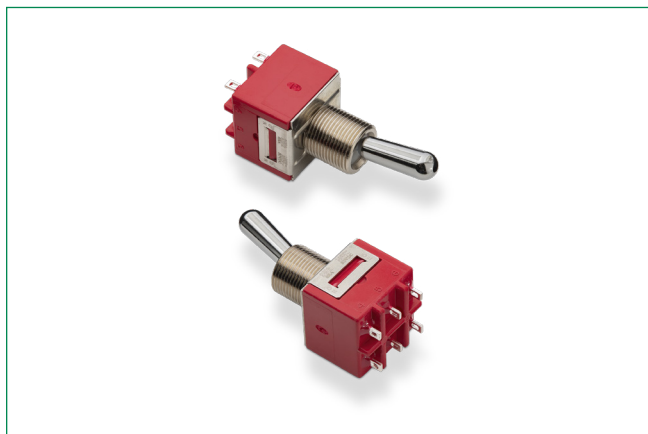


9000 Series

Power Toggle Switches



Agency Approvals

Agency	Agency File Number
US	E42363

Specifications

Contact Rating	9201 Model: GP (general purpose) 6 amps 125 VAC 50/60 Hz T85 10,000 cycles (10E3) 3 amps 250 VAC 50/60 Hz T85 10,000 cycles R (resistive) 6 amps 30 VDC T85 10,000 cycles 9221 Model: GP (general purpose) 10 amps 125 VAC 50/60 Hz T85 10,000 cycles 5 amps 250 VAC 50/60 Hz T85 10,000 cycles R (resistive) 10 amps 30 VDC T85 10,000 cycles
Electrical Life	25,000 make-and-break cycles at full load.
Contact Resistance	Below 10 m Ω typ. initial @ 2-4 V DC, 100 mA.
Insulation Resistance	10 ⁹ Ω min.
Dielectric Strength	2,500 Vrms min. @ sea level.
Operating Temperature	-30°C to 85°C.
Solderability	Per MIL-STD-202F method 208D, or EIA RS-186E method 9. (1 hour steam aging)

Notes:

Any models supplied with Q contact material are RoHS compliant and compatible. Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Description

Perfect for use as a shut-off switch or in small equipment, the 9000 series power toggle switch has a variety of options to meet designers' needs. The 9000 series switches are available with power ratings up to 10 amps, come in a wide variety of actuator styles, have optional locking levers and are available as double pole models.

Features & Benefits

- Power ratings up to 10 amps
- Double pole models
- Locking lever options available
- Wide variety of actuator styles
- RoHS compliant and compatible

Applications

- Shut-off switch
- Small equipment

Materials

Case	Diallyl phthalate (DAP) (UL 94V-0)
Actuator	Brass, chrome plated
Bushing	Brass or zinc, nickel plated
Housing	Stainless steel
Switch Support	Brass or steel, matte-tin plated.
End Contacts	9201 Model: Coin silver, silver plated 9221 Model: Silver cadmium oxide
Center Contacts	Copper alloy, silver plated
All Terminals	9201 Model: Copper alloy, silver plated 9221 Model: Copper alloy, matte-tin plated
Terminal Seal	Epoxy
Hardware	Nut & Locking ring: Brass, nickel plated Lockwasher: Steel, nickel plated

