



#### Features/Benefits

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

#### **Typical Applications**

- Shut-off switch
- Small equipment

# c**FL**°us



UL 61058-1

# **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  $\Omega$  typ. initial @

2-4 V DC, 100 mA.

INSULATION RESISTANCE:  $10^9 \Omega$  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).

#### **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.

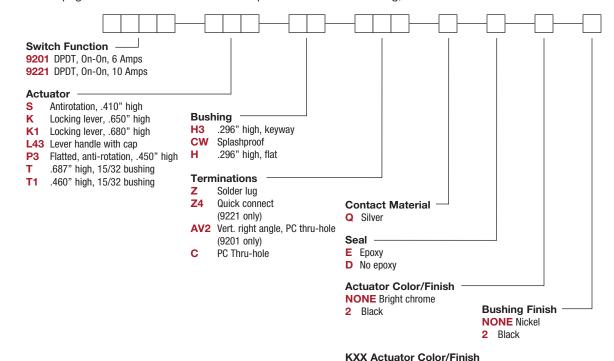
Lockwasher: Steel, nickel plated.

NOTE: Any models supplied with Q contact material are RoHS compliant and compatible.

**NOTE:** Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

#### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages F-49 thru F-52. For additional options not shown in catalog, consult Customer Service Center.



F-50



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2 Black anodized aluminum

Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

**NONE** Natural aluminum

ON

RATING\*

6 AMPS

10 AMPS

MODEL NO.

9201

9221

CONNECTED TERMINALS POS. 2 POS. 1 POS. 2

2-3,5-6

2-1,5-4

SCHEMATIC 2 (COMM) DPDT

2

.400 (10,16)

- .750 -(19,05)

Terminal Nos. Molded On Side Of Case

DPDT .100 1/4 40 UNS-2A 30°-P05.1 1 9 .275 TYP. (6,98) .750 (19,05) .030 TYP. P05.2 1 

ON

ON

Part number shown: 9201SH3ZQE

\* See CONTACT MATERIAL, page F-52, for complete ratings

9221 model must be ordered with Z4 terminations and D seal option.

.410

All 9000 Series models meet international dimensional and electrical requirements. c 15 (15)



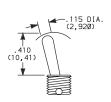
# **ACTUATOR**

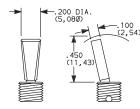
S ANTIROTATION, .410" HIGH

POLES

DP

P3 FLATTED, ANTIROTATION, .450" HIGH





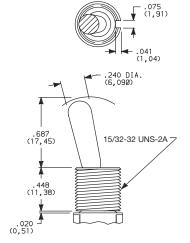
OPTION CODE	ACTUATOR FINISH
NONE	NATURAL ALUMINUM—With Nickel Plated Bushing
2	BLACK

NOTE: Black hardware is supplied when either black actuators or bushings are specified. All hardware is available separately, see Section N.

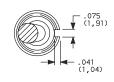
Antirotation is standard on all actuators, provides 'anti-push-in' feature

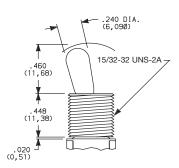
Dress nut part number: 709901201 supplied standard with P3 actuator

.687" HIGH, 15/32 BUSHING



**T1** .460" HIGH, 15/32 BUSHING





OPTION CODE	ACTUATOR FINISH
NONE	BRIGHT CHROME—With Nickel Plated Bushing
2	BLACK

**NOTE:** 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, see Section N.

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



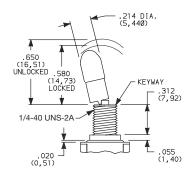
Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

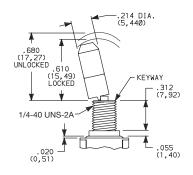


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K LOCKING LEVER, .650" HIGH, THREADED

K1 LOCKING LEVER, .680" HIGH, THREADED





**Locking Positions** 



2 Position Lock

NOTE: 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.

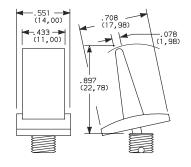
Bushing option code not required unless CW splashproof bushing ordered.

	OPTION CODE	ACTUATOR CAP FINISH
NONE NATURAL ALUMINUM-WI		NATURAL ALUMINUM-With Nickle Plated Bushing
	2	BLACK ANODIZED ALUMINUM





PLASTIC LEVER HANDLE WITH ANTIROTATION AND CAP, P/N 4812



OPTION CODE	ACTUATOR CAP COLOR
2	BLACK
NONE	No Actuator Color (L40 option)

Other colors available, consult Customer Service Center.

No color choice required

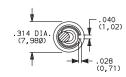
**NOTE:** Lever handle actuator L43 supplied, but not installed. For interchangeability, order L40 actuator option and order lever handles separately, see page F-52. Antirotation is standard on all actuators, provides 'anti-push-in' feature.

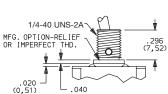
# Antirotation is standard on all actuators, provides 'anti-push-in' feature. BUSHING BUSHING BUSHING

H3 .296" HIGH, THREADED, KEYWAY

H .296" HIGH, THREADED, FLAT

CW SPLASHPROOF, 15/32 BUSHING

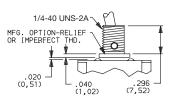


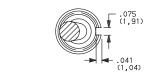


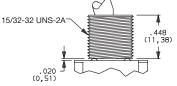
(1,02)



Finish: Matte







OPTION CODE	BUSHING FINISH	
NONE	NICKEL	
2	BLACK	

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

**NOTE:** 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, see Section N.

For T & T1 actuators only.

