General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 1A @ 125V AC or 1A @ 30V DC
Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Logic/Power Level: (gold over silver) Combines silver & gold ratings

Note: Find additional explanation of dual rating & operating range in Supplement section.

Other Ratings

Contact Resistance: 20 milliohms maximum for silver; 30 milliohms maximum for gold
Insulation Resistance: 1,000 megohms minimum @ 500V DC
Dielectric Strength: 1,000V AC minimum between contacts for 1 minute minimum;
1,500V AC minimum between contacts & case for 1 minute minimum
Mechanical Life: 200,000 operations minimum
Electrical Life: 25,000 operations minimum for silver; 100,000 operations minimum for gold
Nominal Operating Force: Single pole 2.94N & double pole 4.90N
Contact Timing: Nonshorting (break-before-make)
Travel: Pretravel .023" (0.6mm); Overtravel .016" (0.4mm); Total Travel .039" (1.0mm)

Materials & Finishes

Plunger: Brass with nickel plating
Support Bracket: Brass with tin plating
Bushing/Housing: Glass fiber reinforced polyamide (UL94V-0)
Sealing Ring: Nitrile butadiene rubber
Base: Glass fiber reinforced polyamide (UL94V-0)
Movable Contacts: Silver alloy with silver plating (code W); copper with gold plating (code G);
or silver alloy with gold plating (code A)
Stationary Contacts: Silver alloy with silver plating (code W); copper with gold plating (code G);
or silver alloy with gold plating (code A)
Terminals: Brass with silver or gold plating

Environmental Data

Operating Temp Range: –30°C through +85°C (–22°F through +185°F)
Humidity: 90 ~ 95% humidity for 96 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: 49.0N (11.0 lbf) for plunger A & 79.4N (17.9 lbf) for plunger B

PCB Processing

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

Standards & Certifications

Flammability Standards: UL94V-0 rated bushing/housing & base
UL: **File No. E44145 - Recognized only when ordered with marking on switch.**
Add "/U" or "/CUL" before dash in part number to order UL recognized switch.
All models recognized at 1A @ 125V AC, 1A @ 30V DC, or 0.4A @ 28V DC.
CSA: **File No. 023535_0_000 - Certified only when ordered with marking on switch.**
Add "/C" before dash in part number to order CSA certified switch.
All models certified at 1A @ 125V AC, 1A @ 30V DC, or 0.4A @ 28V DC.

Distinctive Characteristics

Snap-acting contact mechanism gives short travel, sensitive actuation, light touch, smooth feel, audible feedback, and a longer electrical life.

Single unit construction of the bushing and top of the housing gives protection from cleaning fluids or other liquids.

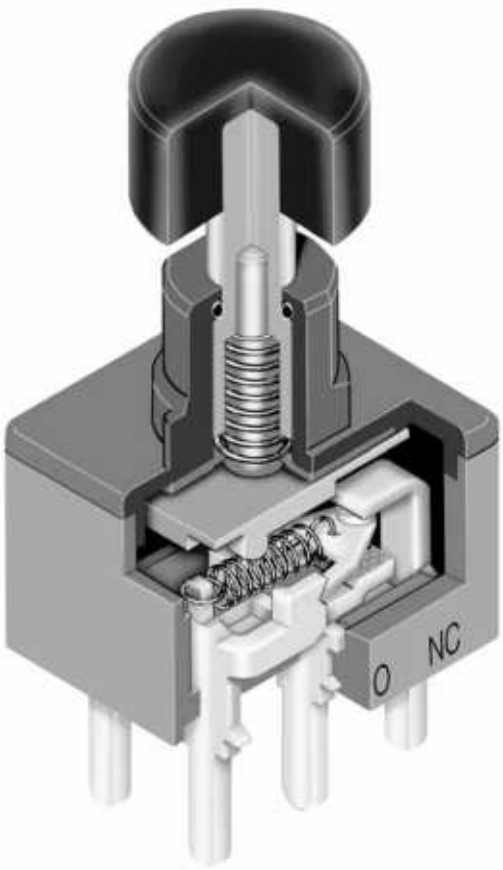
O-ring surrounding actuator at top of bushing interior prevents liquids from reaching switch mechanism.

Ultrasonic welding of upper and lower housing seals out contaminants and allows automated soldering and cleaning.

