

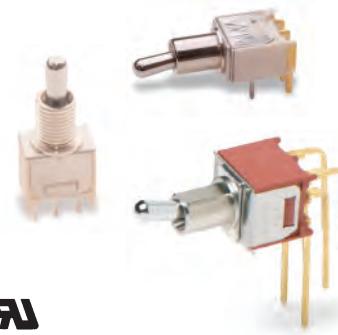
T Series Subminiature Toggle Switches

Features/Benefits

- Compact size—small footprint
- Single and double pole models
- PC and panel mount options available
- RoHS compliant models available

Typical Applications

- Hand-held telecommunications
- Instrumentation
- Medical equipment



Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material (TX01 models): 3 AMPS @ 120 V AC or 28 V DC. All other models: 2 AMPS @ 120 V AC or 28 V DC. See page F-42 for additional ratings.

ELECTRICAL LIFE: TX01 models: 60,000 make-and-break cycles at full load. All other models: 30,000 cycles.

CONTACT RESISTANCE: Below 20 mΩ typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10⁹ Ω min.

DIELECTRIC STRENGTH: 1000 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).

NOTE: Any models supplied with P, R, Q, B or G 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.

Materials

CASE: Glass filled nylon 6/6, flame retardant, heat stabilized or dialyl phthalate (DAP), (UL 94V-0) or glass filled nylon 4/6, flame retardant, heat stabilized.

ACTUATOR: Brass, chrome plated.

BUSHING: Brass, nickel plated.

HOUSING: Stainless steel.

SWITCH SUPPORT: Brass, matte-tin plated.

END CONTACTS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Coin silver, silver plated. See above for additional contact materials.

CENTER CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page F-42 for additional contact materials.

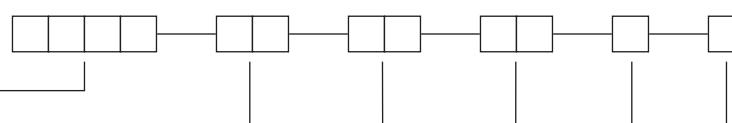
TERMINAL SEAL: Epoxy.

HARDWARE: Nut & Locking Ring: Brass, nickel plated.

Lockwasher: Steel, nickel plated. Additional hardware available separately, see Section N.

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-38 thru F-42. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all "bottom-wash" PCB cleaning methods.



Switch Function

T101 SPDT On-None-On

T102 SPDT Off-None-On

T103 SPDT On-Off-On

T105 SPDT Mom.-Off-Mom.

T107 SPDT On-Off-Mom.

T108 SPDT On-None-Mom.

T201 DPDT On-None-On

T203 DPDT On-Off-On

T205 DPDT Mom.-Off-Mom.

T207 DPDT On-Off-Mom.

T208 DPDT On-None-Mom.

T211 DPDT On-On-On.

Actuator

P3 Flatted, anti-rotation, .490" high

S .370" high

K Locking lever, round tip

L1 .640" high

M1 .220" high

S1 .410" high

M .210" high

L .290" high

Bushing

H .220" high, threaded, flat

H9 .220" high, unthreaded, flat

CF Splashproof, .310" high, threaded, flat

D9 .260" high, unthreaded, keyway

T .310" high, threaded, flat

T9 .310" high, unthreaded, flat

TD .260" high, threaded, keyway

TK .310" high, threaded, keyway

Y .220" high, threaded, keyway

Y9 .220" high, unthreaded, keyway

Terminations

A Right angle, PC thru-hole

AV Vertical right angle, PC thru-hole

C PC Thru-hole

V3 Vertical mount V-bracket

Z Solder lug

W Wire wrap

Contact Material

B Gold

P Gold, matte tin

Q Silver

G Gold over silver

R Gold over silver, matte-tin



F
Toggle



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

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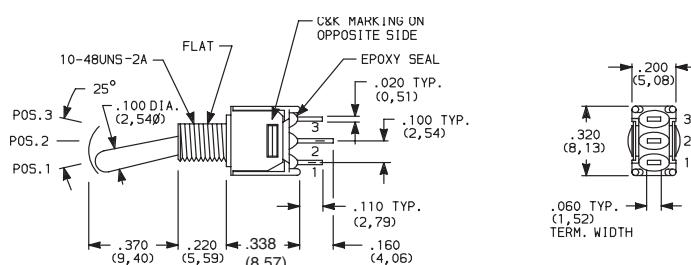
T Series Subminiature Toggle Switches