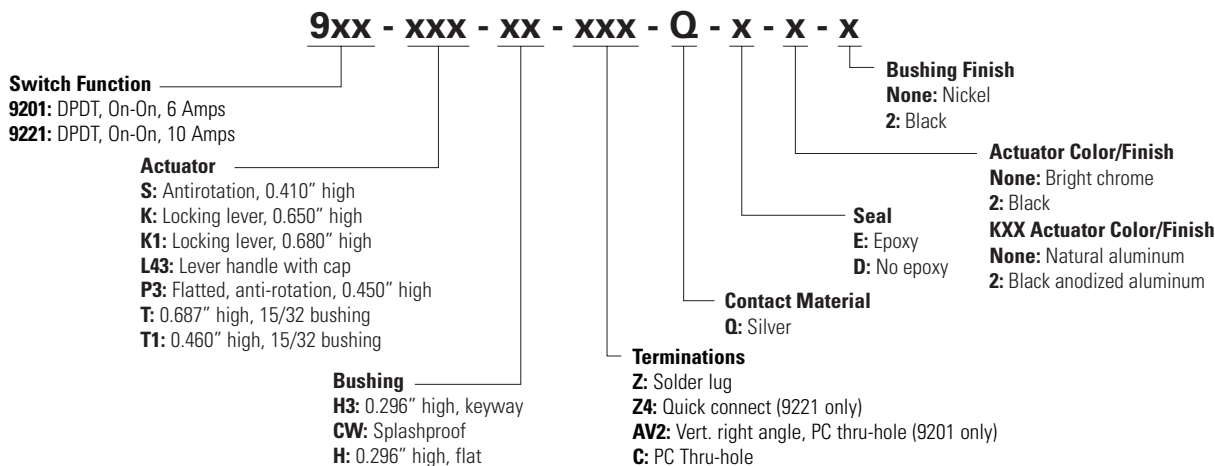
9000 Series

Power Toggle Switches



Ordering Number

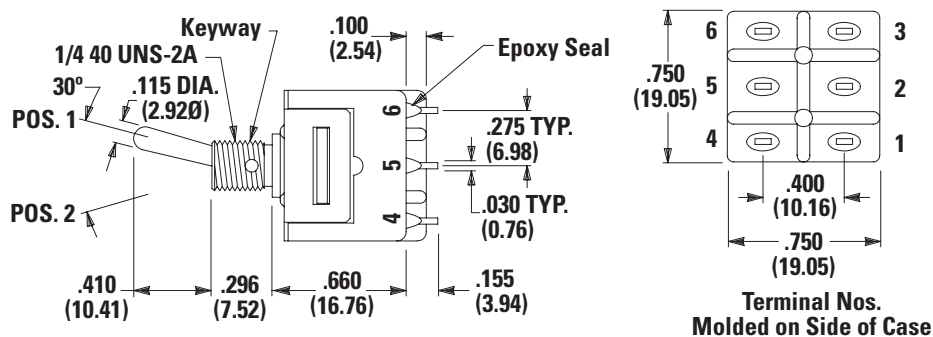
To order, simply select desired option from each category and place in the appropriate box. For additional options not shown in catalog, consult Customer Service Center.



Switch Function

DPDT

No. Poles	Model No.	Rating	Switch Function		Connected Terminals		Schematic
			POS. 1 KEYWAY	POS. 2 KEYWAY	POS. 1 KEYWAY	POS. 2 KEYWAY	
DP	9201	6 AMPS	ON		2-3, 5-6	2-1, 5-4	DPDT
	9221	10 AMPS					



Notes:

Part Number Shown: 9201SH3ZOE

All 9000 Series models meet international dimensional and electrical requirements. **UL US**
 9221 model must be ordered with Z4 terminations and D seal option.

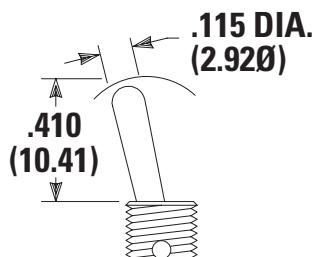
9000 Series

Power Toggle Switches



Actuator

S Antirotation 0.410" High



Dress nut part number: 709901201 supplied standard with P3 actuator.

