

RoHS Compliant

E222871

Miniature Toggle

Specifications

Electrical Ratings	5A @ 120VAC, 28VDC 2A @ 250VAC See Contact Options
Electrical Life	50,000 cycles typical
Contact Resistance	<20mΩ initial @ 2-4VDC, 100mA

Dielectric Strength	1500Vrms min
Insulation Resistance	>1000MΩ min
Operating Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C

Materials

Actuator	Brass, Chrome Plated
Housing	Diallyl Phthalate (DAP)
Cover	Stainless Steel
Bushing	Brass, Nickel Plated
Bracket	Brass, Tin Plated
Contacts	Copper Alloy, Silver or Gold Plated
Terminals	Copper Alloy, Silver Plated

Features

- Wide variety of applications from consumer electronics to commercial
- Standard epoxy sealed terminations
- Gold contacts available for low power applications
- Available support brackets for greater stability
- Up to four poles with seven functions available
- Anti-rotation feature on flat toggles
- High torque bushing preventing separation from frame during installation
- Wide variety of terminal options

Miniature Toggle

Ordering Information

1. Series	ANT	2	3	T	E	B	Q	E
ANT								
2. Number of Poles								
1 = SPDT 2 = DPDT 3 = 3PDT 4 = 4PDT								
3. Switch Function								
1 = ON-NONE-ON 2 = ON-NONE-(ON) 3 = ON-OFF-ON 4 = (ON)-OFF-(ON) 5 = ON-OFF-(ON) 6 = ON-ON-ON **See 3-way wiring section for details								
4. Actuator								
T = 5.08mm, standard S = 10.41mm, standard X = 13.97mm, standard V = 16.26mm, standard W = 21.34mm, standard Y = 6.35mm, flat toggle *only available with AR1, AR2, AN1, AN2 bushing F = 12.30mm, flat toggle *only available with AR1, AR2, AN1, AN2 bushing G = 21.00mm, flat toggle *only available with AR1, AR2, AN1, AN2 bushing K = 13.50mm, flat toggle *only available with AR1, AR2, AN1, AN2 bushing Z = 12.37mm, large toggle *only available with BZ, BZR bushing Z1 = 17.45mm, large toggle *only available with BZ, BZR bushing LK = 14.73mm, locking toggle, round top *only available with K, K1 bushing LK1 = 14.73mm, locking toggle, flat top *only available with K, K1 bushing P(color) = 21.34mm, plastic *see color choices in Actuator Option section PX = 26.30mm, plastic, flat toggle *only available with BZ, BZR bushing								
5. Bushing								
E / E1 = 8.89mm, ¼-40NS / non-threaded, keyway F / F1 = 7.10mm, ¼-40NS / non-threaded, keyway J = 8.89mm, ¼-40NS, flat W = 8.89mm, M6P-0.75 (metric) keyway H = 8.00mm, high torque, ¼-40NS, keyway G = 7.52mm, high torque, ¼-40NS, flat AR1 / AR2 = 7.55mm, anti-rotation, ¼-40NS / non-threaded, keyway AN1 / AN2 = 7.55mm, anti-rotation, ¼-40NS / non-threaded, flat BZ = 11.38mm, 15/32-32NS, keyway BZR = 11.38mm, 15/32-32NS, keyway with support insert L = 7.55mm, ¼-40NS, keyway, splash proof K / K1 = 8.00mm, ¼-40NS, non-threaded, keyway ** See actuator option section for bushing availability with various actuators								
6. Terminals								
B = Solder Lug ** Wire wrap terminals available in various lengths, contact factory C = PC Pin D = Quick Connect H = Horizontal Mount, right angle PC pin, <i>HS = Snap-In</i> V = Vertical Mount, right angle PC pin, <i>VS = Snap-In</i> S20 or S25 = PC pin with support bracket, <i>V20 or V25 = Snap-In support bracket</i> S35 or S40 = PC pin with support bracket, <i>V35 or V40 = Snap-In support bracket</i>								
7. Contacts								
Q = Silver plated R = Gold plated G = Gold over Silver plated								
8. Epoxy Seal	E = Epoxy Seal							
9. Actuator Cover								
Blank = No cover S = for S, T, X, V & W actuators E = for E, F, J, & G bushings Z = for BZ & BZR bushings		Actuator Cover Colors 1 = White 2 = Black 3 = Red ** Color choices only available with S toggle cover						

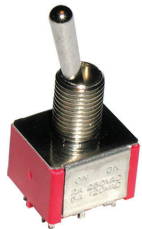
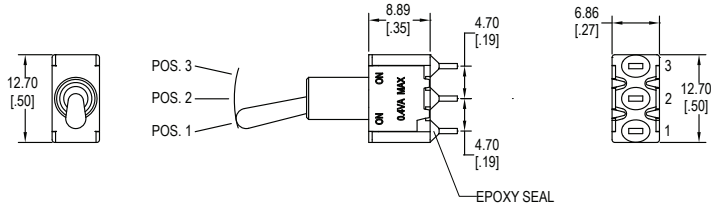
Switch Function



