### General Specifications

#### Electrical Capacity (Resistive Load)
- **Power Level (silver):** 3A @ 125V AC
- **Logic Level (gold):** 0.4VA maximum @ 28V AC/DC maximum (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
- **Logic/Power Level:** Combines silver & gold ratings

#### 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
- **Frame:** Stainless steel
- **Case:** Polybutylene terephthalate (PBT) (UL94V-0)
- **Base:** Diallyl phthalate resin (UL94V-0)
- **Movable Contactor:** Phosphor bronze with silver or gold plating
- **Movable Contacts:** Silver alloy (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 or brass with gold plating (code G); or silver with gold plating (code A)
- **Terminals:** Copper or brass 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 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/s²) acceleration (tested in 6 right angled directions, with 3 shocks in each direction)

#### Installation
- **Mounting Torque:** 1.5Nm (13.0 lb •in) for double nut; 0.7Nm (6.0 lb •in) for single nut
- **Cap Installation Force:** 80.0N (18.0 lbf) maximum downward force on actuator
- **Soldering:** Wave Soldering (PC version): See Profile B in Supplement section.
- **Cleaning:** These devices are not process sealed. Hand clean locally using alcohol based solution. See Cleaning Specifications in Supplement section.

#### Standards & Certifications
- **Flammability Standards:** UL94V-0 case & 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 single and double pole models recognized at 3A @ 125V AC or 0.4VA max. @ 28V 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 models with PC, solder lug, or Wirewrap terminals & double pole with PC or Wirewrap terminals certified at 3A @ 125V AC or 0.4VA @ 28V maximum.
**Distinctive Characteristics**

Snap-acting mechanism gives smooth actuation, short stroke, light touch, and audible feedback. This mechanism also provides long mechanical life.

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

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

Compatible companions with M series toggles. Body, bushing, and footprint dimensions ideal for mounting MB2400 pushbuttons and M toggles next to one another.

Stainless steel frame resists corrosion.

Longer center solder lug terminal simplifies wiring and soldering.

Silver contacts of specially composed alloy for hardness.

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

Prominent external insulating barriers increase insulation resistance and dielectric strength.

---

**Actual Size**

- Bushing Mount: Page C98
- Bracket PC Mount: Page C102
- Snap-in Mount: Page C108
**Series MB2400**

