON<br>(ON) | C1-1                                                        | —            | C1-2         |           |                                                           |
| DPDT         | SK22A          | ON            | NONE         | ON         | C1-1<br>C2-4                                                | —            | C1-2<br>C2-5 |           |                                                           |
| DPDT<br>DPDT | SK22B<br>SK25B | ON<br>ON      | NONE<br>NONE | ON<br>(ON) | C1-1<br>C2-4                                                | —            | C1-2<br>C2-5 |           |                                                           |
| SP3T         | SK14D          | ON            | ON           | ON         | C1-1                                                        | C1-2         | C1-3         |           |                                                           |
| SP3T         | SK14E          | ON            | ON           | ON         | C1-1                                                        | C1-2         | C1-3         |           |                                                           |
| DP3T         | SK24D          | ON            | ON           | ON         | C1-1<br>C2-4                                                | C1-2<br>C2-5 | C1-3<br>C2-6 |           |                                                           |
| DP3T         | SK24E          | ON            | ON           | ON         | C1-1<br>C2-4                                                | C1-2<br>C2-5 | C1-3<br>C2-6 |           |                                                           |

### KEY REMOVABLE

**A** Positions 1 & 3  
90° Angular Throw

**B** Position 1  
90° Angular Throw

**D** Positions 1, 2 & 3  
45° Angular Throw

**E** Position 2  
45° Angular Throw

### CONTACT MATERIAL & RATING

**G** Gold over Copper

Logic Level

0.4VA maximum @ 28V AC/DC maximum

### TERMINALS

**13** Straight PC Terminals with Bracket

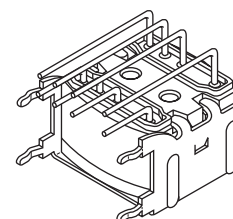
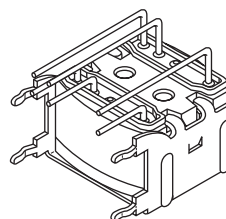
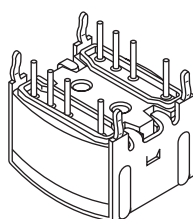
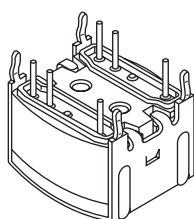
**30** Right Angle PC Terminals

Double Throw Model

Three Throw Model

Double Throw Model

Three Throw Model

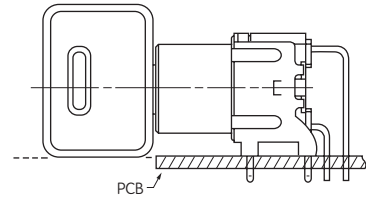
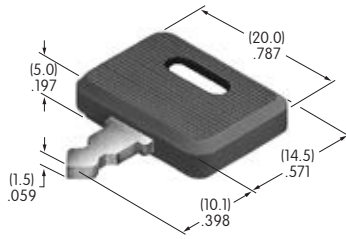


## KEYS

### AT4080 Standard Antistatic Plastic Handle

Brass Alloy with Bright Nickel Plating  
& ABS Resin Handle

2 keys supplied with each switch

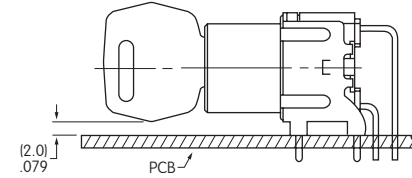
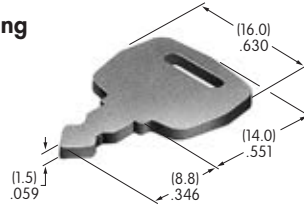


Suitable for all Straight PCB mount and for Right Angle PCB mount where clearance for key is obtainable.

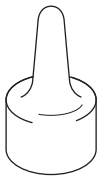
### AT4079 for Right Angle Mid-board Mounting (Optional) All Metal

Brass Alloy with Bright Nickel Plating

Contact factory if metal keys needed



### Disposable Boot



Each switch is supplied with a boot that provides protection from automated soldering and the cleaning process. Attach the boot without the key installed in the switch.