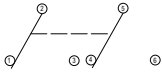
SPDT



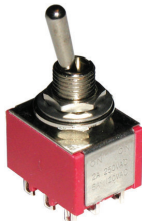
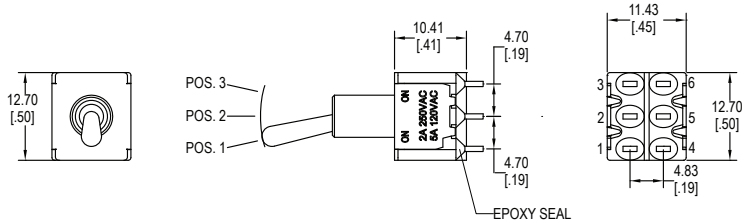
Function	Toggle Position		
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)
Terminals	2-3	-	2-1



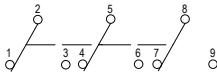
DPDT



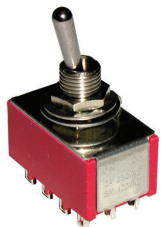
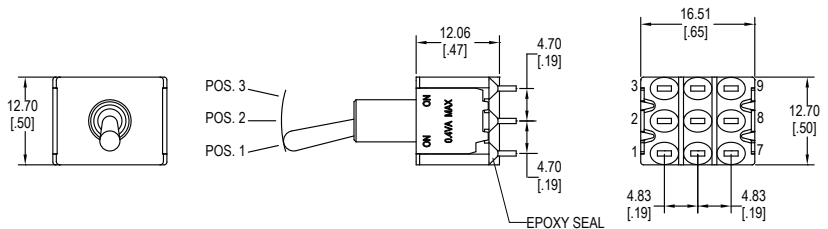
Function	Toggle Position		
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)
Terminals	2-3	-	2-1
6	ON	ON	ON
Terminals	2-3 5-6	2-3 5-4	2-1 5-4



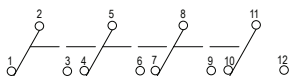
3PDT



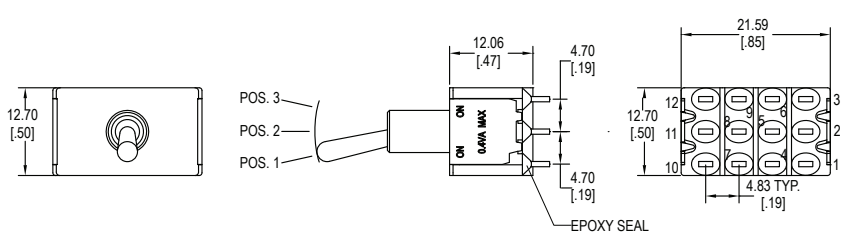
Function	Toggle Position		
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)
Terminals	2-3 5-6 8-9	-	2-1 5-4 8-7



4PDT

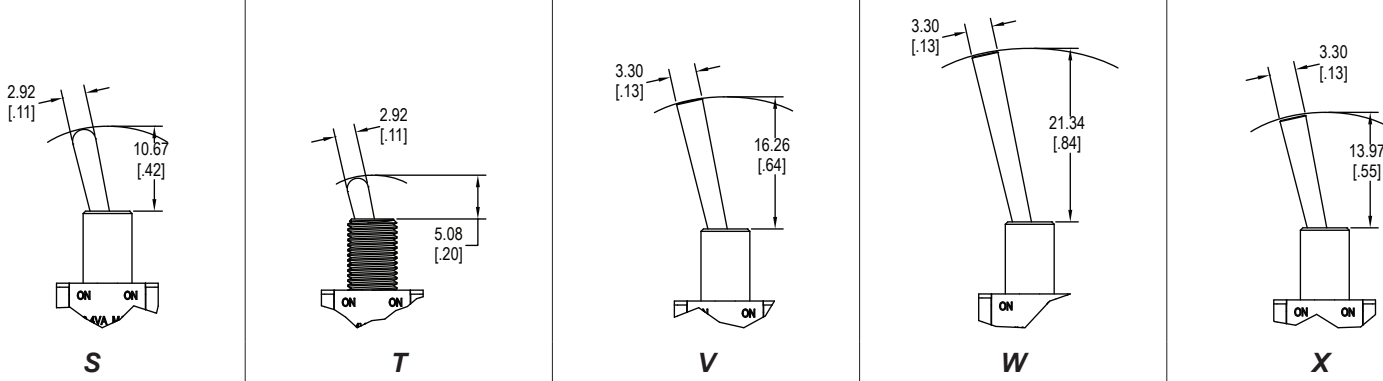


Function	Toggle Position		
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)
Terminals	2-3 5-6 8-9 11-12	-	2-1 5-4 8-7 11-10
6	ON	ON	ON
Terminals	2-3 5-6 8-9 11-12	2-3 5-4 8-9 11-10	2-1 5-4 8-7 11-10

