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: 100,000 operations minimum for On-None-On & On-Off-On
50,000 operations minimum for other circuits
Electrical Life: 50,000 operations minimum
Nominal Operating Force: 2.73N (momentary); 1.84N (maintained)
Contact Timing: Nonshorting (break-before-make)
Angle of Throw: 26°

Materials & Finishes

Actuator or Toggle: Nickel plated brass
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 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^2) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Cap Installation Force: 39.23N (8.82 lbf) maximum downward force on actuator

PCB Processing

Soldering: Wave Soldering Recommended: See Profile A in Supplement section.
Manual Soldering: See Profile B in Supplement section.
Cleaning: Automated cleaning. See Cleaning specifications in Supplement section.

Standards & Certifications

The A Series rockers 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 saves space on PC boards.

Specifically developed for logic-level applications.

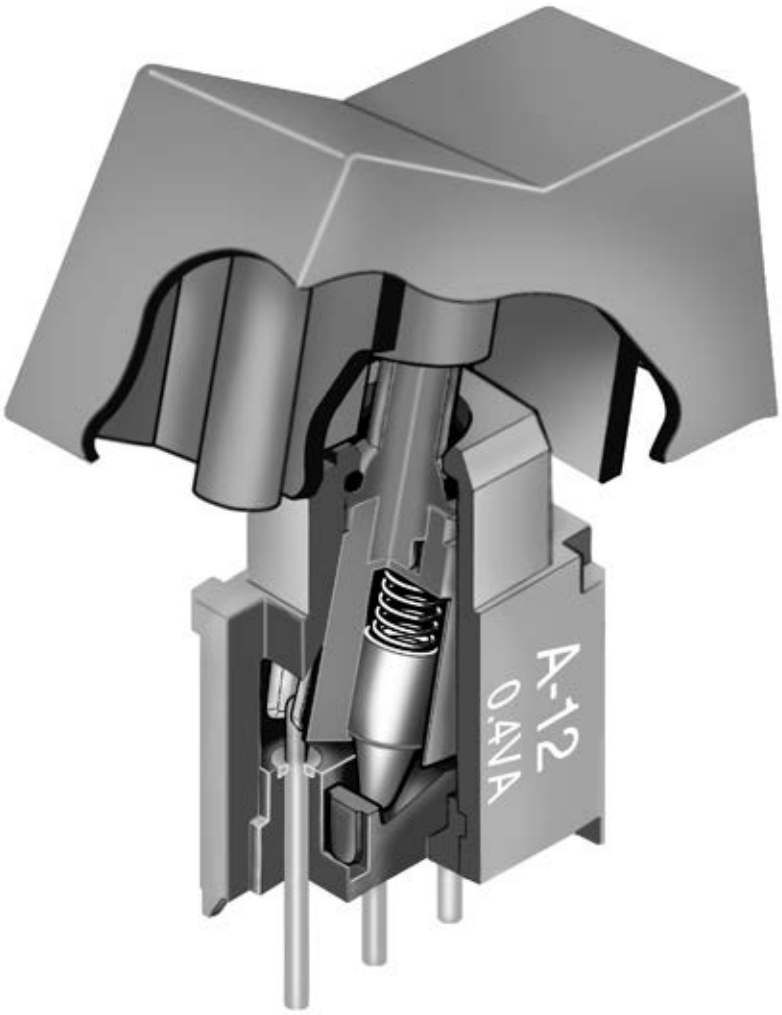
Totally sealed body construction prevents contact contamination and allows time- and money-saving automated soldering and cleaning.

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.)

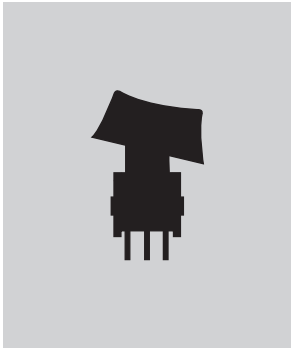
Molded-in, epoxy sealed or ultrasonically welded terminals lock out flux, solvents, and other contaminants.

