

General Specifications

Electrical Capacity (Resistive Load)

Power Level (code W):	3A @ 125V AC
Logic Level (code G):	0.4VA maximum @ 28V AC/DC maximum (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Logic/Power Level (code A):	Combines W & G ratings Note: See Supplement section to find explanation of operating range.

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 2.45N; double pole 3.92N
Travel:	Pretravel .024" (0.6mm); Overtravel .016" (0.4mm); Total Travel .039" (1.0mm)

Materials & Finishes

Plunger:	Brass with nickel plating
Bushing:	Brass with nickel plating
Mounting & Body Frames:	Stainless steel
Support Bracket:	Brass with tin plating
Case:	Polybutylene terephthalate (PBT) (UL94V-0)
Base:	Diallyl phthalate resin
Movable Contactor:	Phosphor bronze with silver or gold plating
Movable Contacts:	Silver alloy (code W); copper with gold plating (code G)
Stationary Contacts:	Silver with silver plating (code W); copper or brass with gold plating (code G)
Terminals:	Copper with silver plating; copper or brass with gold plating

Environmental Data

Operating Temp Range:	-30°C through +85°C (-22°F through +185°F)
Humidity:	90 ~ 95% humidity for 100 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

Mounting Torque:	1.5Nm (13 lb•in) for double nut; 0.7Nm (6 lb•in) for single nut
Cap Installation Force:	80N (18 lbf) maximum downward force on actuator

Processing

Soldering:	Wave Soldering Recommended: See Profile B in Supplement section. Manual Soldering: See Profile B in Supplement section.
Cleaning:	These devices are not process sealed. Hand clean locally using alcohol based solution.

Standards & Certifications

Flammability Standards:	UL94V-0 Case
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 single & double pole models recognized at 3A @ 125V AC or 0.4VA max. @ 28V AC/DC max.
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. Single pole & double pole models certified at 3A @ 125V AC or 0.4VA max. @ 28V AC/DC max.

Distinctive Characteristics

Short stroke and light touch.

Antijamming design protects contacts from damage due to excessive downward force on the actuator.

High torque bushing construction prevents rotation or separation from frame during installation.

Stainless steel frame resists corrosion.

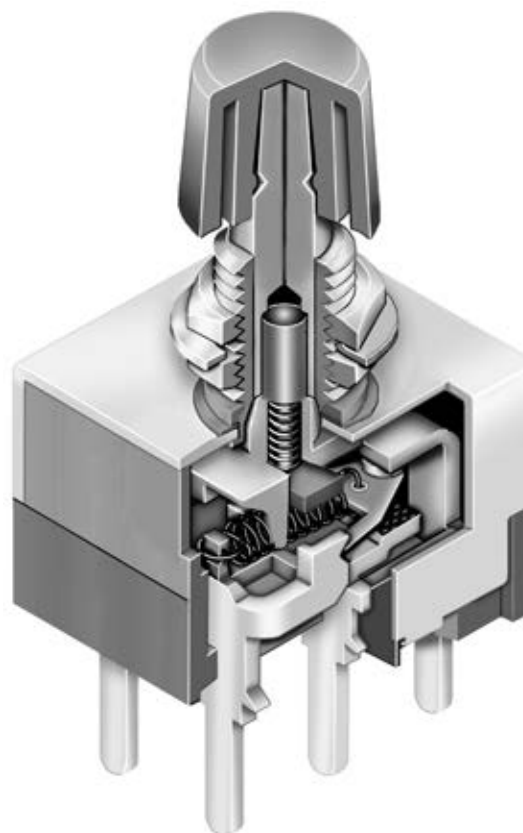
Longer center solder lug terminal simplifies wiring and soldering.

Patented silver contacts of specially composed alloy for hardness.

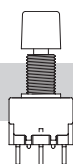
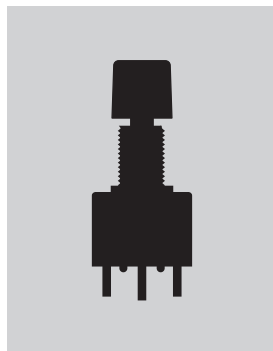
Epoxy sealed terminals prevent entry of solder flux and other contaminants.