SWITCH FUNCTION



| NO. POLES | MODEL NO. | SWITCH FUNCTION | | | CONNECTED TERMINALS | | | SCHEMATIC |
|-----------|-------------|-----------------|--------|--------|---------------------|--------|--------|-----------|
| | | POS. 1 | POS. 2 | POS. 3 | POS. 1 | POS. 2 | POS. 3 | |
| | | | | | | | | |
| SP | T101 | ON | NONE | ON | 2-3 | N/A | 2-1 | |
| | T103 | ON | OFF | ON | 2-3 | OPEN | 2-1 | |
| | T105 | MOM. | OFF | MOM. | 2-3 | OPEN | 2-1 | |
| | T107 | ON | OFF | MOM. | 2-3 | N/A | 2-1 | |
| | T108 | ON | NONE | MOM. | OPEN | N/A | 3-1 | |
| | T102 | OFF | NONE | ON | OPEN | N/A | 3-1 | |

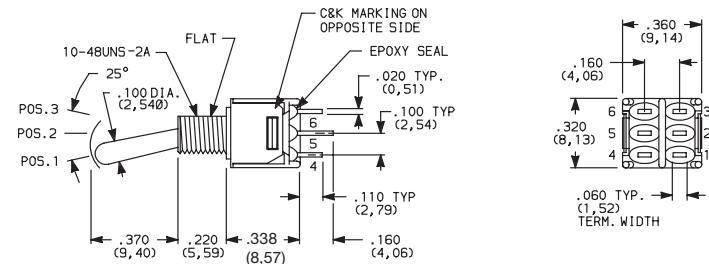
SPDT



Part number shown: T101SHZQE

| NO. POLES | MODEL NO. | SWITCH FUNCTION | | | CONNECTED TERMINALS | | | SCHEMATIC |
|-----------|--------------|-----------------|--------|--------|---------------------|---------|---------|-----------|
| | | POS. 1 | POS. 2 | POS. 3 | POS. 1 | POS. 2 | POS. 3 | |
| | | | | | | | | |
| DP | T201 | ON | NONE | ON | 2-3-5-6 | N/A | 2-1-5-4 | |
| | T203 | ON | OFF | ON | 2-3-5-6 | OPEN | 2-1-5-4 | |
| | T205 | MOM. | OFF | MOM. | 2-3-5-6 | N/A | 2-1-5-4 | |
| | T208 | ON | NONE | MOM. | 2-3-5-6 | N/A | 2-1-5-4 | |
| | T211* | ON | ON | ON | 2-3-5-6 | 2-3-5-4 | 2-1-5-4 | |

DPDT



Terminal Nos.
For Reference Only

Part number shown: T201SHZQE

MOM. = Momentary

* Wiring for 3-way switch refer to page N-10

All models with all options when ordered with G, L, R or Q contact material.

Toggle

C&K



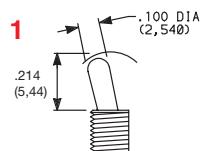
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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T Series Subminiature Toggle Switches

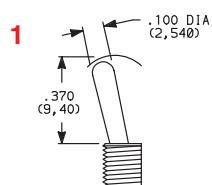
ACTUATOR

M .210" HIGH



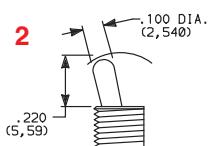
Standard with A, AV or V3 terminations.

S .370" HIGH

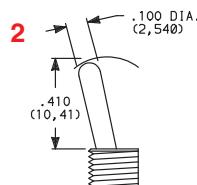


Standard with Z, C or W terminations.

