

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/s²) 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.

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.

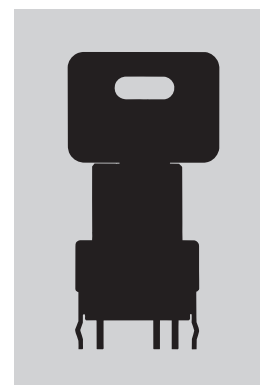
Bifurcated, self-wiping contact mechanism provides unequalled logic-level reliability and smoother, positive detent actuation.

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

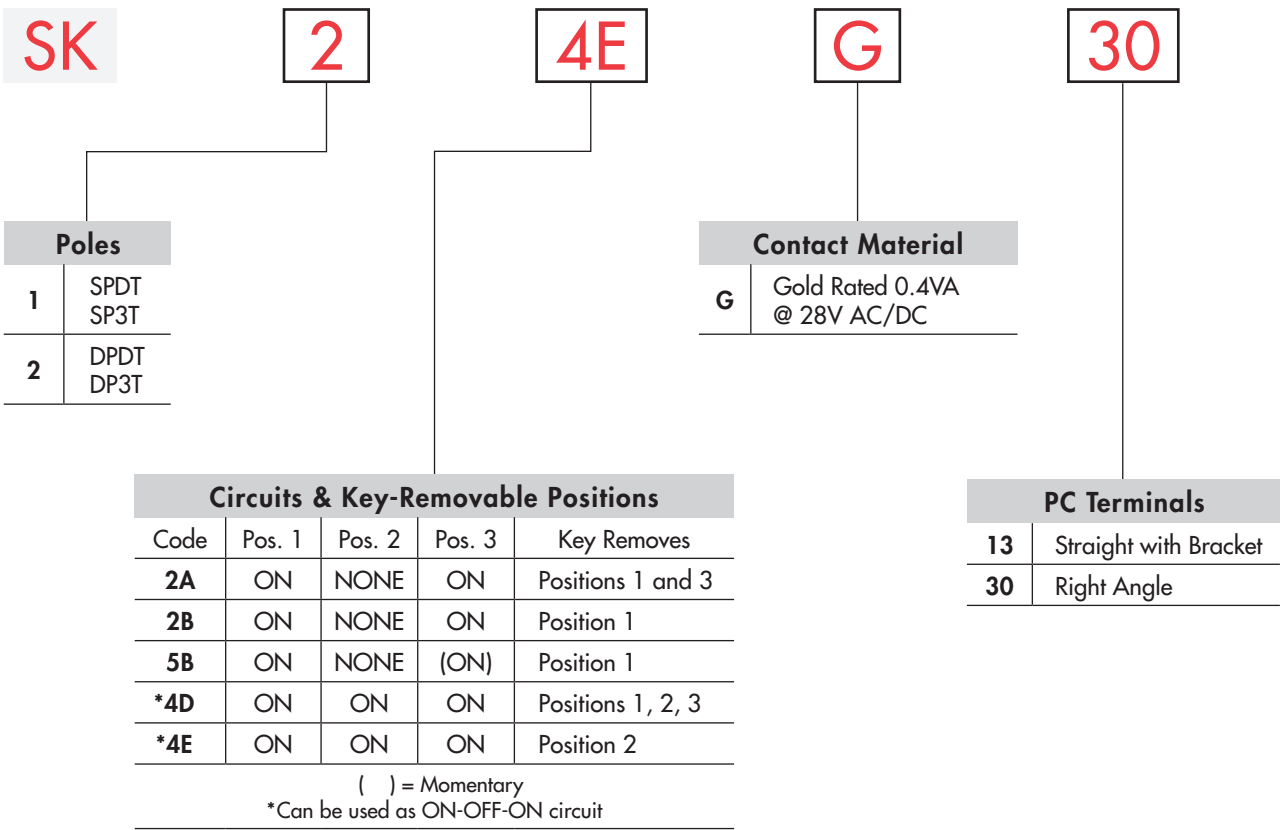
.100" x .100" (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grid spacing.



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

SK24EG30



POLES, CIRCUITS & KEY-REMOVABLE POSITIONS

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

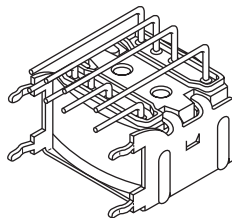
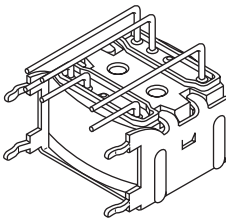
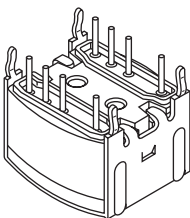
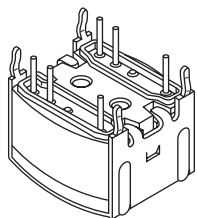
- 13** Straight PC Terminals with Bracket
- 30** Right Angle PC Terminals

