

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:	Glass fiber reinforced polyester (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.

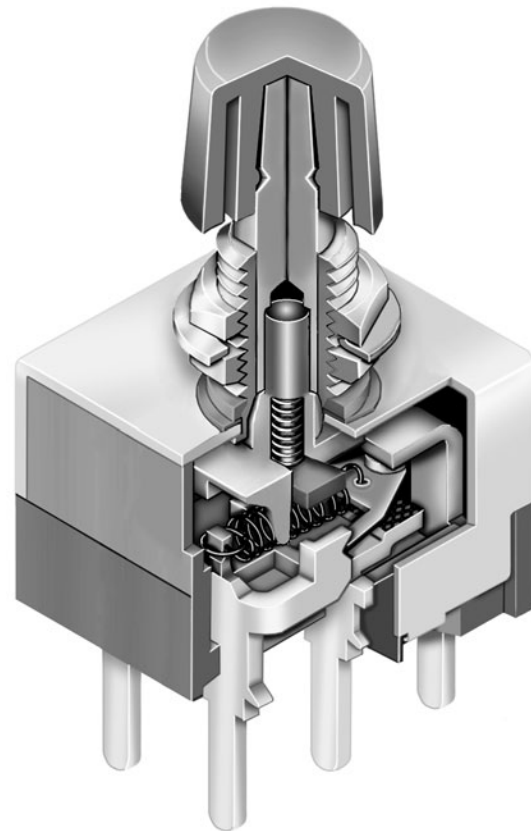
Longer center solder lug terminal simplifies wiring and soldering.

Patented silver contacts of specially composed alloy for hardness.

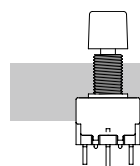
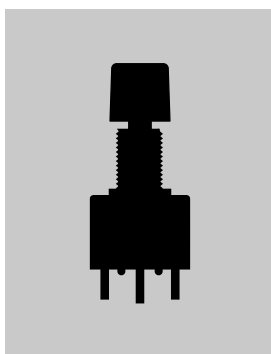
Epoxy sealed terminals prevent entry of solder flux and other contaminants.

Snap-acting mechanism gives smooth actuation and audible feedback.

Prominent external insulating barriers increase insulation resistance and dielectric strength.

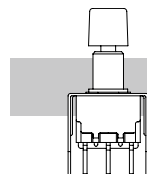


Actual Size



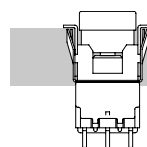
Bushing Mount

Page C118



Bracket PC Mount

Page C121



Snap-in Mount

Page C124

- Toggle
- Rockers
- Pushbuttons**
- Illuminated PB
- Programmable
- Keylocks
- Rotaries
- Slides
- Tactiles
- Tilt
- Touch
- Indicators
- Accessories
- Supplement

TYPICAL SWITCH ORDERING EXAMPLE

MB25

11

S4

W

01

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

S4	.315" (8.0mm) Threaded with Keyway
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Terminals

01	Solder Lug
03	.250" (6.35mm) Straight PC

Cap Colors

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

IMPORTANT:



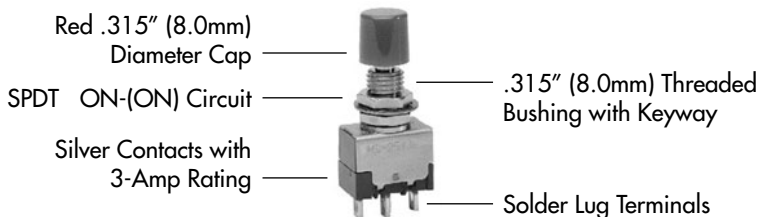
Switches are supplied without UL, cULus & CSA marking unless specified.

UL, cULus & CSA recognized only when ordered with marking on the switch.






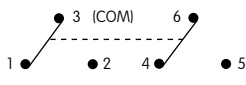
Specific models, ratings, & ordering instructions are noted on General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

MB2511S4W01-BC



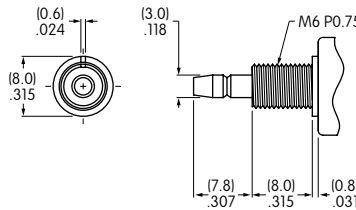
POLES & CIRCUITS

Pole	Model	Plunger Position () = Momentary		Connected Terminals		Throw & Switch Schematics
		Normal  Keyway	Down 	Normal  Keyway	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.