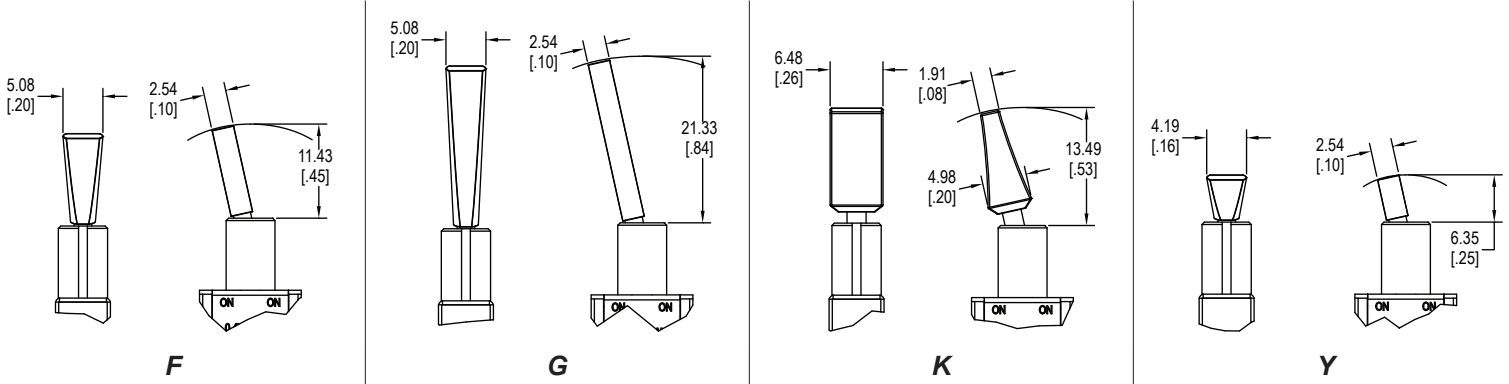


Actuator Options

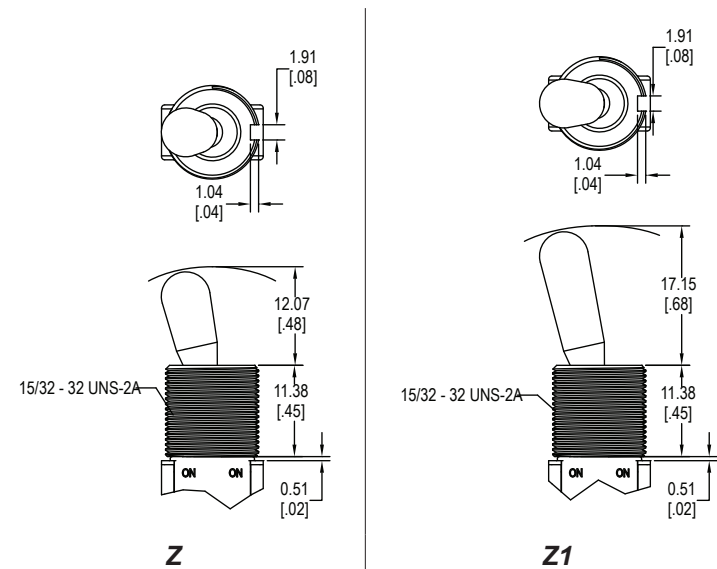
Actuator lengths shown with E bushing, subtract 1.78mm for F/F1 bushing, subtract 0.51mm for M bushing



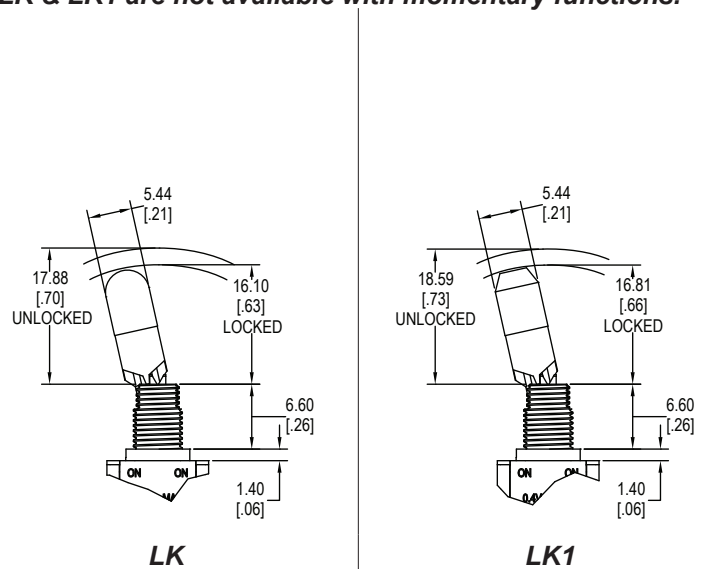
Below Actuators only available with AR1, AR2 & AN1/AN2 bushing



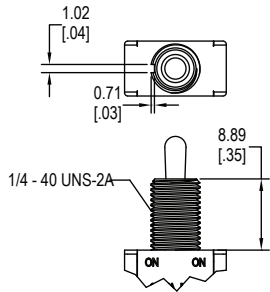
Below Actuators only available with BZ & BZR bushing



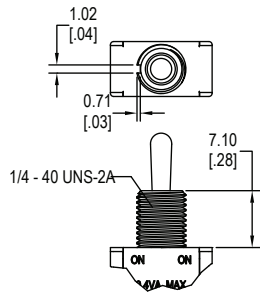
Below Actuators only available with K & K1 Bushing. LK & LK1 are not available with momentary functions.