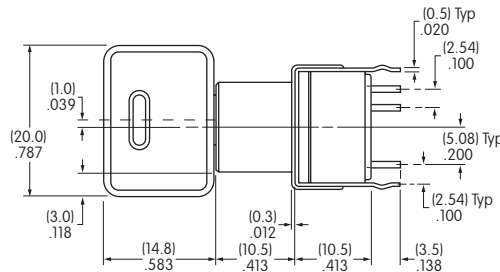
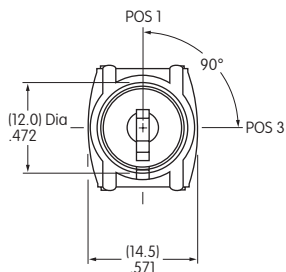
The boot is not reusable; discard after the washing procedure.

Polyvinyl Chloride



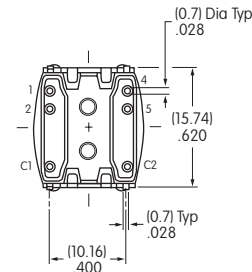
## TYPICAL SWITCH DIMENSIONS

### Single & Double Pole



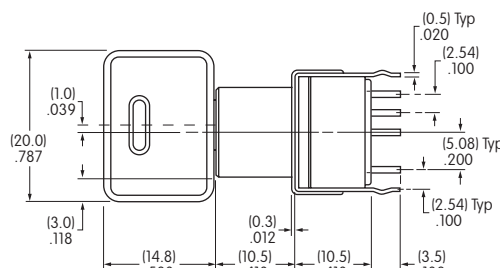
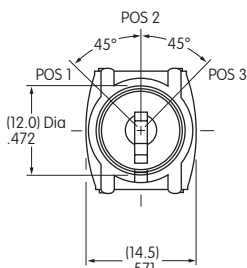
Single Pole models have only terminals 1, 2 & C1

### Straight PC with Bracket • Double Throw



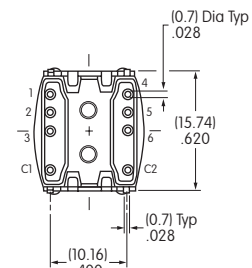
SK12AG13

### Single & Double Pole



Single Pole models have only terminals 1, 2, 3 & C1

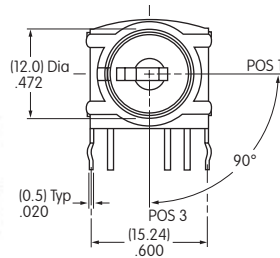
### Straight PC with Bracket • Three Throw



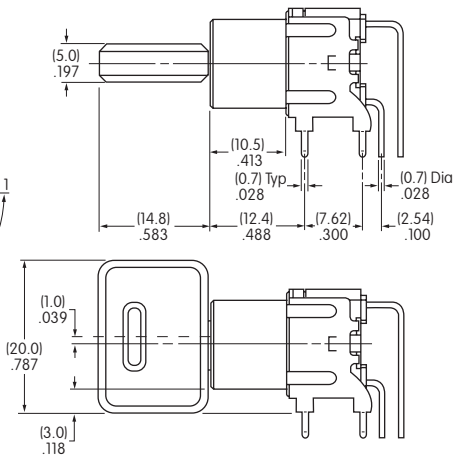
SK24DG13

### TYPICAL SWITCH DIMENSIONS

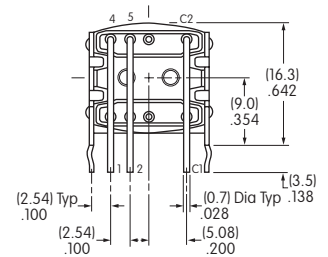
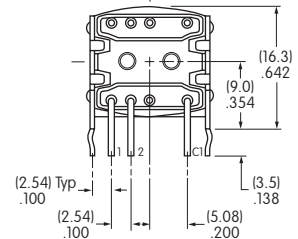
#### Right Angle PC Terminals Double Throw