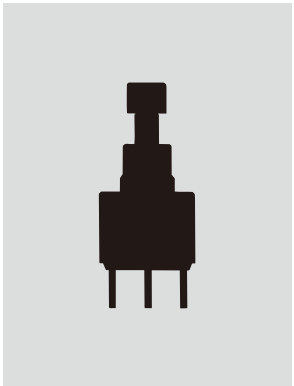
Terminals are epoxy sealed to prevent entry of flux, solvents, and other contaminants.

Bracketed models have crimped bracket legs to ensure secure PC mounting and prevent dislodging during automated soldering.

Logic level and power capabilities are available to suit varying applications.



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

M2B | 15 | A | A5 | G | 30 | – | F | C

Poles & Circuits

15	SPDT	ON	(ON)
25	DPDT	ON	(ON)

( ) = Momentary

Plungers

A	.282″ (7.16mm) Long for cap codes F & H
B	.307″ (7.8mm) Long for cap codes B & C

Bushing

A5	.250″ (6.35mm) Double Flatted

Contact Materials & Ratings

W	Silver; Rated 1A @ 125V AC & 1A @ 30V DC
G	Gold; Rated 0.4VA maximum @ 28V AC/DC maximum
A	Gold over Silver; Rated 1A @ 125V AC & 0.4VA max @ 28V AC/DC max

PC Terminals

03	Straight
13	Straight with .460″ (11.7mm) Bracket
30	.150″ (3.81mm) Right Angle
40	.150″ (3.81mm) Vertical

Snap-on Caps

For Plunger A	
F	.201″ (5.1mm) Diameter
H	.295″ (7.5mm) Diameter
For Plunger B	
B	.315″ (8.0mm) Diameter
C	.394″ (10.0mm) Diameter

Cap Colors

A	Black
B	White
C	Red
* E	Yellow
* F	Green
* G	Blue
* H	Gray

* For cap codes B & C only

IMPORTANT:

Switches are supplied without UL, cULus & CSA marking unless specified. **UL, cULus & CSA recognized only when ordered with marking on the switch.** Specific models, ratings, & ordering instructions are noted on the General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

M2B15AA5G30-FC

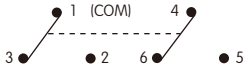


POLES & CIRCUITS

		Plunger Position ( ) = Momentary		Connected Terminals		Throw & Schematics
Pole	Model	Normal	Down	Normal	Down	
SP	**M2B15**	ON	(ON)	1-3	1-2	SPDT
DP	**M2B25**	ON	(ON)	1-3 4-6	1-2 4-5	DPDT

Note: Terminal numbers are not actually on the switch.



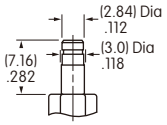


PLUNGERS

A **.282" (7.16mm) Long**

For cap codes F & H

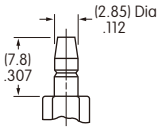
Material:
Chrome over brass



B **.307" (7.8mm) Long**

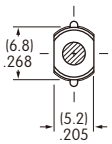
For cap codes B & C

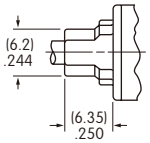
Material:
Chrome over brass



BUSHING

A5 **.250" (6.35mm) Double Flatted**





CONTACT MATERIALS & RATINGS

W	**Silver over Silver**	**Power Level**	**1A @ 125V AC & 1A @ 30V DC**
G	**Gold over Brass or Copper**	**Logic Level**	**0.4VA maximum @ 28V AC/DC maximum**

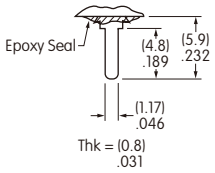
Complete explanation of operating range in Supplement section.

A	**Gold over Silver**	**Power Level or Logic Level**	**1A @ 125V AC or 0.4VA maximum @ 28V AC/DC maximum**

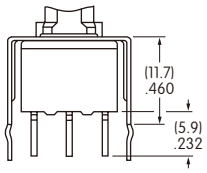
Note: This dual rated option is suitable when two or more identical switches are used in logic and in power circuits within the same application. See Supplement section for complete explanation of dual rating and operating range.