.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

A 2 2 K1 H — D A

Poles

1	SPDT
2	DPDT SP3T

Circuits

2	ON	NONE	ON
3	ON	OFF	ON
5	ON	NONE	(ON)
R	(ON)	NONE	ON
8	(ON)	OFF	(ON)
9	ON	OFF	(ON)
S	(ON)	OFF	ON
*4	ON	ON	ON
*6	(ON)	ON	(ON)
*7	ON	ON	(ON)

( ) = Momentary

*3-ON circuits

PC Terminals

P	Straight
B	Straight with Bracket
B1	Straight with Inline Bracket (Single Pole only)
H	Right Angle with Bracket
V	Vertical with Bracket
V1	Vertical with Inline Bracket (Single Pole only)

Actuators

K	Snap Top for Rocker Code C
* K1	Snap Top for Rockers Codes D & E

*Available in Americas only

Rockers

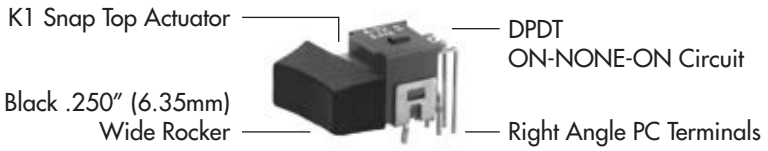
C	.260″ (6.6mm) Wide (K only)
D	.250″ (6.35mm) Wide (K1 only)
E	.300″ (7.6mm) Wide (K1 only)

Colors

Rocker C		Rockers D & E
A	Black	A
B	White	B
C	Red	C
E	Yellow	—
F	Green	—
G	Blue	—
H	Gray	—

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

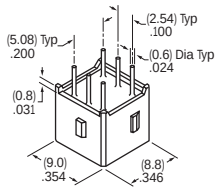
A22K1H-DA



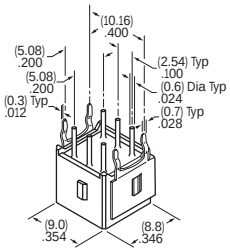
PC TERMINALS

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

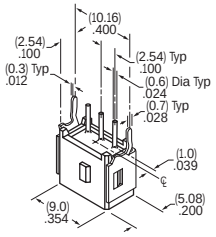
P Straight



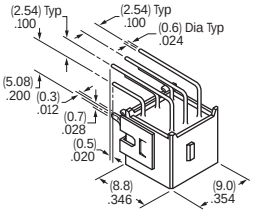
B Straight with Bracket



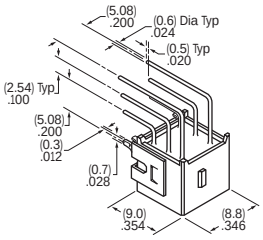
B1 Straight with Inline Bracket Single Pole only



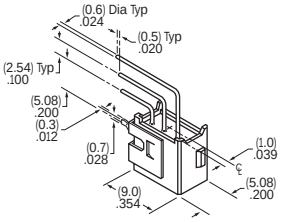
H Right Angle with Bracket



V Vertical with Bracket



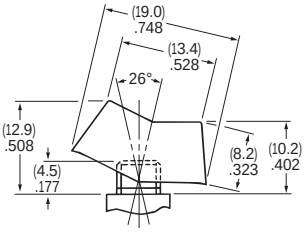
V1 Vertical with Inline Bracket Single Pole only