Snap-Action Bushing Mount Pushbuttons

---

**TYPICAL SWITCH ORDERING EXAMPLE**

```
MB24  11  E1  W  01  F  A

Poles & Circuits

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>SPDT</td>
<td>ON</td>
</tr>
<tr>
<td>61</td>
<td>DPDT</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ON)</td>
</tr>
</tbody>
</table>

(B) = Momentary

Contact Materials & Ratings

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| W | Silver  
 Rated 3A @ 125V AC |
| G | Gold  
 Rated 0.4VA max @ 28V AC/DC max |
| A | Gold over Silver  
 Rated 3A @ 125V AC  
 & 0.4VA max @ 28V AC/DC max |

Bushings

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| E1 | .285" (7.24mm)  
 Threaded with D Flat |
| E2 | .285" (7.24mm)  
 Smooth with D Flat |
| A1 | .280" (7.1mm)  
 Threaded with Keyway |
| A2 | .280" (7.1mm)  
 Smooth with Keyway |
| S1 | .350" (8.9mm)  
 Threaded with Keyway |
| S2 | .350" (8.9mm)  
 Smooth with Keyway |

Caps

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>.201&quot; (5.1mm) Diameter</td>
</tr>
<tr>
<td>H</td>
<td>.295&quot; (7.5mm) Diameter</td>
</tr>
</tbody>
</table>

Cap Colors

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>C</td>
</tr>
</tbody>
</table>

Terminals

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Solder Lug</td>
</tr>
<tr>
<td>03</td>
<td>.250&quot; (6.35mm) Straight PC</td>
</tr>
<tr>
<td>05</td>
<td>.425&quot; (10.8mm) Wirewrap</td>
</tr>
<tr>
<td>06</td>
<td>.750&quot; (19.05mm) Wirewrap</td>
</tr>
<tr>
<td>07</td>
<td>.964&quot; (24.5mm) Wirewrap</td>
</tr>
</tbody>
</table>

---

**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**

**MB2411E1W01-FA**

- Black .201" (5.1mm) Diameter Cap
- .285" (7.24mm) Threaded Bushing with D Flat
- SPDT ON-(ON) Circuit
- Silver Contacts with 3-Amp Rating
- Solder Lug Terminals
Snap-Action Bushing Mount Pushbuttons

Series MB2400

POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Normal</th>
<th>Down</th>
<th>Connected Terminals</th>
<th>Throw &amp; Switch Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>MB2411</td>
<td>ON</td>
<td>(ON)</td>
<td>1-3 1-2</td>
<td>SPDT</td>
</tr>
<tr>
<td>DP</td>
<td>MB2461</td>
<td>ON</td>
<td>(ON)</td>
<td>1-3 4-6 1-2 4-5</td>
<td>DPDT</td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch.

BUSHINGS

Note: Plunger selection is not required for MB2400 pushbuttons. The plunger can be used with or without a cap.

E1  .285” (7.24mm)
Threaded with D Flat

A1  .280” (7.1mm)
Threaded with Keyway

S1  .350” (8.9mm)
Threaded with Keyway

Maximum Panel Thickness with Standard Hardware: .068” (1.74mm)

E2  .285” (7.24mm)
Smooth with D Flat

A2  .280” (7.1mm)
Smooth with Keyway

S2  .350” (8.9mm)
Smooth with Keyway

Maximum Panel Thickness with Standard Hardware: .134” (3.40mm)

Panel Cutouts

For A1, A2, S1, or S2 Bushing with Keyway

For E1 or E2 Bushing with D Flat

With Optional Locking Ring

Standard hardware includes 2 hex nuts & 1 lockwasher. Hardware is illustrated following the Typical Switch Dimension drawings.
Series MB2400
Snap-Action Bushing Mount Pushbuttons

CONTACT MATERIALS & RATINGS

<table>
<thead>
<tr>
<th>Material</th>
<th>Power Level</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver over Silver</td>
<td>Power Level</td>
<td>3A @ 125V AC</td>
</tr>
<tr>
<td>Gold over Brass or Copper</td>
<td>Logic Level</td>
<td>0.4VA maximum @ 28V AC/DC maximum</td>
</tr>
</tbody>
</table>

Note: Complete explanation of operating range in Supplement section.

<table>
<thead>
<tr>
<th>Material</th>
<th>Power Level or Logic Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold over Silver</td>
<td>3A @ 125V AC</td>
