

TYPICAL SWITCH ORDERING EXAMPLE

MB

2011

S

B1

W

01

—

D

A

| Poles & Circuits |      |    |      |
|------------------|------|----|------|
| 2011             | SPDT | ON | (ON) |
| 2065             | SPDT | ON | ON   |
| 2061             | DPDT | ON | (ON) |
| 2085             | DPDT | ON | ON   |
| 2181             | 4PDT | ON | (ON) |
| 2185             | 4PDT | ON | ON   |

( ) = Momentary

| Plunger Type |                           |
|--------------|---------------------------|
| S            | Plunger for Screw-on Caps |

| Bushings |                                          |
|----------|------------------------------------------|
| B1       | .472" (12.0mm)<br>Threaded with Keyway   |
| B3       | .472" (12.0mm)<br>Threaded w/Splashproof |

| Contact Materials & Ratings |                                                |
|-----------------------------|------------------------------------------------|
| W                           | Silver<br>Rated 6A @ 125V AC<br>& 3A @ 250V AC |
| G                           | Gold<br>Rated 0.4VA max @<br>28V AC/DC max     |

| Terminals |                            |
|-----------|----------------------------|
| 01        | Solder Lug*                |
| 02        | Quick Connect              |
| 03        | .250" (6.35mm) Straight PC |
| 05        | .425" (10.8mm) Wirewrap    |
| 06        | .750" (19.05mm) Wirewrap   |
| 07        | .964" (24.5mm) Wirewrap    |
| 08        | 1.062" (27.0mm) Wirewrap   |

| Caps |                         |
|------|-------------------------|
| B    | .315" (8.0mm) Diameter  |
| C    | .394" (10.0mm) Diameter |
| D    | .520" (13.2mm) Diameter |
| E    | .748" (19.0mm) Diameter |

| Cap Colors |        |
|------------|--------|
| A          | Black  |
| B          | White  |
| C          | Red    |
| *D         | Amber  |
| *E         | Yellow |
| F          | Green  |
| *G         | Blue   |
| *H         | Gray   |

\* Not available with cap code E

\* Wire harness & cable assemblies offered only in Americas

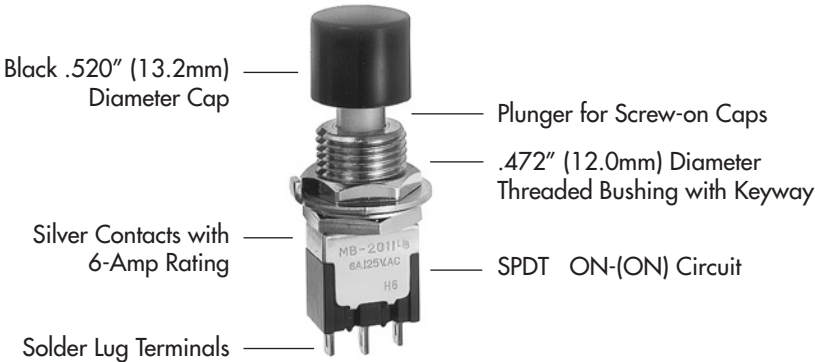
IMPORTANT:



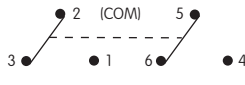
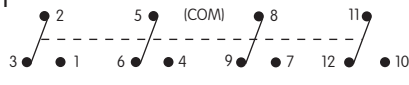
Switches are supplied without UL, cULus & CSA marking unless specified. **UL, cULus & CSA recognized only when ordered with marking on the switch.** Specific models, ratings, & ordering instructions are noted on General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

MB2011SB1W01-DA



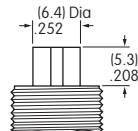
### POLES & CIRCUITS

|      |                  | Plunger Position<br>( ) = Momentary                                                         |                                                                                           | Connected Terminals                                                                         |                                                                                           | Throw & Switch Schematics                                                                   |
|------|------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Pole | Model            | Normal<br> | Down<br> | Normal<br> | Down<br> | Note: Terminal numbers are not actually on the switch.                                      |
| SP   | MB2011<br>MB2065 | ON<br>ON                                                                                    | (ON)<br>ON                                                                                | 2-3<br>2-1                                                                                  | 2-1                                                                                       | SPDT<br> |
| DP   | MB2061<br>MB2085 | ON<br>ON                                                                                    | (ON)<br>ON                                                                                | 2-3 5-6<br>2-1 5-4                                                                          | 2-1 5-4                                                                                   | DPDT<br> |
| 4P   | MB2181<br>MB2185 | ON<br>ON                                                                                    | (ON)<br>ON                                                                                | 2-3 5-6<br>8-9 11-12                                                                        | 2-1 5-4<br>8-7 11-10                                                                      | 4PDT<br> |