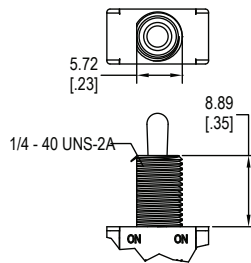
Bushing Options



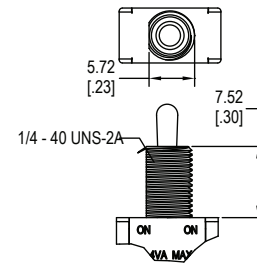
E - Threaded
E1 - Non-Treated



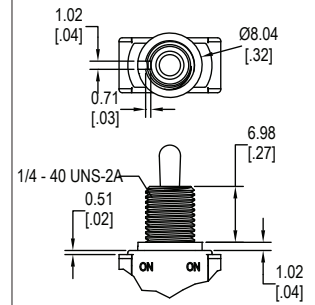
F - Threaded
F1 - Non-Treated



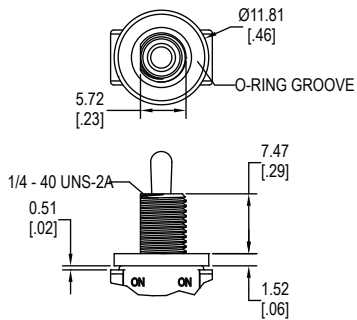
J - Threaded



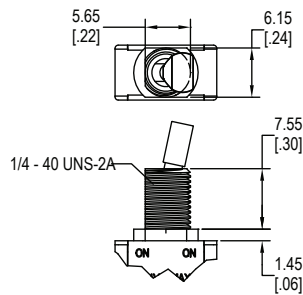
G - Threaded
High Torque



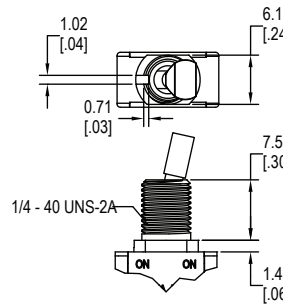
H - Threaded