Snap-acting mechanism gives smooth actuation and audible feedback.

Prominent external insulating barriers increase insulation resistance and dielectric strength.

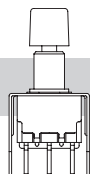


Actual Size



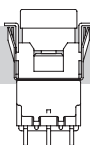
Bushing Mount

Page C118



Bracket PC Mount

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Snap-in Mount

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TYPICAL SWITCH ORDERING EXAMPLE

MB25

11

S2

G

13

—

B

C

Poles & Circuits			
11	SPDT	ON	(ON)
21	DPDT	ON	(ON)
() = Momentary			

Contact Materials & Ratings	
W	Silver Rated 3A @ 125V AC
G	Gold Rated 0.4VA max @ 28V AC/DC max

Caps	
B	.315" (8.0mm) Diameter
C	.394" (10.0mm) Diameter

Bushing	
S2	.300" (7.6mm) Smooth with Keyway

Terminals	
13	.250" (6.35mm) Straight PC with Bracket
30	Right Angle (Single Pole only)
45	Vertical PC

Cap Colors	
A	Black
B	White
C	Red
E	Yellow
F	Green
G	Blue

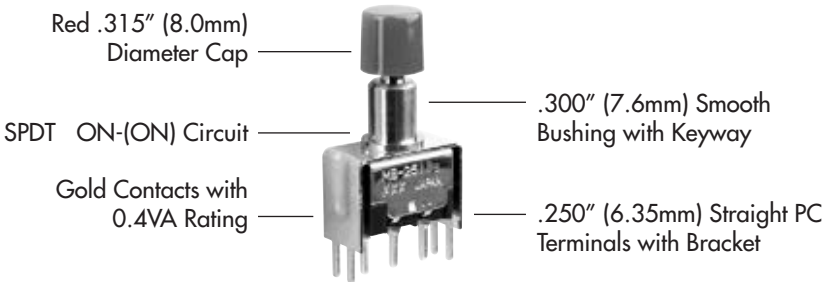
IMPORTANT:



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

MB2511S2G13-BC



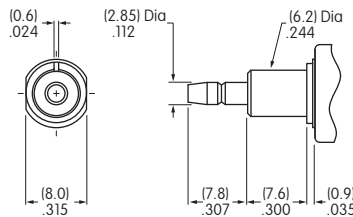
POLES & CIRCUITS

Pole	Model	Plunger Position () = Momentary		Connected Terminals		Throw & Switch Schematics
		Normal 	Down 	Normal 	Down 	
SP	MB2511	ON	(ON)	3-1	3-2	SPDT
DP	MB2521	ON	(ON)	3-1 6-4	3-2 6-5	DPDT

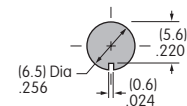
Note: Terminal numbers are not actually on the switch.

BUSHING

S2 .300" (7.6mm)
Smooth with Keyway



Panel Cutout



CONTACT MATERIALS & RATINGS

W Silver over Silver

Power Level

3A @ 125V AC

G Gold over Brass or Copper

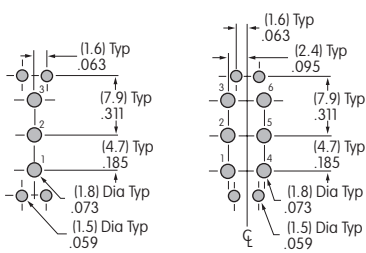
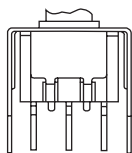
Logic Level

0.4VA maximum @ 28V AC/DC maximum

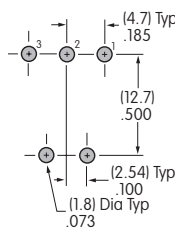
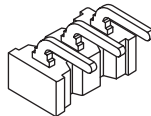
Note: Complete explanation of operating range in Supplement section.