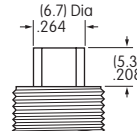
### PLUNGER TYPE

**S**

**Plunger for Screw-on Caps**  
Plunger is plastic for B1 bushing.



Plunger is metal for B3 bushing.



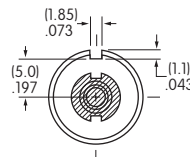
On alternate action models, after transferring circuit, the plunger returns to its original position, and does not latch down.

### BUSHINGS

**B1**

**.472" (12.0mm) Diameter Threaded with Keyway**

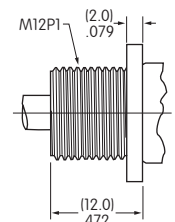
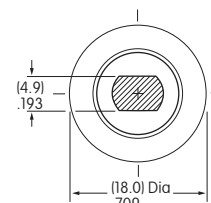
Maximum Panel Thickness with Standard Hardware: .217" (5.5mm)



**B3**

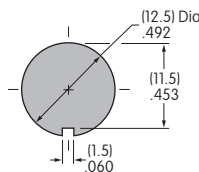
**.472" (12.0mm) Diameter Threaded Splashproof**

Maximum Panel Thickness with Standard Hardware: .217" (5.5mm)

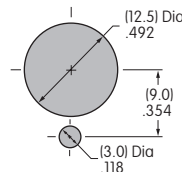


### Panel Cutouts

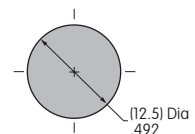
**For B1 Bushing with Keyway**



**For B1 Bushing with Locking Ring**



**For B3 Bushing without Keyway**



### CONTACT MATERIALS & RATINGS

**W**

Silver over Silver

Power Level

6A @ 125V AC & 3A @ 250V 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

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

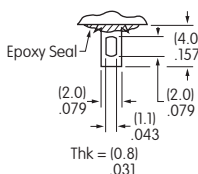
Indicators

Accessories

Supplement

01

Solder Lug



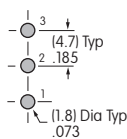
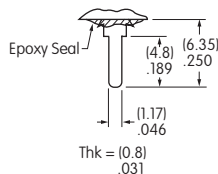
02

.062" (1.57mm) Wide Quick Connect

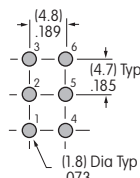


03

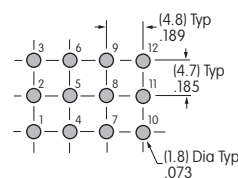
.250" (6.35mm) Straight PC



Single Pole



Double Pole



Four Pole

05

.425" (10.8mm) Wirewrap or Extended PC

06

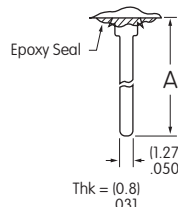
.750" (19.05mm) Wirewrap or Extended PC

07

.964" (24.5mm) Wirewrap or Extended PC

08

1.062" (27.0mm) Wirewrap or Extended PC



If using as extended PC terminal, refer to the above footprints.

Dimension A = terminal lengths as shown beside the terminal codes at the left.