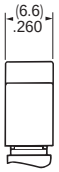


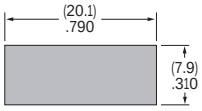
ROCKERS & COLORS

C AT469 .260" (6.6mm) Wide Rocker

Antirotational
Material: Polyamide
Colors Available:
A, B, C, E, F, G, H

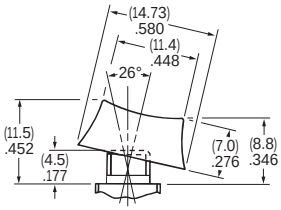


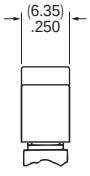


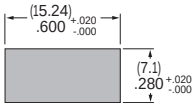


D AT062 .250" (6.35mm) Wide Rocker

Antirotational
Material: Polyamide
Colors Available:
A, B, C

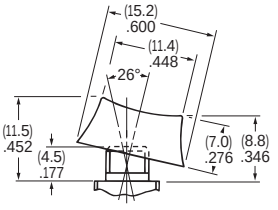


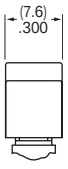


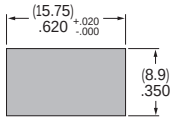


E AT066 .300" (7.6mm) Wide Rocker

Antirotational
Material: Polyamide
Colors Available:
A, B, C



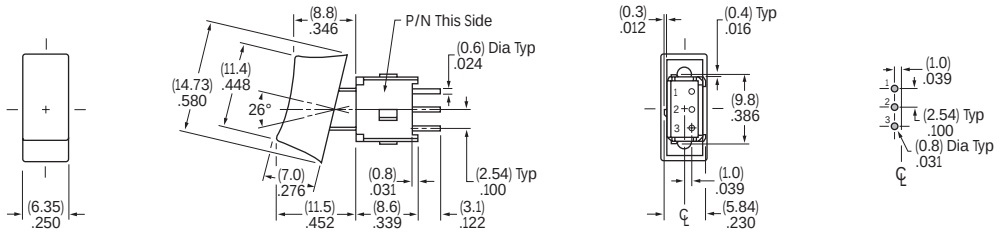




Color Codes: A Black | B White | C Red | E Yellow | F Green | G Blue | H Gray

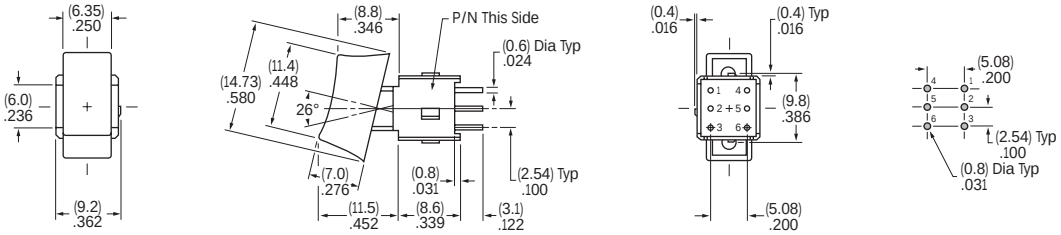
TYPICAL SWITCH DIMENSIONS

Single Pole — Straight PC



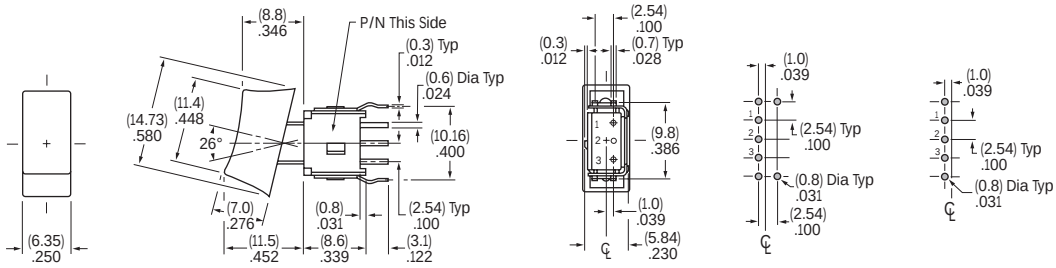
A12K1P-DA

Double Pole — Straight PC



A22K1P-DA

Single Pole — Straight PC • Bracket

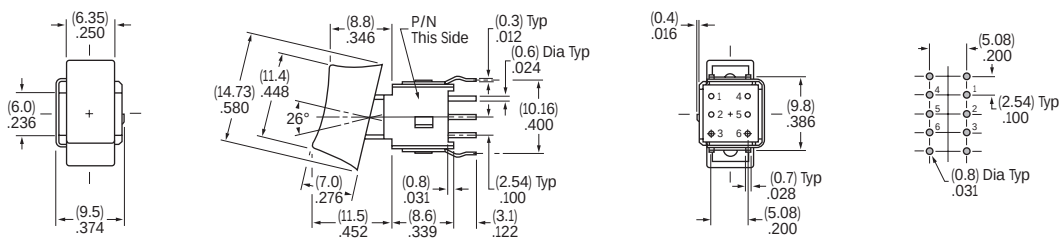


B Terminals

B1 Terminals

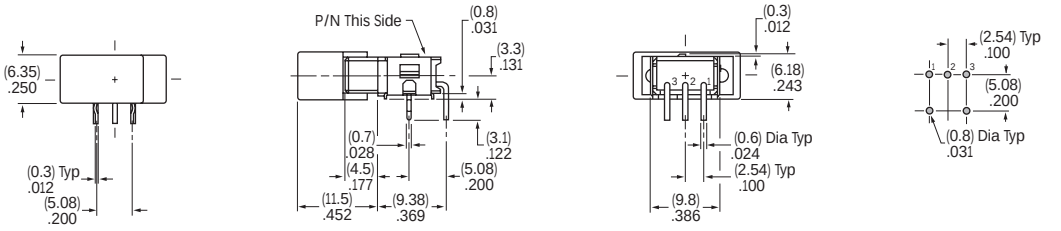