High Torque



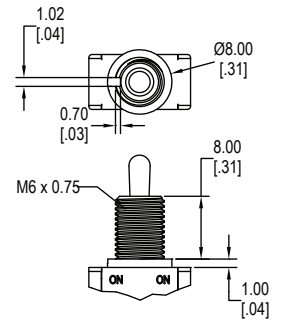
L - Threaded
Splash Proof



AN1 - Threaded
Anti-Rotation



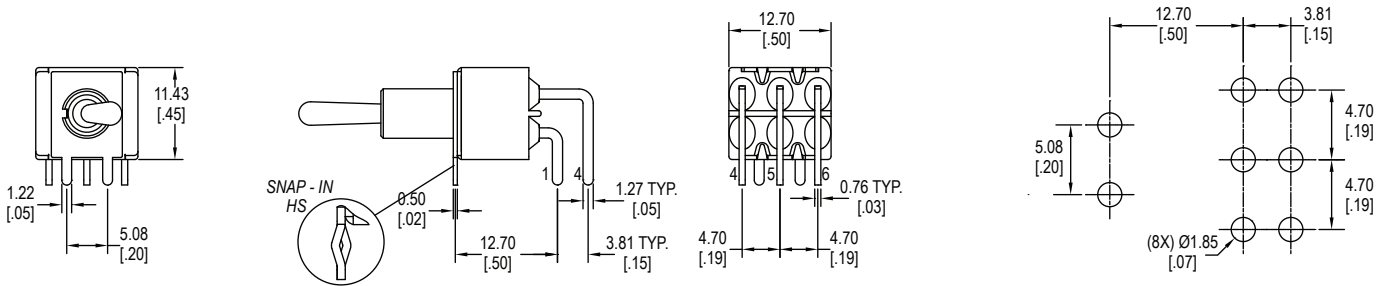
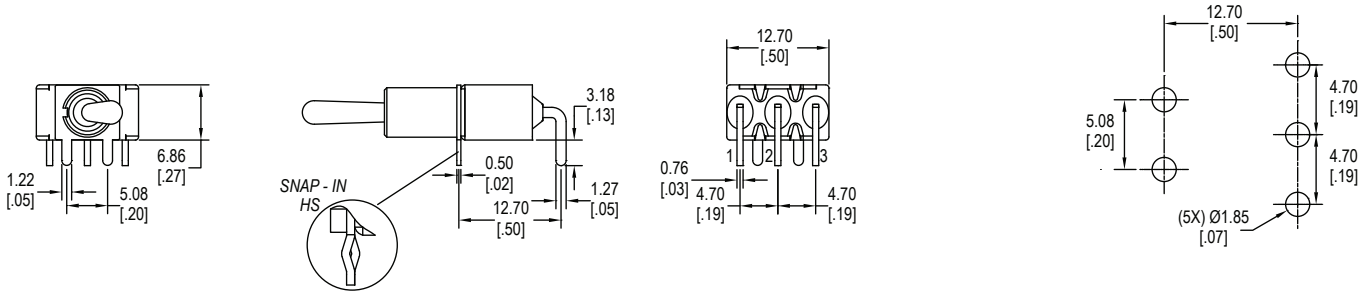
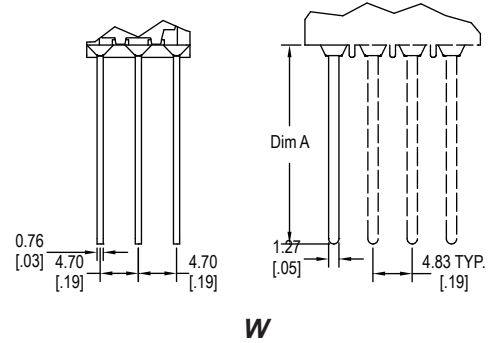
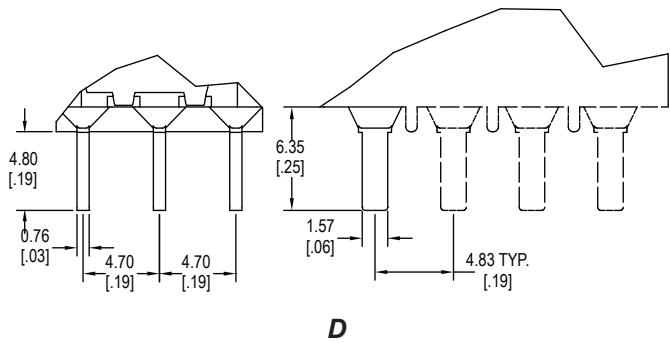
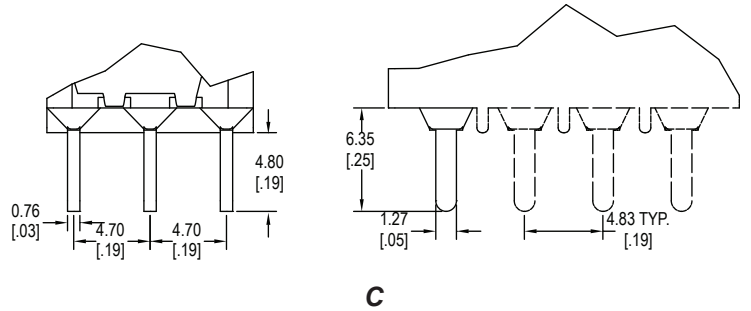
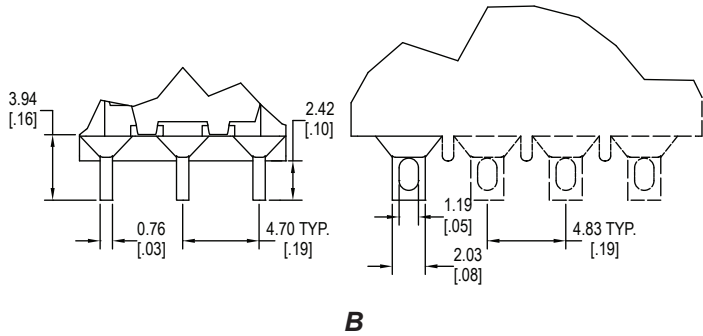
AR1 - Threaded
Anti-Rotation