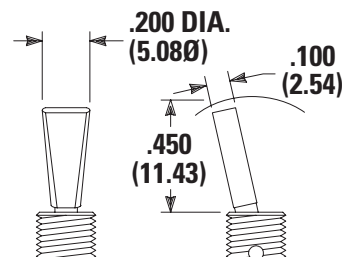
Option Code	Actuator Finish
None	Natural Aluminum - With Nickel Plating Bushing
2	Black

Notes:

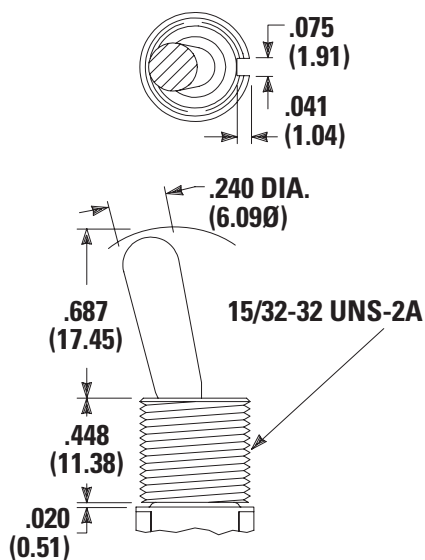
Black hardware is supplied when either black actuators or bushings are specified. All hardware is available separately.

Antirotation is standard on all actuators, provides 'anti-push-in' feature on actuator.

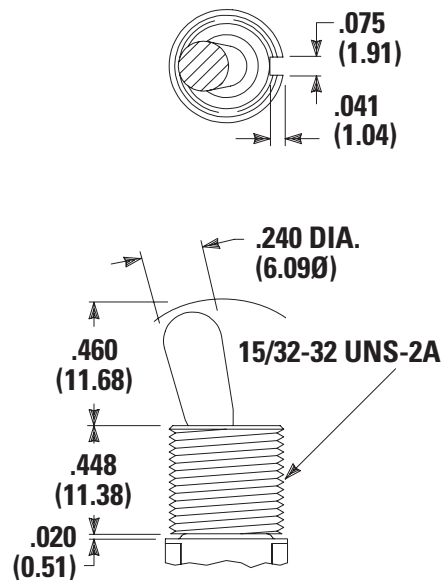
P3 Flatted, Antirotation, 0.450" High



T 0.687" High, 15/32 Bushing



T1 0.460" 15/32 Bushing



Option Code	Actuator Finish
None	Natural Aluminum - With Nickel Plating Bushing
2	Black

Notes:

Bushing option code not required for T & T1 actuators unless CW splashproof bushing ordered. Black hardware is supplied when either black actuators or bushings are specified. All hardware is available separately.

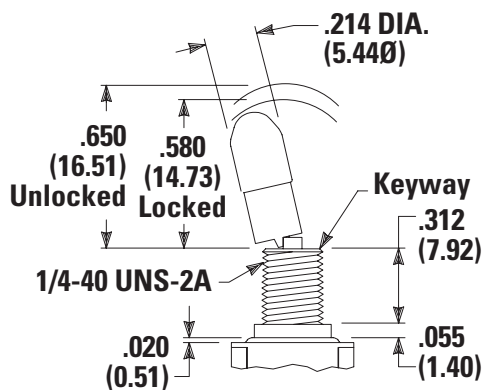
Antirotation is standard on all actuators except T & T1, provides 'anti-push-in' feature on actuator.

9000 Series

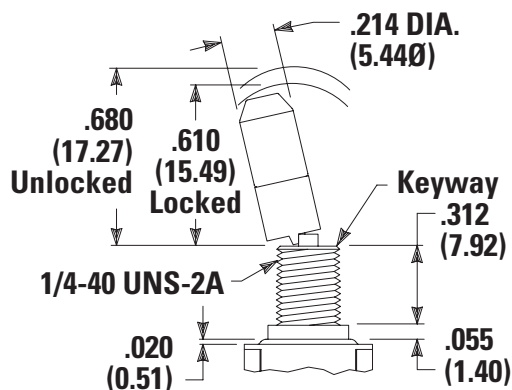
Power Toggle Switches



**K Locking Lever, 0.650"
High, Threaded**



**K1 Locking Lever, 0.680"
High, Threaded**

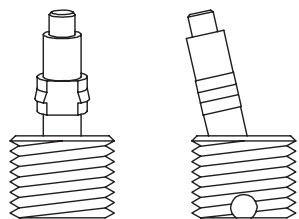


Option Code	Actuator Cap Finish
None	Natural Aluminum - With Nickel Plating Bushing
2	Black