Internal actuator seal standard. External bushing seal available separately from APM Hexseal, part # MFS-60064.



Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

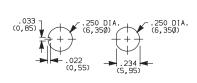


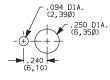
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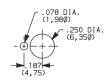
PANEL MOUNTING

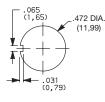
1/4-40 UNS-2A

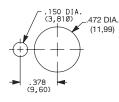
15/32-32 UNS-2A











Without locking ring.

With standard locking ring.

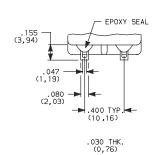
With small locking ring.

Without locking ring.

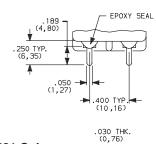
With standard locking ring.

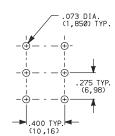
## **TERMINATIONS**

**Z** SOLDER LUG



PC THRU-HOLE





PC MOUNTING

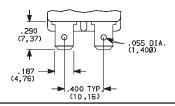
9201 Only

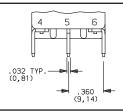
Z4 .187" QUICK CONNECT

#### 9221 Only

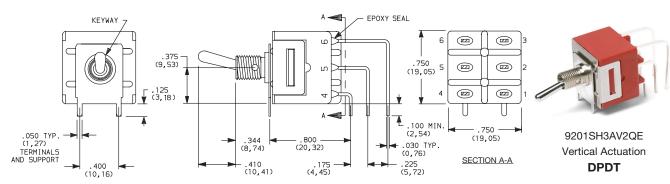
9201 Only

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





**AV2** VERTICAL RIGHT ANGLE, PC THRU-HOLE



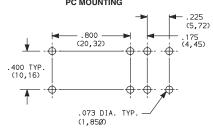
F-53

Actuator Shown in Pos. 3

PC MOUNTING Terminal Nos. For Reference Only

### 9201 Only

NOTE: Terminal bend radii and lead-in manufacturing option. Terminal spacing greater than 3mm at all points.

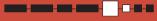




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Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

# **CONTACT MATERIAL**



OPTION CODE	MODEL	CONTACT MATERIAL	TERMINAL PLATING	RATINGS
	9201	SILVER 1,2	SILVER OR TIN <sup>2,5</sup>	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
Q	9221	SILVER CADMIUM OXIDE 3,4,6	TIN <sup>5</sup>	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

- \* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.
- <sup>1</sup> END CONTACTS: Coin silver, silver plated.
- <sup>2</sup> CENTER CONTACTS & ALL TERMINALS: Copper alloy, silver plated.
- <sup>3</sup> END CONTACTS: Silver cadmium oxide.
- <sup>4</sup> CENTER CONTACTS: Copper alloy, silver plated.
- <sup>5</sup> Z4 TERMINALS ONLY: Copper alloy, matte-tin plated.
- <sup>6</sup> Cadmium in electrical switch contacts is exempt from RoHS.

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

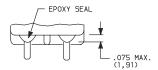
All 9000 Series models meet international dimensional and electrical requirements. 9221 model must be ordered with Z4 terminations and D seal option.





#### SEAL

**E** EPOXY SEAL



D NO EPOXY SEAL



Not available with 9221 model or Z4 terminations.

Must be ordered with 9221 model and Z4 termination

## **AVAILABLE HARDWARE**

Compatible with S actuator



PART NO.

896801000 WHITE 896802000 BI ACK 896803000 RED

Material: Polyethylene Finish: Matte

Cap

Compatible with S actuator



PART NO.

706201000 WHITE 706202000 BLACK 706203000 RED

Material: Vinvl Finish: Matte

L43 Actuator



PART NO.

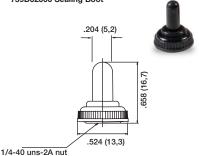
481202000 BLACK 481203000 RFD

Material: Nylon Finish: Matte

NOTE: Additional nuts, locking rings and lockwashers available separately, see Section N.

Other colors available, consult Customer Service Center.

#### 759D02000 Sealing Boot



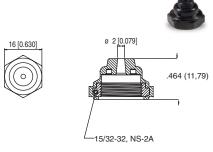
NOTE: For use with S actuator style when combined with H3 and H bushings

#### 703D02000 Sealing Boot



NOTE: For use with T style actuator

#### 704D02000 Sealing Boot



NOTE: For use with T style actuator



Specifications and dimensions subject to change



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# **Mouser Electronics**

**Authorized Distributor** 

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# **C&K Switches:**

9221TZ4QD 9201TCWZQE 9221KZ4QD 9221P3H3Z4QD 9201SH3ZQE22 9201T1CWZQE 9201TCWZQE22
9201K1AV2QE 9201K1CQE 9201K1ZQE 9201KAV2QE 9201KZQE 9201KZQE2 9201P3H3CQE 9201P3H3ZQE
9201P3HZ4QD 9201P3HZQE 9201SH3AV2QE 9201SH3CQE 9201SH3Z4QD 9201SH3ZQE 9201SHZQE
9201T1ZQE 9201TAV2QE 9201TCWCQE 9201TZQE 9221K1Z4QD 9221L43H3Z4QD2 9221P3HZ4QD
9221SH3Z4QD 9221T1CWZ4QD 9221T1Z4QD 9221TCWZ4QD 9221SHZ4QD