PC TERMINALS

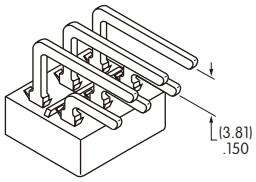
03 **Straight**



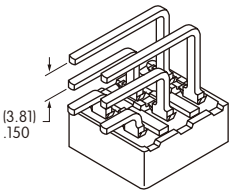
13 **Straight with .460" (11.7mm) Bracket**



30 **.150" (3.81mm) Right Angle**



40 **.150" (3.81mm) Vertical**



SNAP-ON CAPS

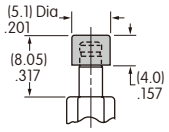
For Plunger Type A

F **AT475**
.201" (5.1mm) Diameter

Material: Polyamide

Colors Available:
A, B, C



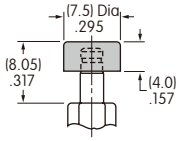


H **AT496**
.295" (7.5mm) Diameter

Material: Polyamide

Colors Available:
A, B, C





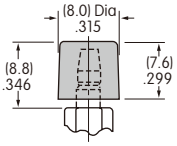
For Plunger Type B

B **AT443**
.315" (8.0mm) Diameter

Material: Polycarbonate

Colors Available:
A, B, C, E, F, G, H



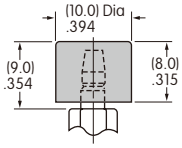


C **AT442**
.394" (10.0mm) Diameter

Material: Polycarbonate

Colors Available:
A, B, C, E, F, G, H