Notes:

To prevent accidental actuation, toggles must be lifted before being actuated. When released, toggles again lock in place. Bushing option code not required. Overtightening mounting nut may cause actuator to bind.

**L40 Lever Handle
Without Cap**



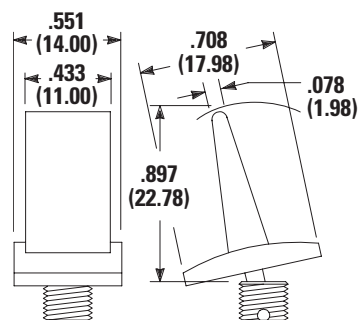
No color choice required.

Option Code	Actuator Cap Color
2	Black
None	No Actuator Color (L40 option)

Notes:

Other colors available, consult Customer Service Center. Lever handle actuator L43 supplied, but not installed. For interchangeability, order L40 actuator option and order lever handles separately. Antirotation is standard on all actuators, provides 'anti-push-in' feature.

**L43 Plastic Lever Handle with
Antirotation and Cap, P/N 4812**



Finish: Matte

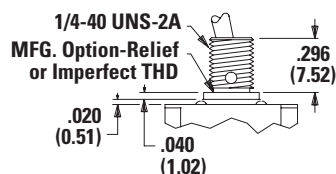
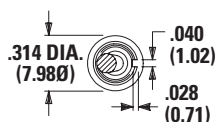
9000 Series

Power Toggle Switches

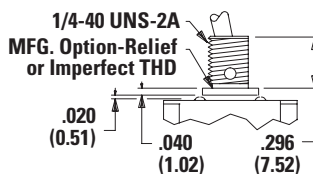
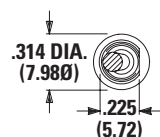


Bushing

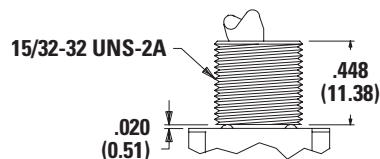
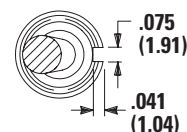
**H3 0.296" High,
Threaded, Keyway**



**H 0.296" High,
Threaded, Flat**



**CW Splashproof,
15/32 Bushing**



Will withstand 12 in./lbs. of torque with no distortion.

For T & T1 actuators only.

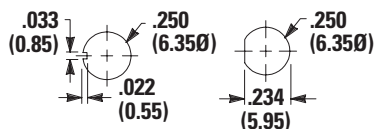
Notes:

Two mounting nuts, locking ring and lockwasher supplied standard with threaded bushings. Black hardware is supplied when either black bushings or actuators are specified. Optional mounting nut and locking ring styles and finishes available. Internal actuator seal standard. External bushing seal available separately from APM Hexseal, part # MFS-60064

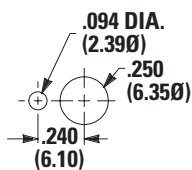
Option Code	Bushing Finish
None	Nickel
2	Black

Panel Mounting

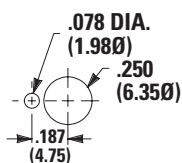
1/4-40 UNS-2A



Without locking ring.

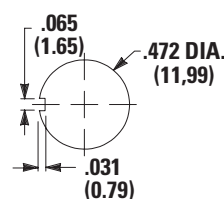


With standard locking ring.