#### Key in Position 1



#### Single Pole

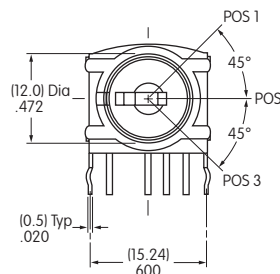


SK15BG30

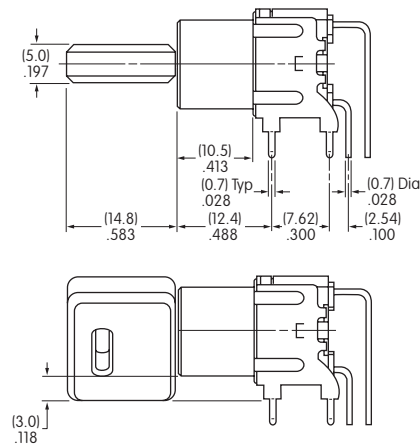
#### Key in Position 3

#### Double Pole

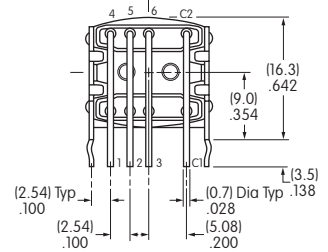
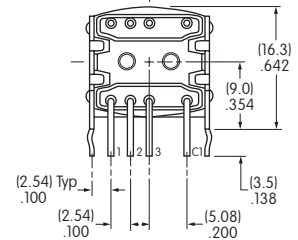
#### Right Angle PC Terminals Three Throw



#### Key in Position 2



#### Single Pole

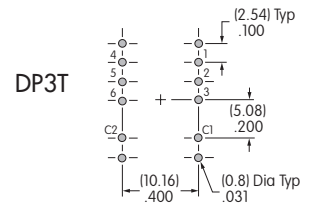
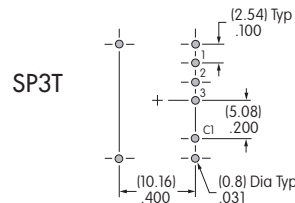
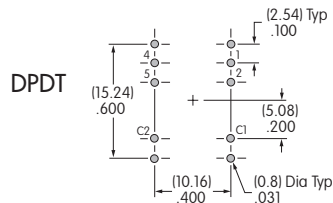
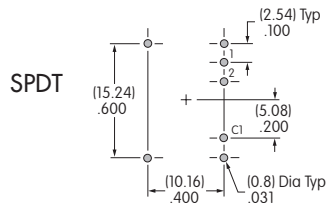


SK24EG30

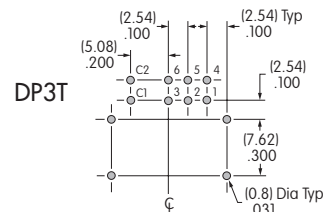
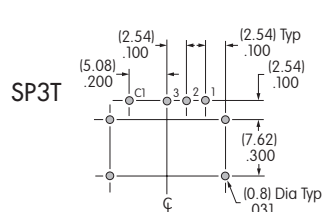
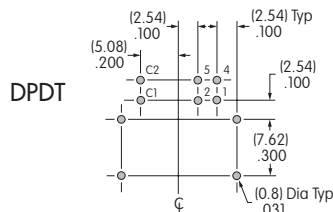
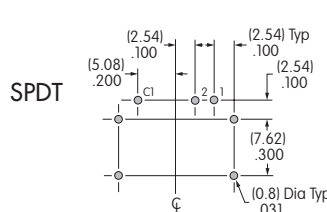
#### Key in Position 1

#### Double Pole

#### Straight PC Footprints



#### Right Angle PC Footprints



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