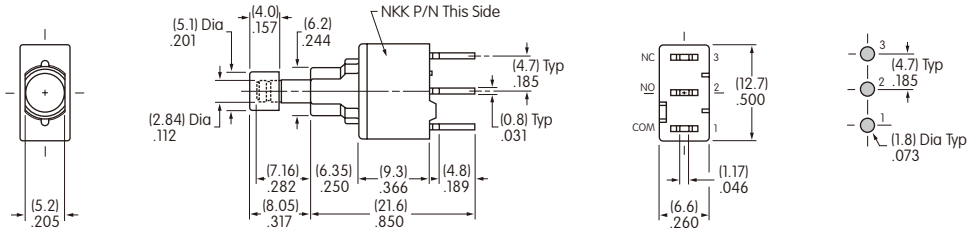


Cap Colors Codes: A Black B White C Red E Yellow F Green G Blue H Gray

TYPICAL SWITCH DIMENSIONS

Single Pole

Straight PC

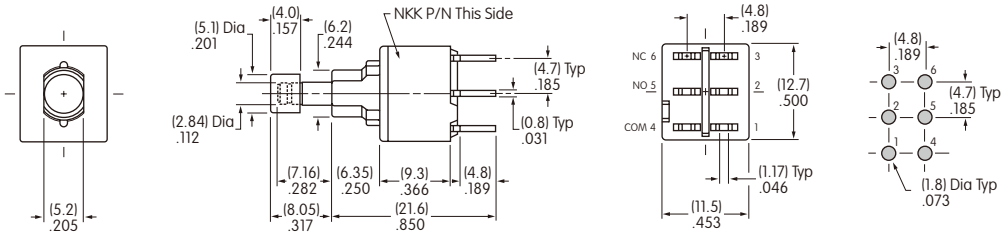




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Double Pole

Straight PC

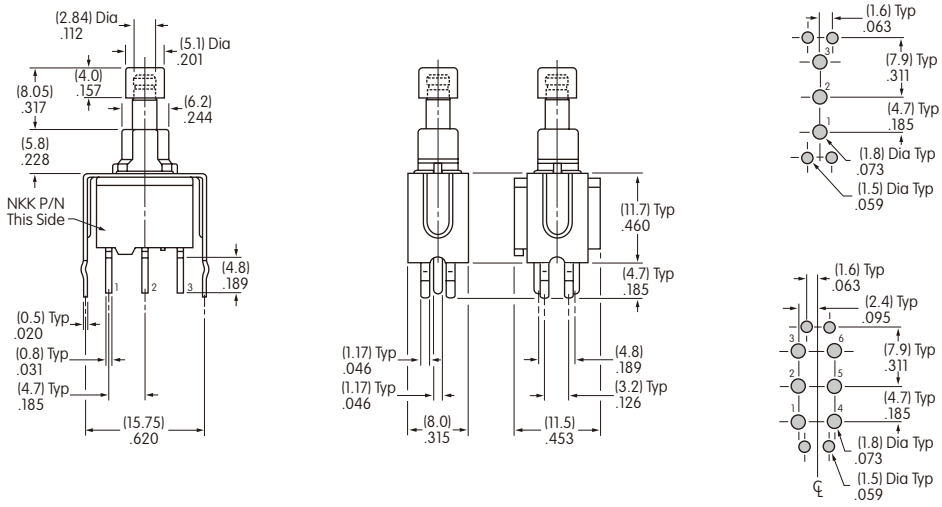




M2B25AA5G03-FC

Single & Double Pole

Straight PC • Bracket



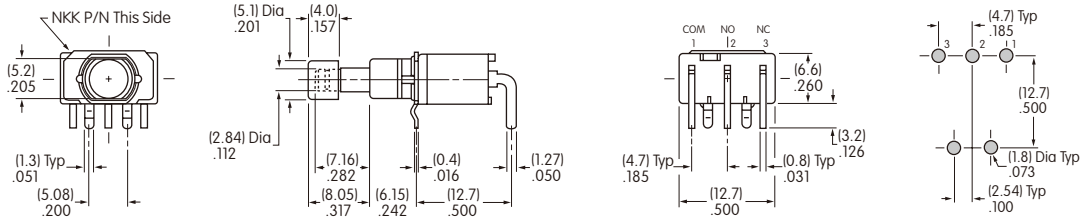


M2B15AA5G13-FC

TYPICAL SWITCH DIMENSIONS

Right Angle PC — Single Pole

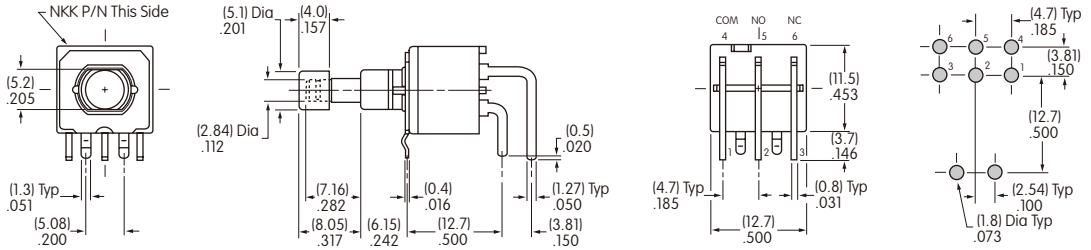




M2B15AA5G30-FC

Right Angle PC — Double Pole

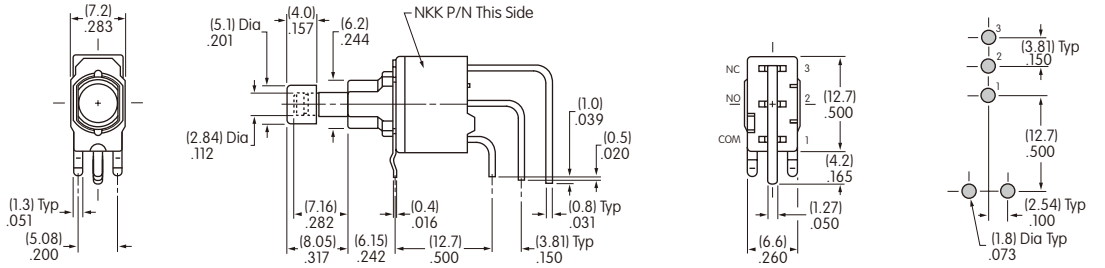




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Vertical PC — Single Pole

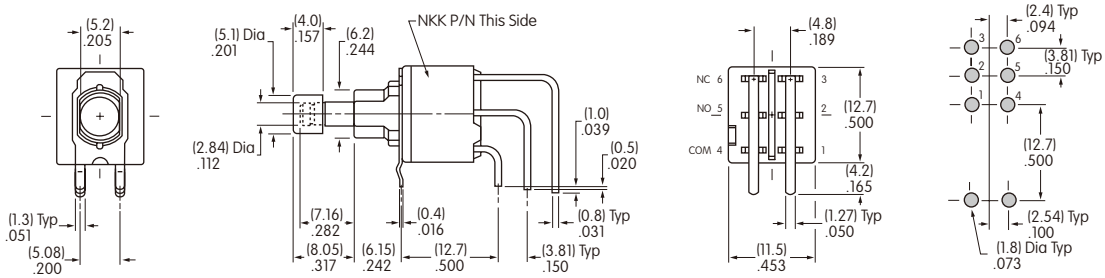




M2B15AA5G40-FC

Vertical PC — Double Pole





M2B25AA5G40-FC