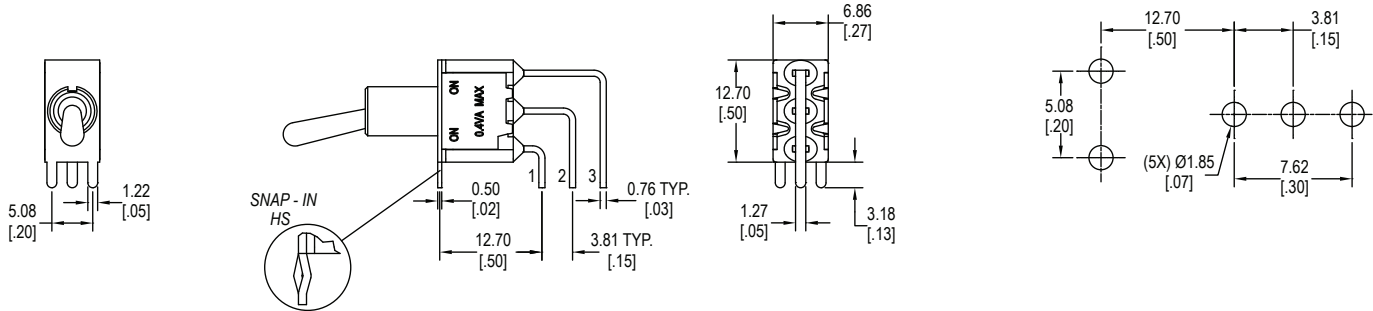
W - Threaded
Metric

Panel Mounting

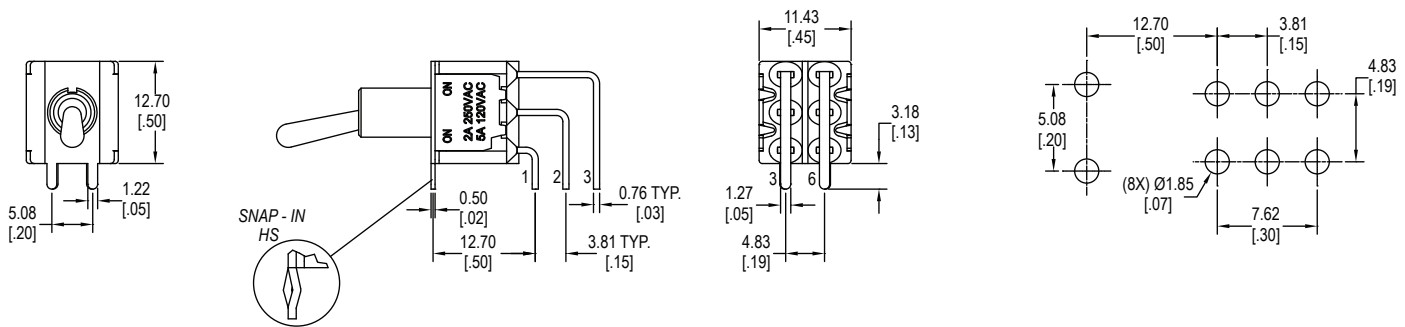
Terminal Options



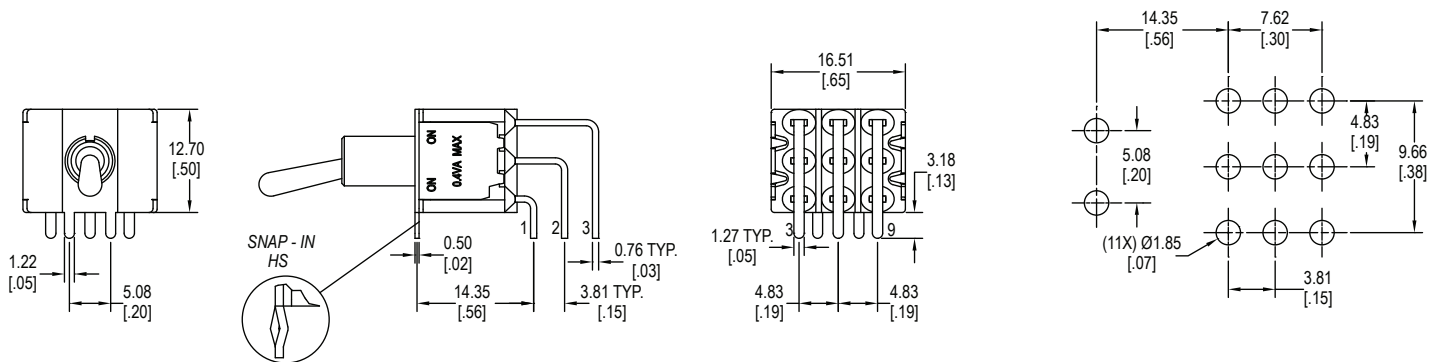
Terminal Options



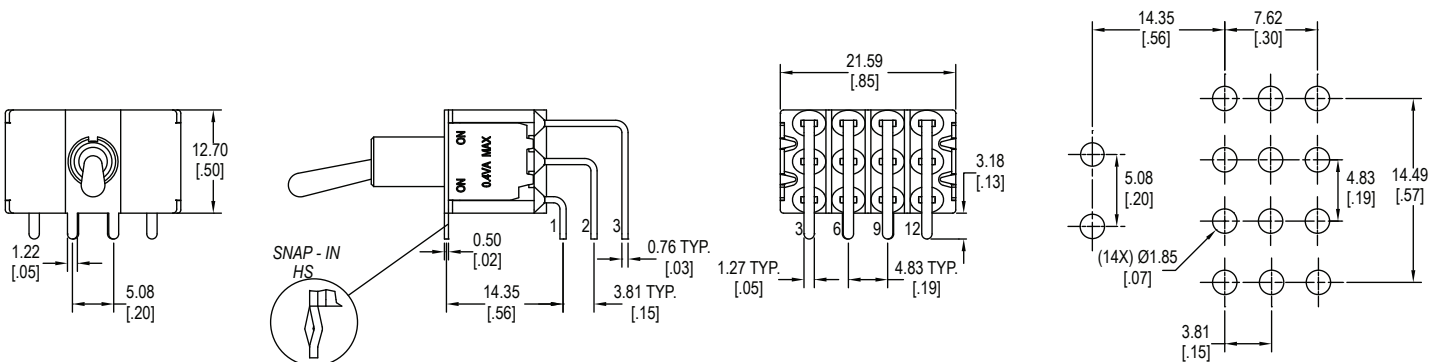
V (VS - Snap-in) = Vertical mount, right angle PC pins, single pole