A12K1B-DA

Double Pole — Straight PC • Bracket



A22K1B-DA

Single Pole — Right Angle PC



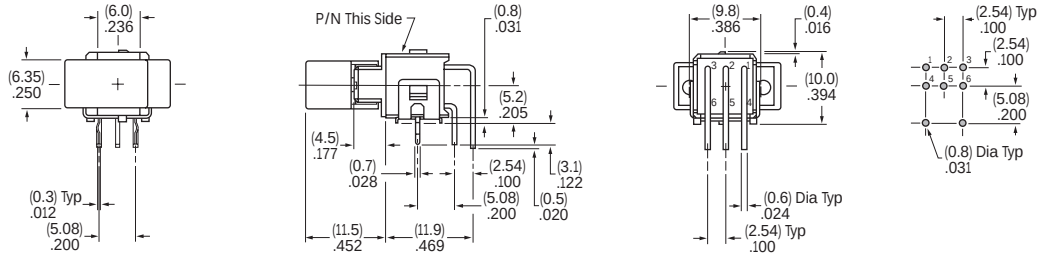
A12K1H-DA

TYPICAL SWITCH DIMENSIONS

Right Angle PC

A22K1H-DA

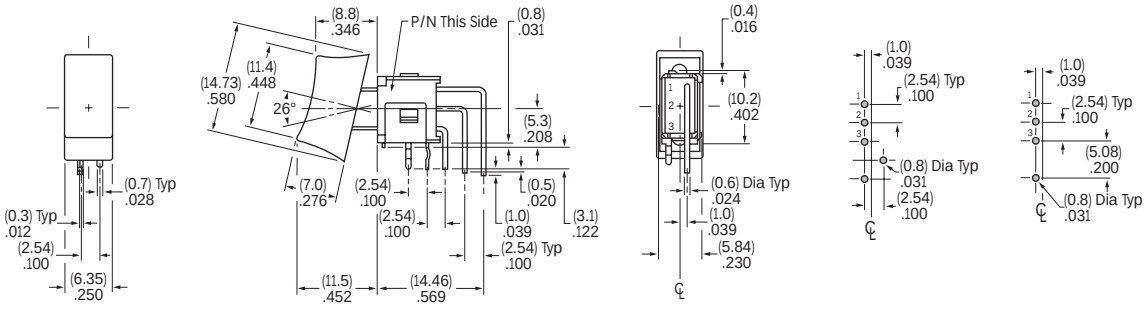
Double Pole



Vertical PC

A12K1V-DA

Single Pole

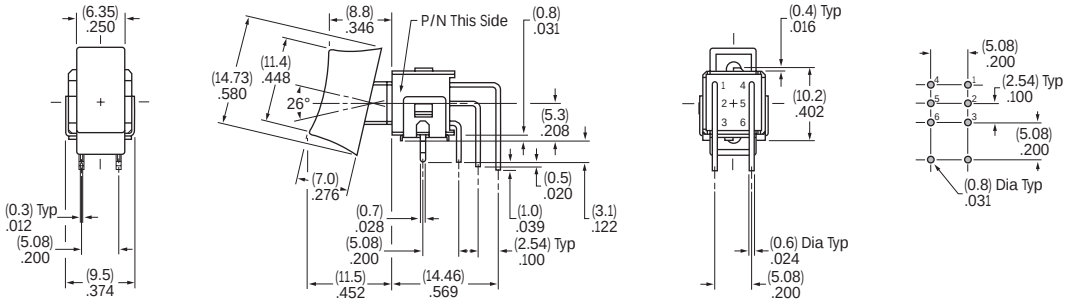


V Terminals V1 Terminals

Vertical PC

A22K1V-DA

Double Pole



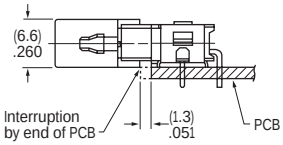
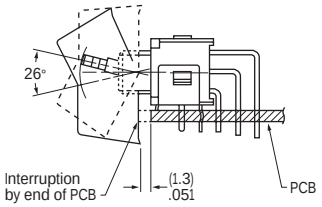
ROCKER MOUNTING PRECAUTION

Rocker switches with vertical and right angle terminals must be mounted so that extension of the PC board beyond the top of the switch housing does not interrupt rocker movement, in turn causing incomplete switching operation.

The MAXIMUM limit of the PC board extension is .051" (1.3mm), as illustrated below.

This precaution does not apply to the double pole switch with right angle terminals due to the extra width of the switch allowing the rocker to clear the PC board.

Side View of Rocker
Right Angle Mounting PC
Single Pole Only



Side View of Rocker
Vertical Mounting PC
Single Pole and
Double Pole