## CAPS & CAP COLORS

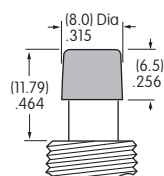
B

AT078  
.315" (8.0mm)  
Diameter Screw-on Cap

Material:  
Polystyrene  
Finish:  
Glossy



Colors Available:  
A B C E F G H



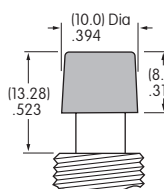
C

AT079  
.394" (10.0mm)  
Diameter Screw-on Cap

Material:  
Polystyrene  
Finish:  
Glossy



Colors Available:  
A B C E F G H



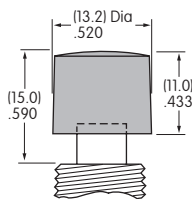
D

AT414  
.520" (13.2mm)  
Diameter Screw-on Cap

Material:  
PBT  
Finish:  
Glossy



Colors Available:  
A B C D E F G H



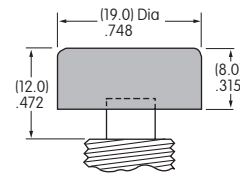
E

AT412  
.748" (19.0mm)  
Diameter Screw-on Cap

Material:  
Polystyrene  
Finish:  
Glossy



Colors Available:  
A B C F



Cap Color  
Codes:

A

Black

B

White

C

Red

D

Amber

E

Yellow

F

Green

G

Blue

H

Gray

### TYPICAL SWITCH DIMENSIONS

#### Solder Lug

#### Single Pole



MB2011SB1W01-DA

#### Solder Lug

#### Double Pole



MB2061SB1W01-DA

#### Solder Lug

#### Four Pole



MB2181SB1W01-DA

## HARDWARE

### Standard Hardware for B1 Bushing

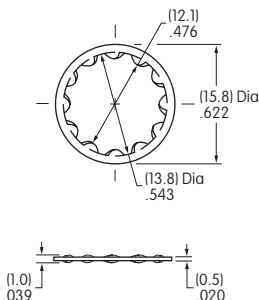
#### AT503M Hex Face Nut

Material:  
Brass with Chrome plating



#### AT508 Lockwasher

Material:  
Steel with Zinc/Chromate



#### AT527M Hex Nut

Material:  
Steel with Nickel plating



#### AT506M Locking Ring

Material:  
Steel with Zinc/Chromate



### Standard Hardware for B3 Bushing

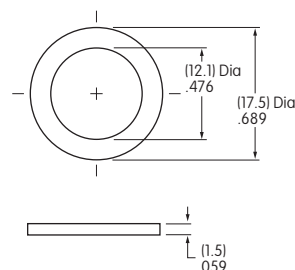
#### AT503M Hex Face Nut

Material:  
Brass with Chrome plating



#### AT401P O-ring

Material:  
Nitrile butadiene rubber

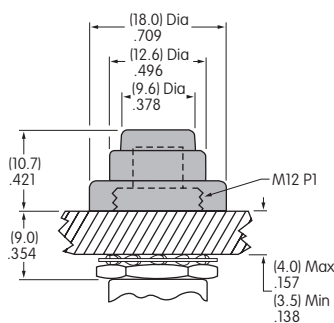


### Optional Splashproof Boot for B1 Bushing

#### AT4043 Splashproof Boot

Material: Silicone Rubber  
Operating Life: 10,000 for momentary  
30,000 for alternate action

When using a splashproof boot, no cap is required.



### CUSTOM ASSEMBLY ORDERING EXAMPLE

The MB2000 pushbutton series offers flexibility to accommodate a variety of applications. Using a basic large bushing model, different accessories can be assembled onto the switch to achieve the mounting variations shown on the following two pages.

- These switches have:
- 12mm diameter threaded bushing with keyway
  - Silver contacts
  - 6-Amp rating
  - Solder lug terminals

Other 12mm bushing options can be used; see details in preceding Large Bushing Ordering tables.

**MB2011**

**SB1W01**

**4**

**C**

**A**

#### Poles & Circuits

|                  |      |    |      |
|------------------|------|----|------|
| <b>2011</b>      | SPDT | ON | (ON) |
| <b>2065</b>      | SPDT | ON | ON   |
| <b>2061</b>      | DPDT | ON | (ON) |
| <b>2085</b>      | DPDT | ON | ON   |
| 4-pole available |      |    |      |
| ( ) = Momentary  |      |    |      |

#### Mounter Shapes For Shroud

|          |             |
|----------|-------------|
| <b>4</b> | Round       |
| <b>5</b> | Rectangular |

#### Cap Colors For Shroud

|          |       |
|----------|-------|
| <b>A</b> | Black |
| <b>B</b> | White |
| <b>C</b> | Red   |
| <b>F</b> | Green |
| <b>G</b> | Blue  |
| <b>H</b> | Gray  |

#### Mounter Colors For Shroud

|          |       |
|----------|-------|
| <b>A</b> | Black |
| <b>B</b> | White |
| <b>H</b> | Gray  |

#### Cap Colors For Snap-In

|          |       |
|----------|-------|
| <b>A</b> | Black |
| <b>B</b> | White |
| <b>C</b> | Red   |
| <b>F</b> | Green |



**Round Shroud**  
**MB2011SB1W01-4C-A**



**Rectangular Shroud**  
**MB2011SB1W01-5C-A**

See custom assemblies on following pages.