</tr>
<tr>
<td>or 0.4VA maximum</td>
<td>28V AC/DC maximum</td>
</tr>
</tbody>
</table>

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.

TERMINALS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Solder Lug</td>
<td>.425” (10.8mm)</td>
</tr>
<tr>
<td>03</td>
<td>.250” (6.35mm)</td>
<td>Straight PC</td>
</tr>
<tr>
<td>05</td>
<td>.750” (19.05mm)</td>
<td>Wirewrap or Extended PC</td>
</tr>
<tr>
<td>06</td>
<td>.964” (24.5mm)</td>
<td></td>
</tr>
</tbody>
</table>

CAPS & CAP COLORS

<table>
<thead>
<tr>
<th>Code</th>
<th>Diameter Cap</th>
<th>Material</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>.201” (5.1mm)</td>
<td>Polyamide</td>
<td>Glossy</td>
</tr>
<tr>
<td>H</td>
<td>.295” (7.5mm)</td>
<td>Polyamide</td>
<td>Glossy</td>
</tr>
</tbody>
</table>

Cap Colors Available: A Black  B White  C Red
### TYPICAL SWITCH DIMENSIONS

#### Single Pole

#### Solder Lug

#### Double Pole

#### Solder Lug

### HARDWARE

#### Standard Hardware

**AT513H Inch Threaded Hexagon Nut**
- 2 included with each switch
- Material: Brass with Nickel Plating

**AT509 Lockwasher**
- 1 included with each switch
- Material: Steel with Zinc/Chromate

#### Optional Hardware

**AT507H Locking Ring for A1 or S1 Bushing**
- Material: Steel with Zinc/Chromate

**AT515 Locking Ring for E1 Bushing**
- Material: Steel with Zinc/Chromate
### TYPICAL SWITCH ORDERING EXAMPLE

**MB24** 11 A2 G 40 — F A

#### Poles & Circuits
- **11**: SPDT ON (ON)
- **61**: DPDT ON (ON)

( ) = Momentary

#### Bushings
- **A2**: .280” (7.1mm) Smooth with Keyway
- **A1**: .280” (7.1mm) Threaded with Keyway
- **E2**: .285” (7.24mm) Smooth with D Flat
- **E1**: .285” (7.24mm) Threaded with D Flat
- **S2**: .350” (8.9mm) Smooth with Keyway
- **S1**: .350” (8.9mm) Threaded with Keyway

#### Contact Materials & Ratings

<table>
<thead>
<tr>
<th><strong>W</strong></th>
<th>Silver</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rated 3A @ 125V AC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>G</strong></th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rated 0.4VA max @ 28V AC/DC max</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>A</strong></th>
<th>Gold over Silver</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rated 3A @ 125V AC &amp; 0.4VA max @ 28V AC/DC max</td>
</tr>
</tbody>
</table>

#### Caps
- **F**: .201” (5.1mm) Dia.
- **H**: .295” (7.5mm) Dia.

#### Cap Colors
- **A**: Black
- **B**: White
- **C**: Red

#### Terminals
- **With Bracket**
- **13**: .250” (6.35mm) Straight PC with .465” (11.8mm) Bracket
- **15**: .425” (10.8mm) Straight PC with .630” (16.0mm) Bracket
- **17**: .964” (24.5mm) Straight PC with 1.150” (29.2mm) Bracket

- **With Reinforced Bracket**
- **23**: .250” (6.35mm) Straight PC with .465” (11.8mm) Bracket
- **25**: .425” (10.8mm) Straight PC with .630” (16.0mm) Bracket
- **26**: .750” (19.05mm) Straight PC with .953” (24.2mm) Bracket

- **With Terminal Support**
- **30**: Right Angle PC
- **40**: Vertical PC

### 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

**MB2411A2G40-FA**

- .280” (7.1mm) Smooth Bushing with Keyway
- Black .201” (5.1mm) Diameter Cap
- SPDT ON-(ON) Circuit
- Vertical PC Terminals
- Gold Contacts with 0.4VA Rating

---

**Series MB2400** Snap-Action Bracket PC Mount Pushbuttons

www.nkkswitches.com
### POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Normal</th>
<th>Down</th>
<th>Connected Terminals</th>
<th>Throw &amp; Switch Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>MB2411</td>
<td>ON</td>
<td>(ON)</td>
<td>1-3 1-2</td>
<td>SPDT</td>
</tr>
<tr>
<td>DP</td>
<td>MB2461</td>