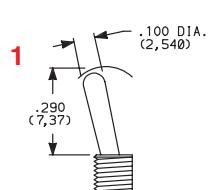
M1 .220" HIGH
(with "T" bushing)



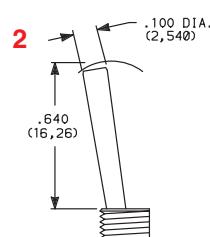
S1 .410" HIGH
(with "T" bushing)



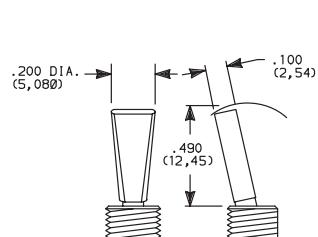
L .290" HIGH



L1 .640" HIGH



P3 ANTI-ROTATION, FLATTED,
.450" HIGH



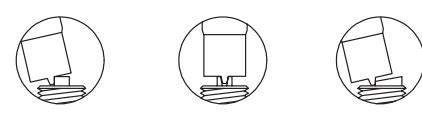
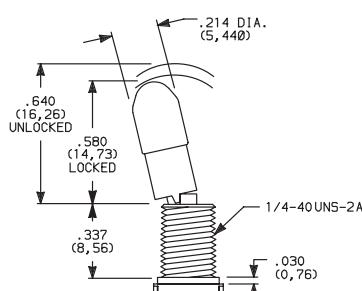
Available with T & T9 bushings only.
Dress nut part number 709901201
supplied standard with threaded bushing.

1 Actuator shown with standard H bushing.
Subtract .040 (1.02) for TD and D9 bushings,
subtract .090 (2.29) for T, T9, TK, K9 &
CF bushings.

2 Actuators shown with T, T9, TK & CF bushings,
add .050 (1.27) for TD and D9 bushings,
add .090 (2.29) for H, H9, Y & Y9 bushings.
All actuators have chrome finish (except K).

K LOCKING LEVER

Locking Positions



K actuators have natural aluminum finish.

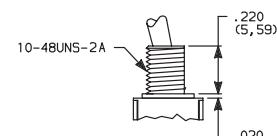
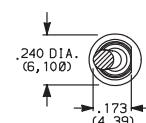
Keyway on right side. To prevent accidental actuation, toggles must be lifted before being actuated. When released, toggles again lock in place. Overtightening mounting nut may cause actuator to bind.

Not available with CF bushing option.

Bushing option code not required. Not available with TX05 & TX07 models.

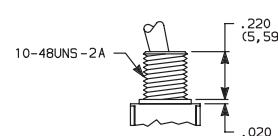
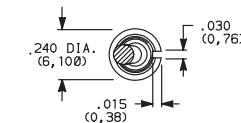
BUSHING

H .220" HIGH THREADED, FLAT



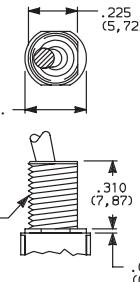
H standard with C, W & Z terminations.
H9 standard with A, AV & V3 terminations.

Y .220" HIGH THREADED, KEYWAY



Y9 .220" HIGH UNTHREADED, KEYWAY

T .310" HIGH THREADED, FLAT



T9 .310" HIGH UNTHREADED, FLAT



F Toggle

Third Angle Projection

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

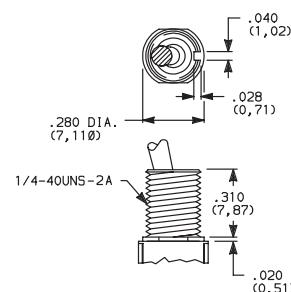
C&K

T Series Subminiature Toggle Switches

BUSHING

TK

.310" HIGH THREADED, KEYWAY

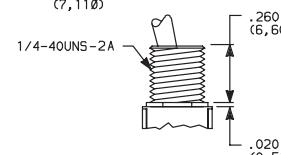


TD

.260" HIGH THREADED, KEYWAY

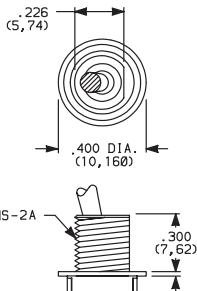
D9

.260" HIGH UNTHREADED, KEYWAY



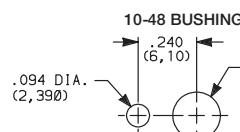
CF

SPLASHPROOF, .310" HIGH THREADED, FLAT

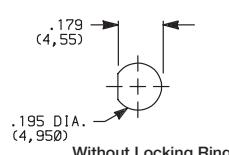


IP67 Degree of protection.
Internal o-ring actuator seal and
external bushing seal washer standard.