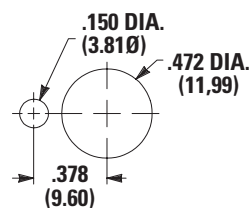


With small locking ring.

15/32-32 UNS-2A



Without locking ring.



With standard locking ring.

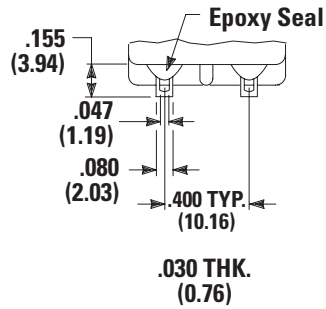
9000 Series

Power Toggle Switches



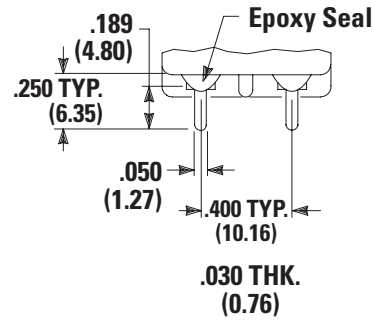
Terminations

Z Solder Lug



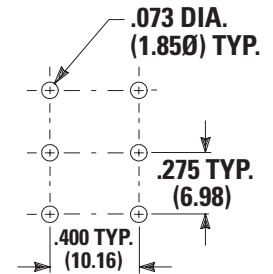
9201 Only

C PC Thru-hole

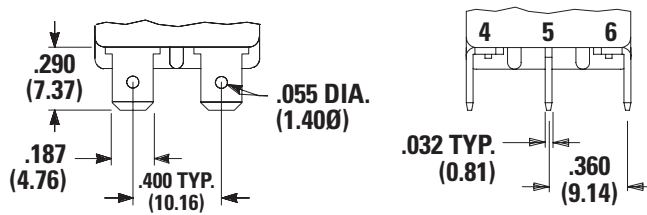


9201 Only

PC Mounting



Z4 0.187" Quick Connect



9221 Only

Notes:

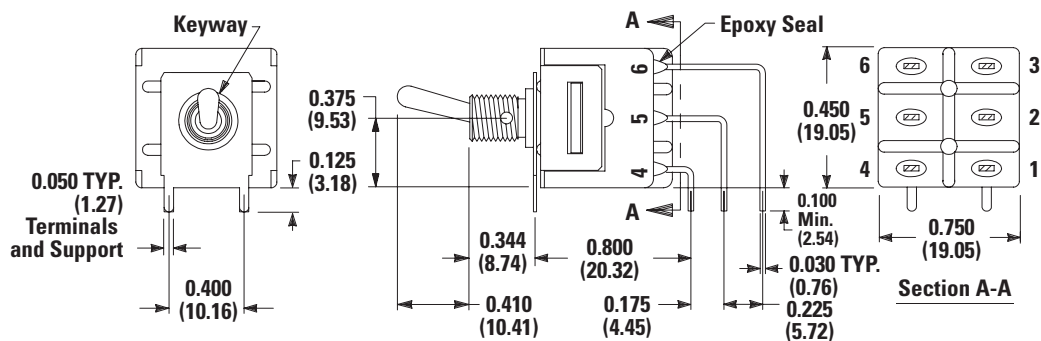
Only termination available with 9221 model. Must be ordered with D seal option.
Mates with standard .187 Nema female connector.