Double Throw Model

Three Throw Model

Double Throw Model

Three Throw Model

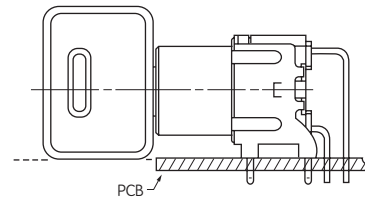
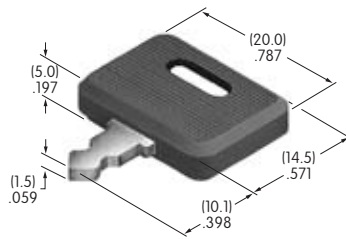


KEYS

AT4080 Standard Antistatic Plastic Handle

Brass Alloy with Bright Nickel Plating
& ABS Resin Handle

2 keys supplied with each switch

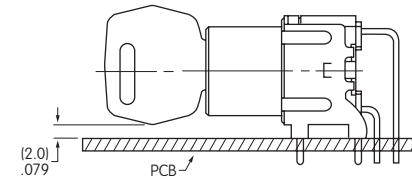
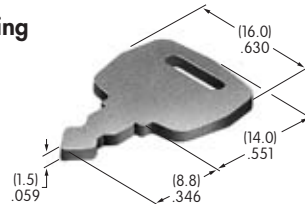


Suitable for all Straight PCB mount and for Right Angle PCB mount where clearance for key is obtainable.

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.

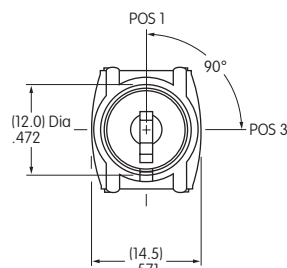
The boot is not reusable; discard after the washing procedure.

Polyvinyl Chloride



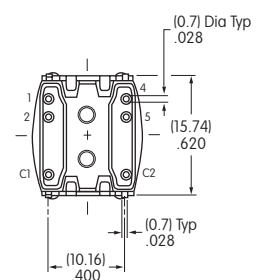
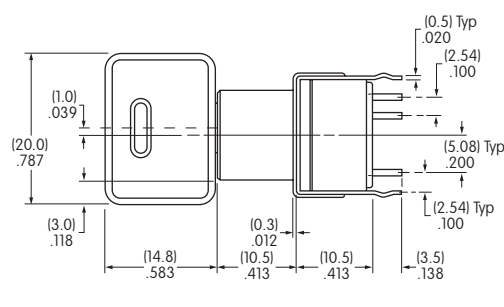
TYPICAL SWITCH DIMENSIONS

Straight PC with Bracket • Double Throw



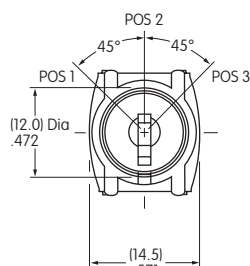
SK12AG13

Single & Double Pole



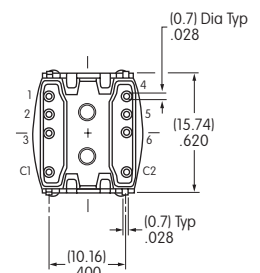
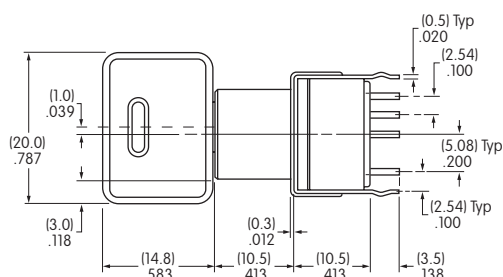
Single Pole models have only terminals 1, 2 & C1

Straight PC with Bracket • Three Throw



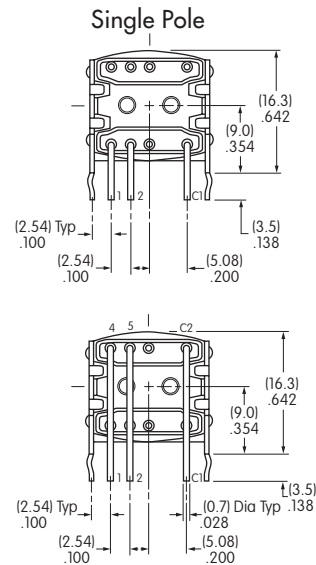
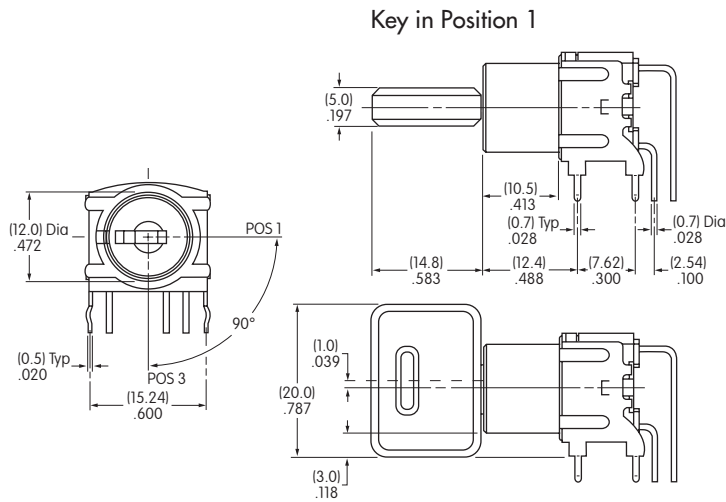
SK24DG13