Not available with K locking lever option.

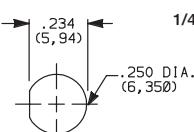


With Standard Locking Ring

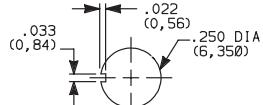


Without Locking Ring

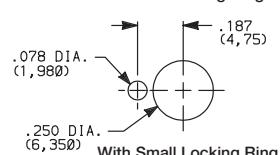
PANEL MOUNTING



1/4 IN. BUSHING

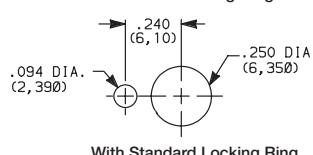


Without Locking Ring



With Small Locking Ring

Without Locking Ring

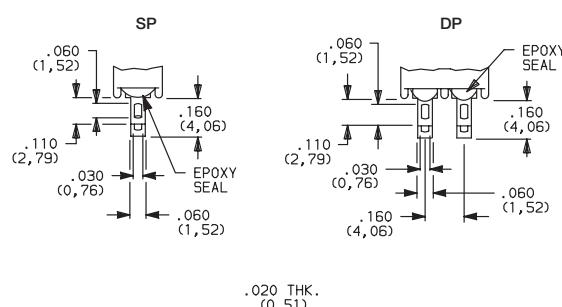


With Standard Locking Ring

TERMINATIONS

Z

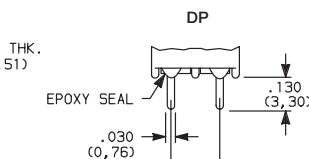
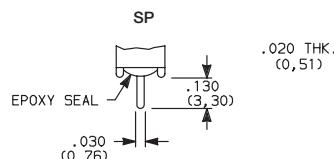
SOLDER LUG



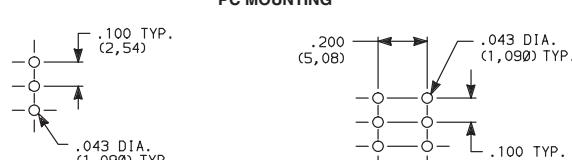
Not available with P or R contact materials.

C

PC THRU-HOLE



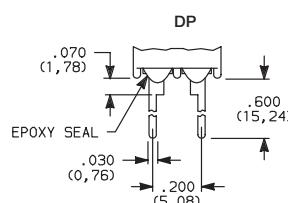
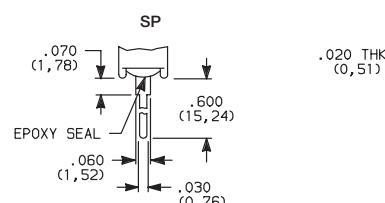
PC MOUNTING



T102 – omit center hole.

W

WIRE WRAP



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

C&K

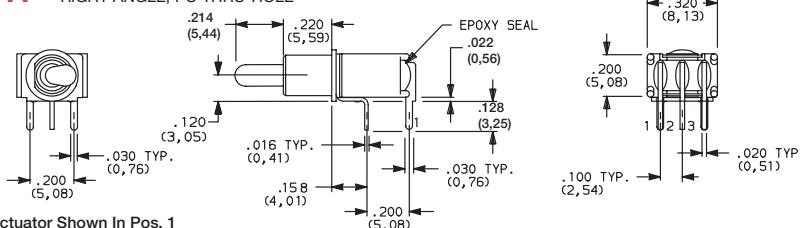
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T Series Subminiature Toggle Switches