<td>ON</td>
<td>(ON)</td>
<td>1-3 4-6 1-2 4-5</td>
<td>DPDT</td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch.

### BUSHINGS

Note: Plunger selection is not required for MB2400 pushbuttons. The plunger can be used with or without a cap.

- **A2**: .280” (7.1mm) Smooth with Keyway
- **E2**: .285” (7.24mm) Smooth with D Flat
- **S2**: .350” (8.9mm) Smooth with Keyway

Maximum Panel Thickness with Standard Hardware:
- **A1**: .068” (1.74mm) for .280” (7.1mm) threaded with keyway
- **E1**: .068” (1.74mm) for .285” (7.24mm) threaded with D flat
- **S1**: .134” (3.40mm) for .350” (8.9mm) threaded with keyway

### Panel Cutouts

- For A1, A2, S1, or S2 Bushing with Keyway
- For E1 or E2 Bushing with D Flat
- With Optional Locking Ring

Standard hardware includes 2 hex nuts & 1 lockwasher. Hardware is illustrated following the Typical Switch Dimension drawings.
**Series MB2400**

Snap-Action Bracket PC Mount Pushbuttons

### CONTACT MATERIALS & RATINGS

<table>
<thead>
<tr>
<th>Material</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver over Silver</td>
<td>Power Level</td>
</tr>
<tr>
<td></td>
<td>3A @ 125V AC</td>
</tr>
<tr>
<td>Gold over Brass or Copper</td>
<td>Logic Level</td>
</tr>
<tr>
<td></td>
<td>0.4VA maximum @ 28V AC/DC maximum</td>
</tr>
</tbody>
</table>

Note: Complete explanation of operating range in Supplement section.

<table>
<thead>
<tr>
<th>Material</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold over Silver</td>
<td>Power Level</td>
</tr>
<tr>
<td></td>
<td>3A @ 125V AC</td>
</tr>
<tr>
<td>or Logic Level</td>
<td>0.4VA maximum @ 28V AC/DC maximum</td>
</tr>
</tbody>
</table>

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.

### TERMINALS

**Straight PC Mount with Bracket**

- 13: .250” (6.35mm) Terminal with .465” (11.8mm) Bracket
- 15: .425” (10.8mm) Terminal with .630” (16.0mm) Bracket
- 17: .964” (24.5mm) Terminal with 1.150” (29.2mm) Bracket

**Straight PC Mount with Reinforced Bracket**

- 23: .250” (6.35mm) Terminal with .465” (11.8mm) Bracket
- 25: .425” (10.8mm) Terminal with .630” (16.0mm) Bracket
- 26: .750” (19.05mm) Terminal with .953” (24.2mm) Bracket

### CAPS & CAP COLORS

- **AT475**: .201” (5.1mm) Diameter Cap
  - Material: Polyamide
  - Finish: Glossy
- **AT496**: .295” (7.5mm) Diameter Cap
  - Material: Polyamide
  - Finish: Glossy

Cap Colors Available:
- A: Black
- B: White
- C: Red
Series MB2400

Snap-Action Bracket PC Mount Pushbuttons

TYPICAL SWITCH DIMENSIONS

Straight PC • Bracket

MB2411A2G13-FA

<table>
<thead>
<tr>
<th>Terminal Code</th>
<th>Terminal Length:</th>
<th>Bracket Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>.250 (6.35mm)</td>
<td>.465 (11.8mm)</td>
</tr>
<tr>
<td>15</td>
<td>.425 (10.8mm)</td>
<td>.630 (16.0mm)</td>
</tr>
<tr>
<td>17</td>
<td>.964 (24.5mm)</td>
<td>1.150 (29.2mm)</td>
</tr>
</tbody>
</table>

Straight PC • Reinforced Bracket

MB2411A2G23-FA

<table>
<thead>
<tr>
<th>Terminal Code</th>
<th>Terminal Length:</th>
<th>Bracket Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>.250 (6.35mm)</td>
<td>.465 (11.8mm)</td>
</tr>
<tr>
<td>25</td>
<td>.425 (10.8mm)</td>
<td>.630 (16.0mm)</td>
</tr>
<tr>
<td>26</td>
<td>.750 (19.05mm)</td>
<td>.953 (24.2mm)</td>
</tr>
</tbody>
</table>
Series MB2400
Snap-Action Bracket PC Mount Pushbuttons

TYPICAL SWITCH DIMENSIONS

Right Angle PC

Single Pole

MB2411A2G30-FA

Right Angle PC

Double Pole

MB2461A2G30-FA

Vertical PC

Single Pole

Double Pole

MB2411A2G40-FA
## HARDWARE

### Standard Hardware

**AT513H Inch Threaded Hexagon Nut**
- 2 included with each switch
- Material: Brass with Nickel Plating