V (VS - Snap-in) = Vertical mount, right angle PC pins, double pole

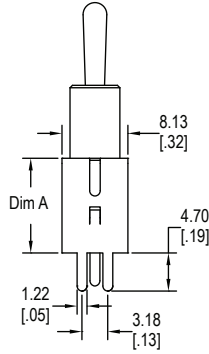
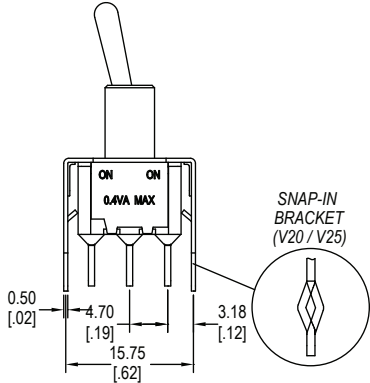


V (VS - Snap-in) = Vertical mount, right angle PC pins, three pole

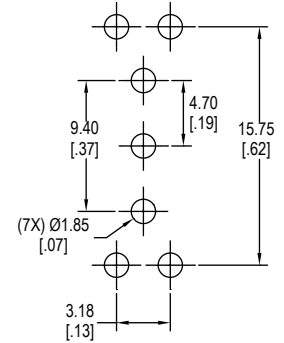


V (VS - Snap-in) = Vertical mount, right angle PC pins, four pole

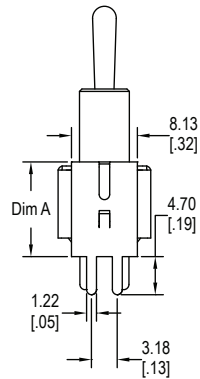
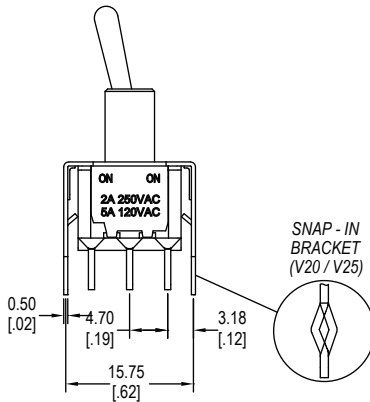
Terminal Options



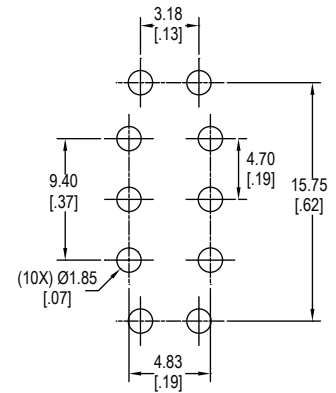
Terminal Option	"A" Dimension
S20 / V20	11.68
S25 / V25	16.00



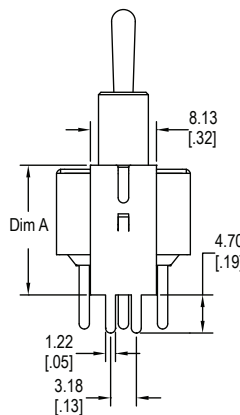
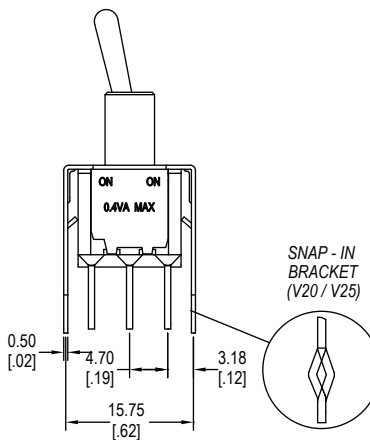
S20/S25 (V20/V25 - Snap-in) = PC pins with support bracket, single pole



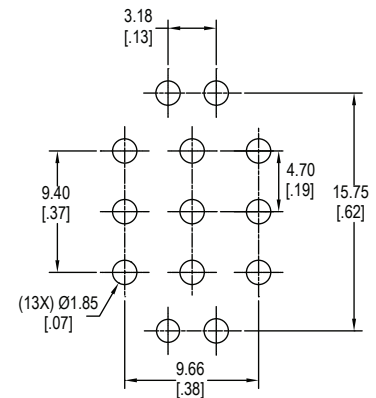
Terminal Option	"A" Dimension
S20 / V20	11.68
S25 / V25	16.00