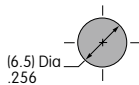
BUSHING

S4 .315" (8.0mm)
Threaded with Keyway

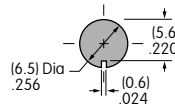


Panel Cutouts

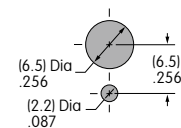
Without Keyway



With Keyway



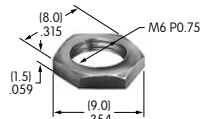
With Optional Locking Ring



Maximum Panel Thickness with Standard Hardware: .134" (3.4mm)

Standard Hardware

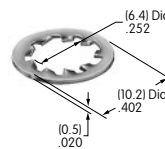
AT513M Threaded Hex Nut



2 included with each switch

Brass with nickel plating

AT509 Lockwasher

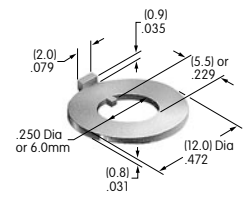


1 included with each switch

Steel with zinc/chromate

Optional Hardware

AT507M Locking Ring



Steel with zinc/chromate

CONTACT MATERIALS & RATINGS



Silver over Silver

Power Level

3A @ 125V AC



Gold over Brass or Copper

Logic Level

0.4VA maximum @ 28V AC/DC maximum

Note: Complete explanation of operating range in Supplement section.

Toggles
Rockers
Pushbuttons
Illuminated PB
Programmable
Keylocks
Rotaries
Slides
Tactiles
Tilt
Touch
Indicators
Accessories
Supplement

Toggles

Rockers

Pushbuttons

Programmable Illuminated PB

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

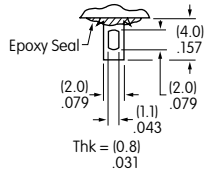
Indicators

Accessories

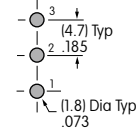
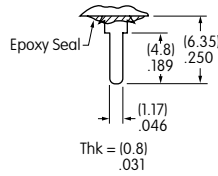
Supplement

TERMINALS

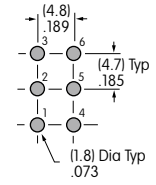
01 Solder Lug



03 .250" (6.35mm) Straight PC



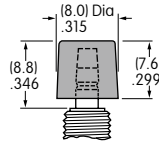
Single Pole



Double Pole

CAPS & CAP COLORS

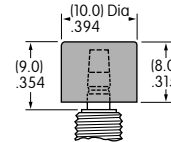
B AT443
.315" (8.0mm) Diameter Cap



Material: Polycarbonate

Finish: Glossy

C AT442
.394" (10.0mm) Diameter Cap



Material: Polycarbonate

Finish: Glossy

Cap Colors Available:



Black



White



Red



Yellow



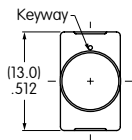
Green



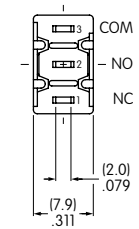
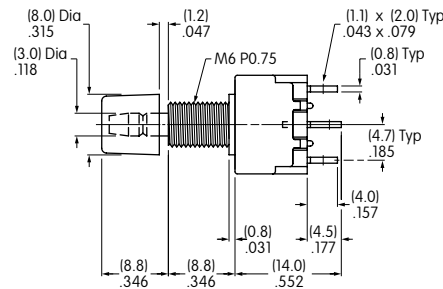
Blue

TYPICAL SWITCH DIMENSIONS

Solder Lug

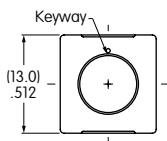


Single Pole

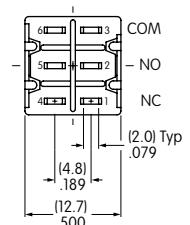
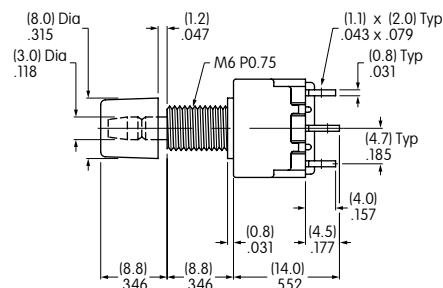


MB2511S4W01-BC

Solder Lug



Double Pole



MB2521S4W01-BC