**AT509 Lockwasher**
- 1 included with each switch
- Material: Steel with Zinc/Chromate

### Optional Hardware

**AT507H Locking Ring for A1 or S1 Bushing**
- Material: Steel with Zinc/Chromate

**AT515 Locking Ring for E1 Bushing**
- Material: Steel with Zinc/Chromate
Series MB2400  
Snap-Action Snap-in Mount Pushbuttons

TYPICAL SWITCH

MB24

J

W

01

C

Poles & Circuits

| 11 | SPDT | ON (ON) |
| 61 | DPDT | ON (ON) |

( ) = Momentary

Contact Materials & Ratings

| W | Silver | Rated 3A @ 125V AC |
| G | Gold | Rated 0.4VA max @ 28V AC/DC max |
| A | Gold over Silver | Rated 3A @ 125V AC & 0.4VA max @ 28V AC/DC max |

Cap & Cap Colors

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

Mounting Frame

J  Snap-in Frame

Terminals

| 01 | Solder Lug |
| 03 | .250" (6.35mm) Straight PC |
| 05 | .425" (10.8mm) Wirewrap |
| 06 | .750" (19.05mm) Wirewrap |
| 07 | .964" (24.5mm) Wirewrap |

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

MB2411JW01-C

Red Cap

SPDT ON-(ON) Circuit

Silver Contacts with 3-Amp Rating

Snap-in Frame

Solder Lug Terminals
Snap-Action Snap-in Mount Pushbuttons

ORDERING EXAMPLE

**Optional Bezels**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bezel without LEDs</td>
</tr>
<tr>
<td>*2</td>
<td>Bezel with 1 Round LED</td>
</tr>
<tr>
<td>*3</td>
<td>Bezel with 2 Round LEDs</td>
</tr>
<tr>
<td>*4</td>
<td>Bezel with 2 Rectangular LEDs</td>
</tr>
</tbody>
</table>

*Available in Black color only

**Bezel Colors**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<td>B</td>
<td>White</td>
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<tr>
<td>C</td>
<td>Red</td>
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<tr>
<td>D</td>
<td>Yellow</td>
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<tr>
<td>F</td>
<td>Blue</td>
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<tr>
<td>G</td>
<td>Gray</td>
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**LED Colors**

<table>
<thead>
<tr>
<th></th>
<th>1 LED</th>
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</thead>
<tbody>
<tr>
<td>C</td>
<td>Red</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
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</tbody>
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<table>
<thead>
<tr>
<th></th>
<th>2 LEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top LED</td>
<td>Bottom LED</td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
</tr>
<tr>
<td>E</td>
<td>Yellow</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
</tr>
</tbody>
</table>

**DESCRIPTION FOR TYPICAL ORDERING EXAMPLE**

MB2411JW01-C-3A-CF

Red Cap
Snap-in Frame
SPDT ON-(ON) Circuit
Silver Contacts with 3-Amp Rating
Solder Lug Terminals

1 Red LED
1 Green LED
Black Bezel with 2 Round LEDs
### Series MB2400
Snap-Action Snap-in Mount Pushbuttons

#### POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Normal Plunger Position</th>
<th>Connected Terminals</th>
<th>Down Plunger Position</th>
<th>Throw &amp; Switch Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>MB2411</td>
<td><strong>ON</strong></td>
<td>1-3</td>
<td><strong>(ON)</strong></td>
<td>SPDT</td>
</tr>
<tr>
<td>DP</td>
<td>MB2461</td>
<td><strong>ON</strong></td>
<td>1-3 4-6</td>
<td>1-2 4-5</td>
<td>DPDT</td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch.

#### MOUNTING FRAME

- **Panel Cutout for Single Pole without Bezel**
- **Panel Thickness without Bezel:** .039” ~ .157” (1.0mm ~ 4.0mm)
- **Panel Thickness with Bezel:** .039” ~ .126” (1.0mm ~ 3.2mm)

#### CONTACT MATERIALS & RATINGS

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