Single & Double Pole



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

TYPICAL SWITCH DIMENSIONS



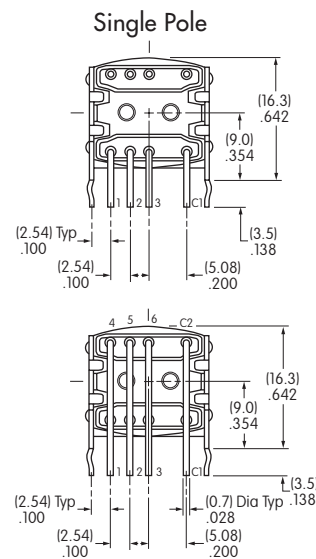
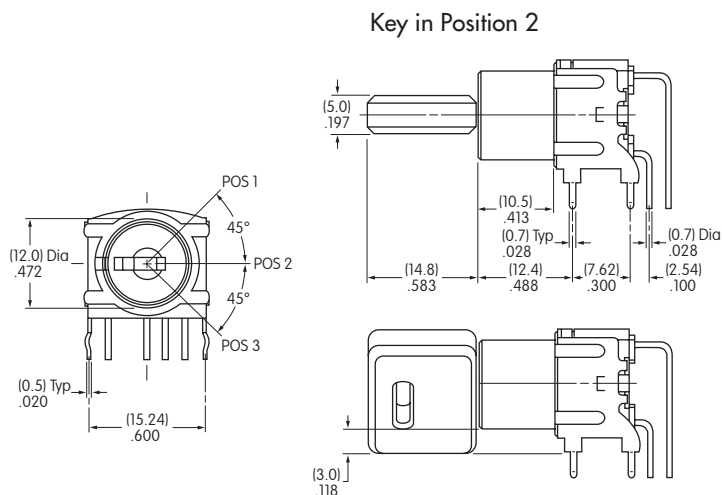
**Right Angle
PC Terminals
Double Throw**



Key in Position 3

Double Pole

SK15BG30



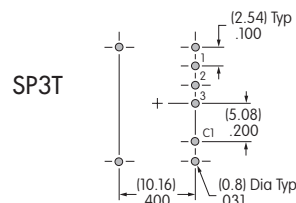
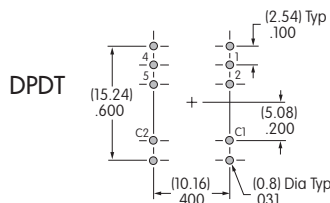
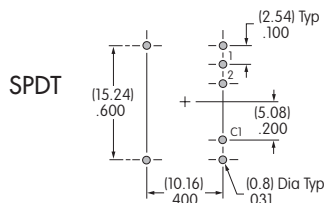
**Right Angle
PC Terminals
Three Throw**



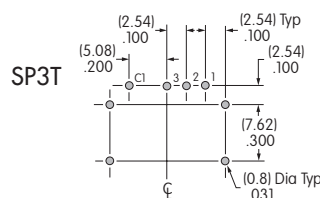
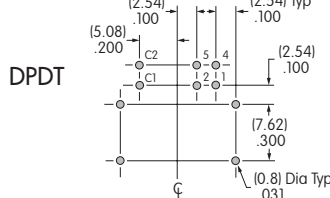
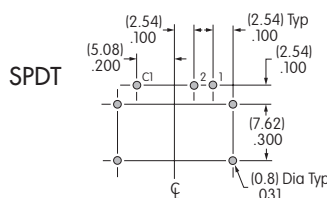
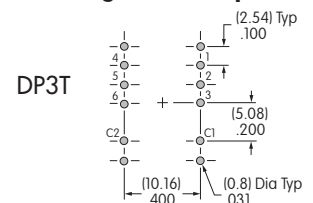
Key in Position 1

Double Pole

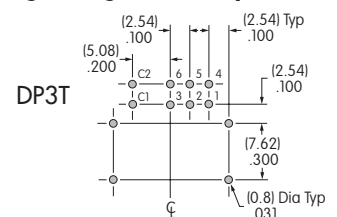
SK24EG30



Straight PC Footprints



Right Angle PC Footprints



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

NKK Switches:

[SK22AG30-RO](#) [SK12BG30-RO](#) [SK14DG13-RO](#) [SK14DG30-RO](#) [SK24DG30-RO](#) [SK24DG13-RO](#) [SK24EG13-RO](#)
[SK14EG13-RO](#) [SK22BG13-RO](#) [SK12AG30-RO](#) [SK12BG13-RO](#) [SK24EG30-RO](#) [SK15BG13-RO](#)