TERMINALS

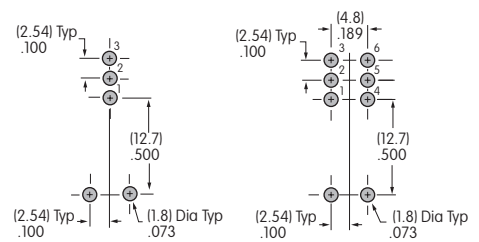
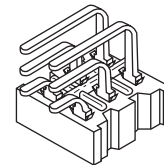
13 .250" (6.35mm) Terminal
with .465" (11.8mm) Bracket



30 Right Angle PC
Single Pole only



45 Vertical PC

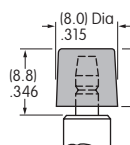


CAPS & CAP COLORS

B AT443
.315" (8.0mm) Diameter Cap

Material: Polycarbonate

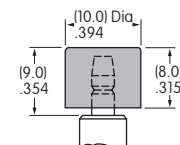
Finish: Glossy



C AT442
.394" (10.0mm) Diameter Cap

Material: Polycarbonate

Finish: Glossy



Cap Colors Available:



Black



White



Red



Yellow



Green



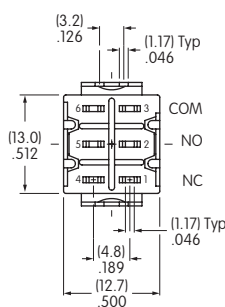
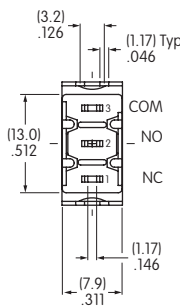
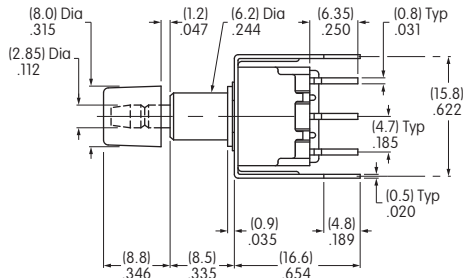
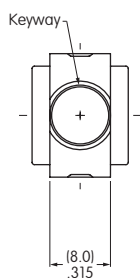
Blue

TYPICAL SWITCH DIMENSIONS

Single Pole

Double Pole

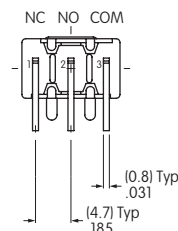
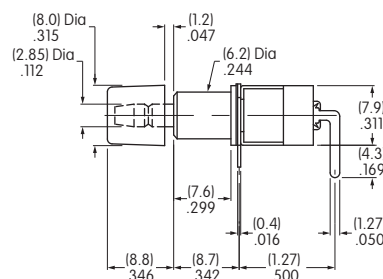
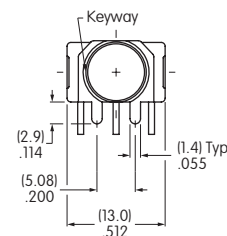
Straight PC • Bracket



MB2511S2G13-BC

Single Pole

Right Angle PC

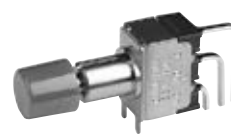
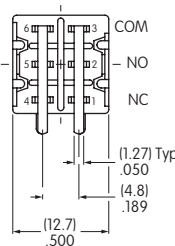
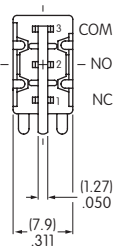
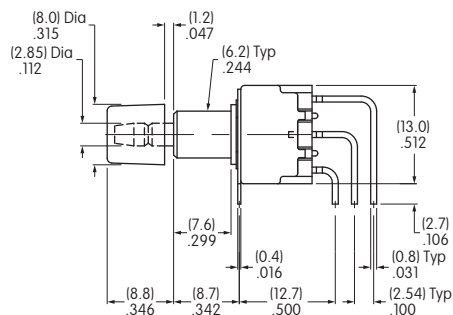
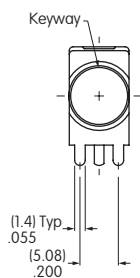


MB2511S2G30-BC

Single Pole

Double Pole

Vertical PC



MB2511S2G45-BC

Mouser Electronics

Authorized Distributor

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

NKK Switches:

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[MB2521S2G45](#) [MB2521S2W13](#) [MB2521S2W45](#)