<th>Power Level</th>
<th>Logic Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Silver over Silver</td>
<td>3A @ 125V AC</td>
<td>0.4VA maximum @ 28V AC/DC maximum</td>
</tr>
</tbody>
</table>

Note: Complete explanation of operating range in Supplement section.

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
<th>Power Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Gold over Brass or Copper</td>
<td>3A @ 125V AC or 0.4VA maximum @ 28V AC/DC maximum</td>
</tr>
</tbody>
</table>

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.

#### TERMINALS

- **Solder Lug**
- **.425” (10.8mm)**
- **.750” (19.05mm)**
- **.964” (24.5mm)**

**Wirewrap or Extended PC**

Refer to footprints if using as extended PC terminal.

Dimension A = terminal lengths as shown beside the code boxes at left.
**Series MB2400**

**CAP & CAP COLORS**

<table>
<thead>
<tr>
<th>Part</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Black</td>
</tr>
<tr>
<td>B</td>
<td>White</td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
</tr>
<tr>
<td>E</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

**OPTIONAL SNAP-IN BEZELS & BEZEL COLORS**

1. **AT207 Bezel**
   - Material: Polycarbonate
   - Finish: Glossy
   - Contact factory for matte finish.

2. **AT208 Bezel**
   - Material: Polycarbonate
   - Finish: Glossy
   - Contact factory for matte finish.

3. **AT212 Bezel**
   - Material: Polycarbonate
   - Finish: Semi-glossy

4. **AT213 Bezel**
   - Material: Polycarbonate
   - Finish: Semi-glossy

**Bezel Assembly**

1. Pry out tab on bezel to a 45° angle.
2. Insert switch frame under tab and snap on the bezel.
3. Push tab back into place.
4. Snap assembled bezel and switch into panel.
LED COLORS & SPECIFICATIONS

Bezel Orientation on Switch

<table>
<thead>
<tr>
<th>AT070 LED</th>
<th>AT617 LED</th>
<th>AT618 LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Bezel AT208 with 1 LED</td>
<td>For Bezel AT212 with 2 Round LEDs</td>
<td>For Bezel AT213 with 2 Rectangular LEDs</td>
</tr>
</tbody>
</table>

Note: Lead lengths may differ from manufacturing lot to lot. The longer lead is the anode (+).

<table>
<thead>
<tr>
<th>Color</th>
<th>AT070</th>
<th>AT617</th>
<th>AT618</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Forward Current</th>
<th>25mA</th>
<th>50mA</th>
<th>30mA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Forward Current</td>
<td>20mA</td>
<td>30mA</td>
<td>20mA</td>
</tr>
<tr>
<td>Forward Voltage</td>
<td>2.8V</td>
<td>2.1V</td>
<td>2.0V</td>
</tr>
<tr>
<td>Maximum Reverse Voltage</td>
<td>4V</td>
<td>5V</td>
<td>5V</td>
</tr>
<tr>
<td>Current Reduction Rate</td>
<td>0.33 mA/°C</td>
<td>0.40 mA/°C</td>
<td>0.40 mA/°C</td>
</tr>
<tr>
<td>Ambient Temperature Range</td>
<td>-10° ~ 70°C</td>
<td>-15° ~ 70°C</td>
<td>-25° ~ 70°C</td>
</tr>
</tbody>
</table>

The electrical specifications shown are determined at a basic temperature of 25°C. LED circuit is independent of switch operation. LED is colored in OFF state.

If the source voltage is greater than the rated voltage of the LED, a ballast resistor must be connected in series with the LED. The ballast resistor calculation and more lamp detail are shown in the Supplement section.

TYPICAL SWITCH DIMENSIONS

Solder Lug

Single Pole

Double Pole

MB2411JW01-C
LEGENDS

NKK Switches can provide custom legends for caps. Contact factory for more information.

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Suggested Printable Area for Cap

**Recommended Print Method:**
- Screen Print or Pad Print
- Epoxy based ink is recommended.

**AT465**

**AT465**

Shaded areas are printable areas.