## MOUNTER SHAPES FOR SHROUDS

4

**AT455 Round**

Material: Polycarbonate

Colors: A B H



5

**AT453 Rectangular**

Material: Polycarbonate

Colors: A B H



## CAPS & CAP COLORS FOR SHROUDS

**AT454 Round Insert Cap**

Material: Polycarbonate

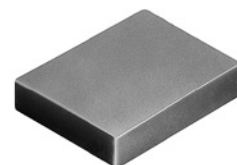
Colors: A B C F G H



**AT452 Rectangular Insert Cap**

Material: Polycarbonate

Colors: A B C F G H



**AT080 Screw Adaptor for Insert Caps**

Material: Brass



### Color Codes:

**A**

Black

**B**

White

**C**

Red

**F**

Green

**G**

Blue

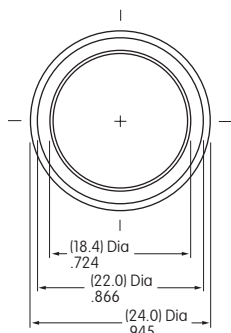
**H**

Gray

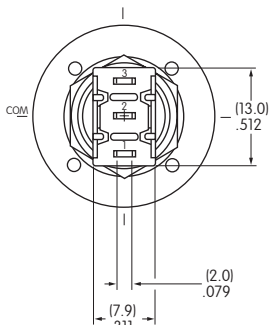
### CUSTOM ASSEMBLY WITH ROUND SHROUD



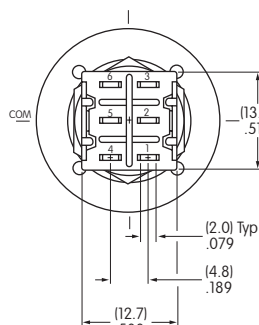
**MB2011SB1W01-4C-A**



#### Single Pole



#### Double Pole

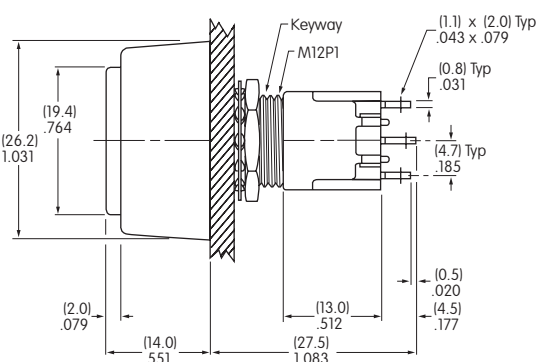


Effective Panel Thickness:  
.217" (5.5mm) maximum

### CUSTOM ASSEMBLY WITH RECTANGULAR SHROUD



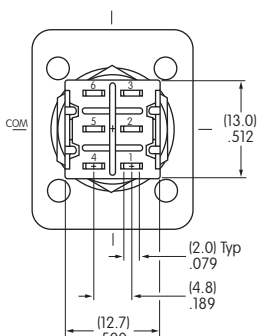
**MB2011SB1W01-5C-A**



#### Single Pole



#### Double Pole



Effective Panel Thickness:  
.217" (5.5mm) maximum



# Mouser Electronics

Authorized Distributor

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## NKK Switches:

[MB2011SB1](#) [MB2185SB3W01-RO](#) [MB2011SB3G01-DC-RO](#) [MB2011SB3W01-EC-RO](#) [MB2011SB3W01-DC-RO](#)  
[MB2011SB1W01-6B-A-RO](#) [MB2011SB1W01-6A-A-RO](#) [MB2011SB1W01-6C-A-RO](#) [MB2085SB1W01-EC-RO](#)  
[MB2011SB3W01-](#) [MB2065SB1W01-6A-A-RO](#)