TERMINATIONS



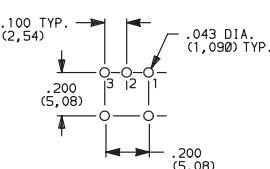
A RIGHT ANGLE, PC THRU-HOLE



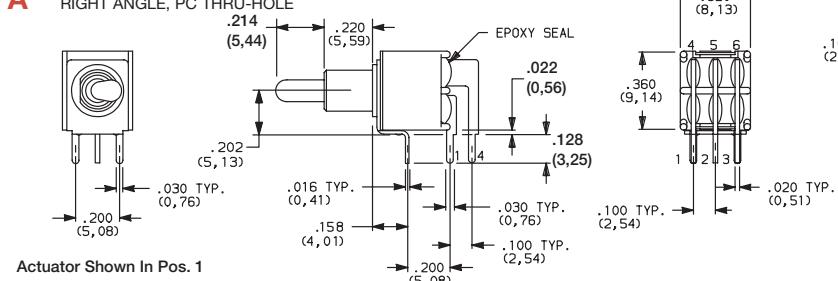
Actuator Shown In Pos. 1

Not available with T102 model.

PC MOUNTING

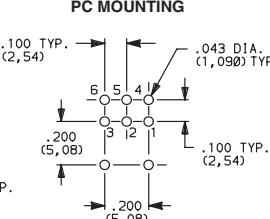


A RIGHT ANGLE, PC THRU-HOLE

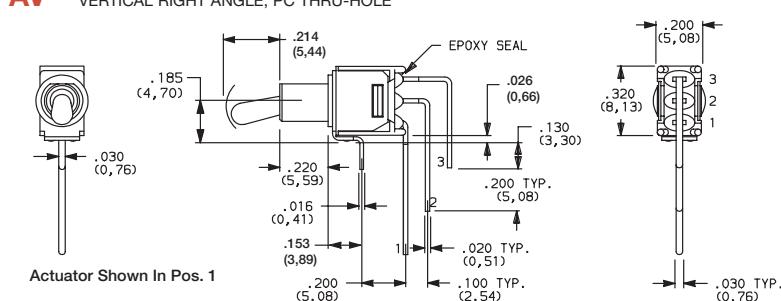


Actuator Shown In Pos. 1

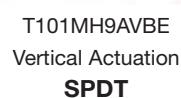
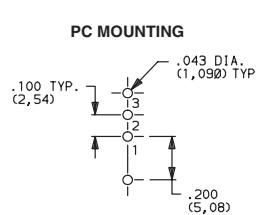
PC MOUNTING



AV VERTICAL RIGHT ANGLE, PC THRU-HOLE

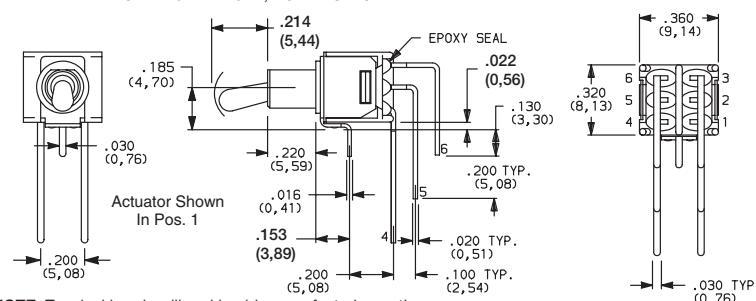


Actuator Shown In Pos. 1

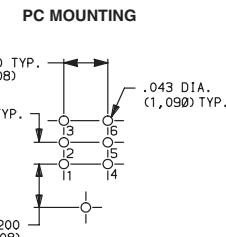


NOTE: Terminal bend radii and lead-in manufacturing option.

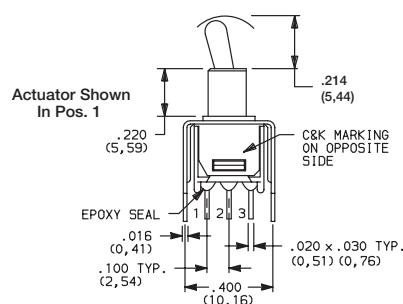
AV VERTICAL RIGHT ANGLE, PC THRU-HOLE



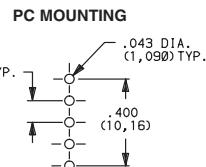
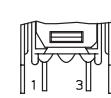
NOTE: Terminal bend radii and lead-in manufacturing option.



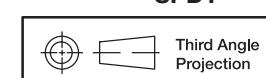
V3 VERTICAL MOUNT, V-BRACKET



Actuator Shown
In Pos. 1



T102 Models:
Omit center hole.