9000 Series

Power Toggle Switches



AV2 Vertical Right Angle, PC Thru-hole 9201SH3AV2QE Vertical Actuation DPDT

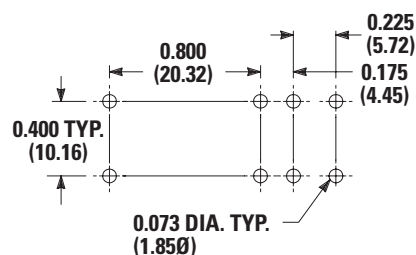


Actuator Shown in Pos. 3

9201 Only

Notes: Terminal bend radii and lead-in manufacturing option. Terminal spacing greater than 3mm at all points.
Terminal Nos. For Reference Only

PC Mounting



Contact Material

Option Code	Model	Contact Material	Terminal Plating	Ratings
Q	9201	Silver ^{1,2}	Silver or Tin ^{2,5}	GP (general purpose) 6 amps 125 VAC 50/60 Hz T85 10,000 cycles (10E3) 3 amps 250 VAC 50/60 Hz T85 10,000 cycles R (resistive) 6 amps 30 VDC T85 10,000 cycles
	9221	Silver Cadmium Oxide ^{3,4,6}	Tin ⁵	GP (general purpose) 10 amps 125 VAC 50/60 Hz T85 10,000 cycles 5 amps 250 VAC 50/60 Hz T85 10,000 cycles R (resistive) 10 amps 30 VDC T85 10,000 cycles

Notes:

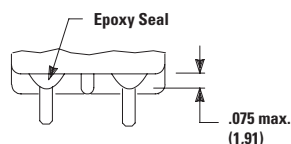
1. End Contacts: Coin silver, silver plated.
2. Center Contacts & All Terminals: Copper alloy, silver plated.
3. End Contacts: Silver cadmium oxide.
4. Center Contacts: Copper alloy, silver plated.
5. Z4 Terminals Only: Copper alloy, matte-tin plated.
6. Cadmium in electrical switch contacts is exempt from RoHS.

Notes: Any models supplied with Q contact material are RoHS compliant.

All 9000 Series models meet international dimensional and electrical requirements. **UL**
9221 model must be ordered with Z4 terminations and D seal option.

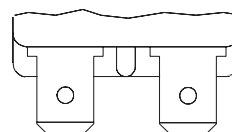
Seal

E Epoxy Seal



Notes: Not available with 9221 model or Z4 terminations.

D No Epoxy Seal



Notes: Must be ordered with 9221 model or Z4 terminations.

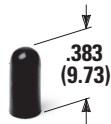
9000 Series

Power Toggle Switches



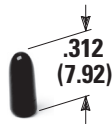
Available Hardware

Cap Compatible with S actuator



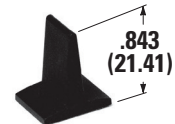
Part No.
896801000 WHITE
896802000 BLACK
896803000 RED
Material: Polyethylene
Finish: Matte

Cap Compatible with S actuator



Part No.
706201000 WHITE
706202000 BLACK
706203000 RED
Material: Vinyl
Finish: Matte

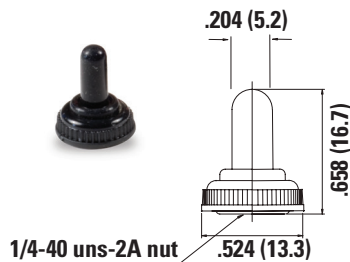
L43 Lever Handle



Part No.
481202000 BLACK
481203000 RED
Material: Nylon
Finish: Matte

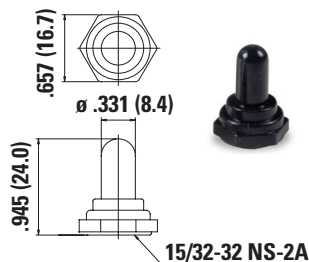
Notes: L43: Additional nuts, locking rings and lockwashers available separately
Other colors available, consult Customer Service Center.

759D02000 Sealing Boot



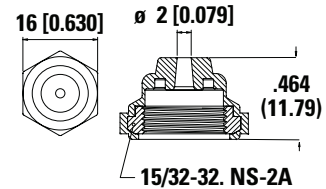
Notes: For use with S actuator style when combined with H3 and H bushings

703D02000 Sealing Boot



Notes: For use with T style actuator

704D02000 Sealing Boot



Notes: For use with T style actuator

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