# General Specifications

## **Electrical Capacity (Resistive Load)**

Power Level (silver): 6A @ 125V AC & 3A @ 250V AC

## Other Ratings

Contact Resistance: 10 milliohms maximum

1,000 megohms minimum @ 500V DC Insulation Resistance:

Dielectric Strength: 1,000V AC minimum between contacts for 1 minute minimum;

1,500V AC minimum between contacts and case for 1 minute minimum

Mechanical Life: 100,000 operations minimum

Electrical Life: 25,000 operations minimum; 50,000 operations minimum for 3A @ 125V AC

Angle of Throw: 25°

### Materials & Finishes **Gold Actuator Black Actuator**

Toggle: Brass with gold plating Brass with black chrome plating Brass with gold plating Brass with black chrome plating Bushing: Bushing:

Frame: Stainless steel Frame: Stainless steel

Support Bracket: Brass with tin plating Support Bracket: Brass with tin plating Diallyl phthalate resin (UL94V-0) Case: Case:

Diallyl phthalate resin (UL94V-0) Phosphor bronze with silver plating Phosphor bronze with silver plating Movable Contactor: **Movable Contactor:** 

**Movable Contacts:** Silver alloy **Movable Contacts:** Silver alloy

Silver with silver plating Stationary Contacts: Silver with silver plating **Stationary Contacts:** 

> **Terminals:** Copper or brass with silver plating Copper or brass with silver plating Terminals:

## **Environmental Data**

Operating Temp Range: -30°C through +85°C (-22°F through +185°F)

**Humidity:** 90 ~ 95% humidity for 96 hours @  $40^{\circ}$ C ( $104^{\circ}$ 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 5 shocks in each direction)

## Installation

Mounting Torque: 3.0Nm (26.55 lb-in) double nut

## **Processing**

Manual Soldering: 350°C for 3 seconds, 1 cycle

Note: Lever must be in center position while soldering.

Cleaning: These devices are not process sealed. Hand clean locally using alcohol based solution.

## **Standards & Certifications**

Flammability Standards: UL94V-0 for case



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Supplement | Accessories | Indicators

## Distinctive Characteristics

Rich, lustrous gold tone over a large actuator and bushing, or the understated black matte large actuator and bushing (.453"/11.5mm toggle with .472"/12.0mm threaded bushing). Both sleek designs deliver the same functionality and reliability.

Actuation administers distinctive tactile feedback.

Antirotation design, standard on noncylindrical levers, mates toggle and bushing; bottom of toggle has two flatted sides which fit into a complementary opening inside bushing.

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

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

Molded diallyl phthalate case meets flammability standards for UL94V-0.

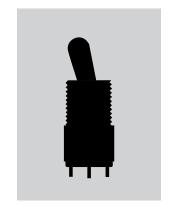
Increased insulation resistance and dielectric strength due to prominent external insulating barriers.

Interlocked actuator block, lever, and interior guide prevent switch failure due to biased lever movement.

Clinching of frame to case well above base and terminals provides 1,500V dielectric strength.

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





## **SWITCH PART NUMBER & DESCRIPTION**

Part Number	Toggle & Bushing	Switch Description		
M2024BB1UW01 (Gold)	.453" (11.5mm) Large Bat Toggle .472" (12.0mm) Large Threaded Bushing with Keyway Gold Plated Toggle & Bushing Gold Plated Hex Face Nut & Locking Ring	Silver Contacts; Single Pole 3 Throw (3-On) Solder Lug Terminals		
M2024BB1AW01 (Black)	.453" (11.5mm) Large Bat Toggle .472" (12.0mm) Large Threaded Bushing with Keyway Black Chrome Plated Toggle & Bushing Black Chrome Plated Hex Face Nut	Silver Contacts; Single Pole 3 Throw (3-On) Solder Lug Terminals		



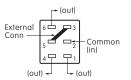
## **POLE & CIRCUIT**

For 3 Throw (3-On)

Pole	Model	Toggle Position		Connected Terminals & Schematics			
Pole		Down	Center	Up	Down	Center	Up
SP	M2024	Keyway <sub>3</sub>	ON	ON	External Connection 7 2 (in) 5 1 (out) 3 4 (out) 6 (out) 2-3 5-6	External Connection 7 2 lin) 5 1 (out) 3 4 (out) 6 (out) 2-3 5-4	External Connection 7 2 (in) 5 1 (out) 3 4 (out) 6 (out) 2-1 5-4

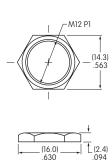
The SP3T model utilizes a double pole base.

External connection must be made during field installation.

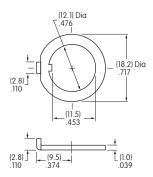


## STANDARD HARDWARE FOR GOLD TOGGLE

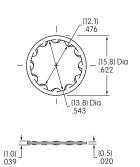
**Hex Face Nut** Brass with Gold Plating

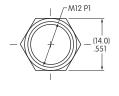


**Locking Ring** Brass with Gold Plating



AT508 Lockwasher Steel with Zinc/Chromate

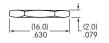




AT527M Hex Nut

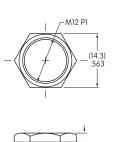
Steel with

Nickel Plating

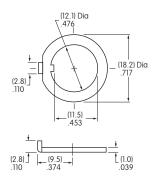


## STANDARD HARDWARE FOR BLACK TOGGLE

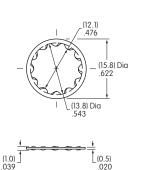
**Hex Face Nut** Brass with Black Chrome Plating



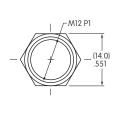
AT506M Locking Ring Steel with Zinc/Chromate



AT508 Lockwasher Steel with Zinc/Chromate



AT527M Hex Nut Steel with Nickel Plating







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