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



F
Toggle

T Series Subminiature Toggle Switches

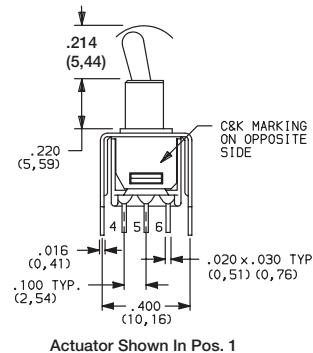
TERMINATIONS

V3

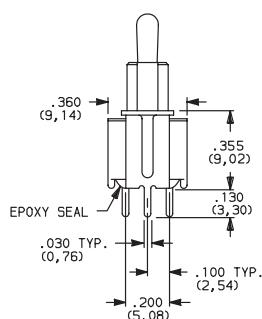
VERTICAL MOUNT, V-BRACKET



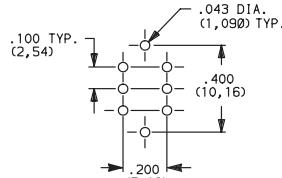
T201MH9V3BE
DPDT



Actuator Shown In Pos. 1



PC MOUNTING



CONTACT MATERIAL

| OPTION CODE | CONTACT MATERIAL | TERMINAL PLATING | RATINGS | |
|-------------|----------------------|------------------|--------------------------------|---|
| B | GOLD 1 | GOLD 1 | LOW LEVEL/DRY CIRCUIT | 0.4 VA MAX. @ 20 V AC OR DC MAX. |
| | | MATTE-TIN 6 | | |
| Q | SILVER 4,5 | SILVER 5 | POWER | TX01 MODELS: 3 AMPS @ 120 V AC OR 28 V DC. ALL OTHER MODELS: 2 AMPS @ 120 V AC OR 28 V DC. |
| G | GOLD OVER SILVER 2,3 | GOLD 3 | LOW LEVEL/DRY CIRCUIT OR POWER | TX01 MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 3 AMPS @ 120 V AC OR 28 V DC. ALL OTHER MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 2 AMPS @ 120 V AC OR 28 V DC. |
| | | MATTE-TIN 6 | | |

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

1 CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

2 END CONTACTS: Coin silver, with gold plate over nickel plate.

3 CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

4 END CONTACTS: Coin silver, silver plated.

5 CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

6 TERMINALS: Copper alloy, with matte-tin over nickel plate.

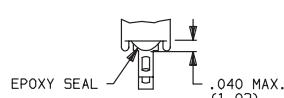
All models with all options when ordered with R, G, or Q contact material.

B contact material standard with A, AV, V3 & W terminations.

Q contact material standard with C & Z terminations.

SEAL

E EPOXY SEAL



AVAILABLE HARDWARE

759D02000

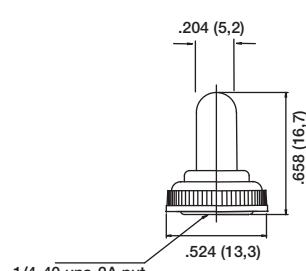
SEALING BOOT



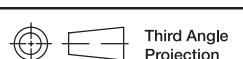
F



* Note: For use with S1 actuator style when combined with T, TK, and CF bushings.



1/4-40 uns-2A nut



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

C&K

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

C&K Components:

[T103SHZQE](#) [T203SHZQE](#) [T103SHCQE](#) [T201MH9ABE](#) [T201SHZQE](#) [T105SHZQE](#) [T107MHZBE](#) [T102MH9AVBE](#)
[T102LTZBE](#) [T102SHZQE](#) [T103MH9ABE](#) [T103MHV3BE](#) [T103STDCBE](#) [T105MHZBE](#) [T105SH9CBE](#) [T107S1T9ABE](#)
[T108MH9ABE](#) [T201MH9AVBE](#) [T201MH9CBE](#) [T201MH9V3BE](#) [T208SH9ABE](#) [T211MH9AVBE](#) [T211MH9V3BE](#)
[T211SHZQE](#) [T203MYAVBE](#) [T105MY9CBE](#) [T101MYAVBE](#)