S20/S25 (V20/V25 - Snap-in) = PC pins with support bracket, double pole

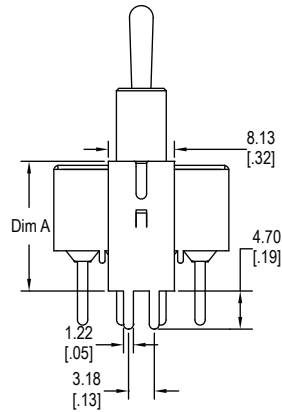
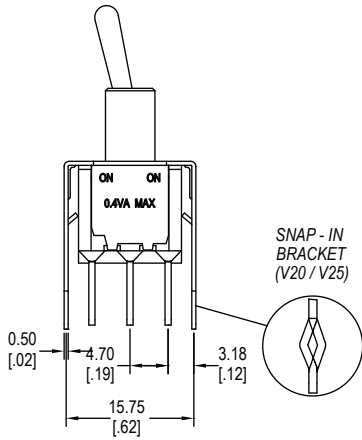


Terminal Option	"A" Dimension
S25 / V25	16.00

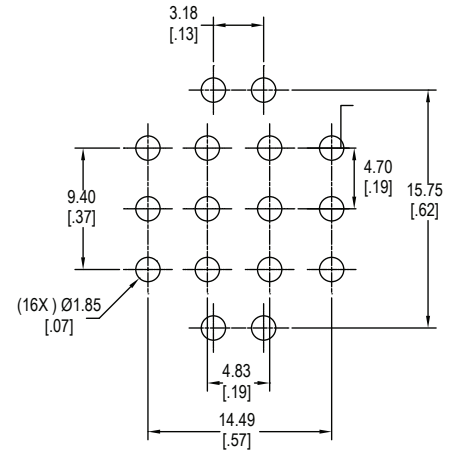


S20/S25 (V20/V25 - Snap-in) = PC pins with support bracket, three pole

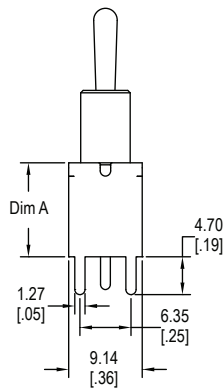
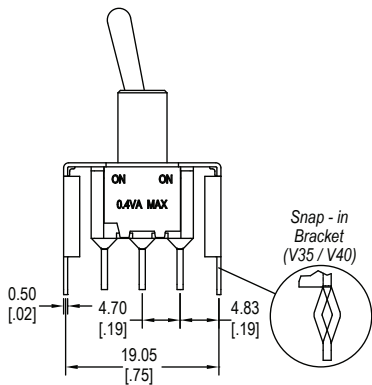
Terminal Options



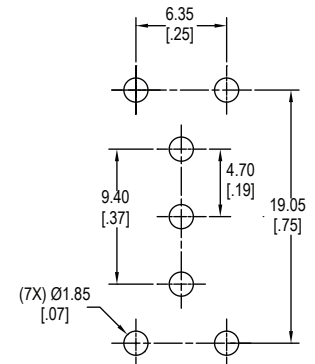
Terminal Options	"A" Dimension
S25 / V25	16.00



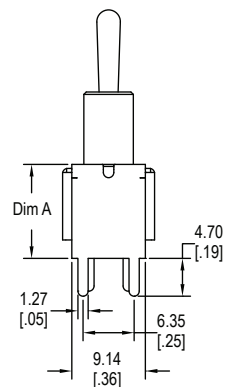
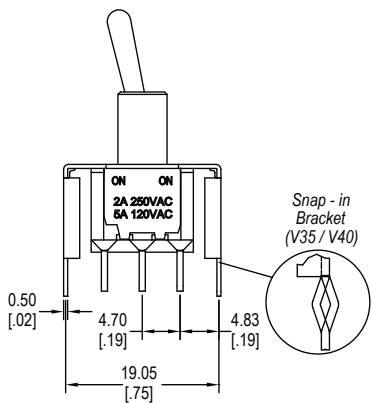
S20/S25 (V20/V25 - Snap-in) = PC pins with support bracket, four pole



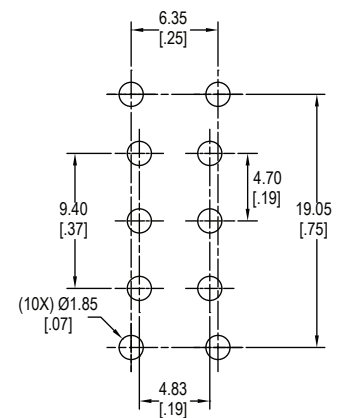
Terminal Option	"A" Dimension
S35 / V35	11.68
S40 / V40	16.00



S35 (V35 - Snap-in) = PC pins with support bracket, single pole



Terminal Option	"A" Dimension
S35 / V35	11.68
S40 / V40	16.00

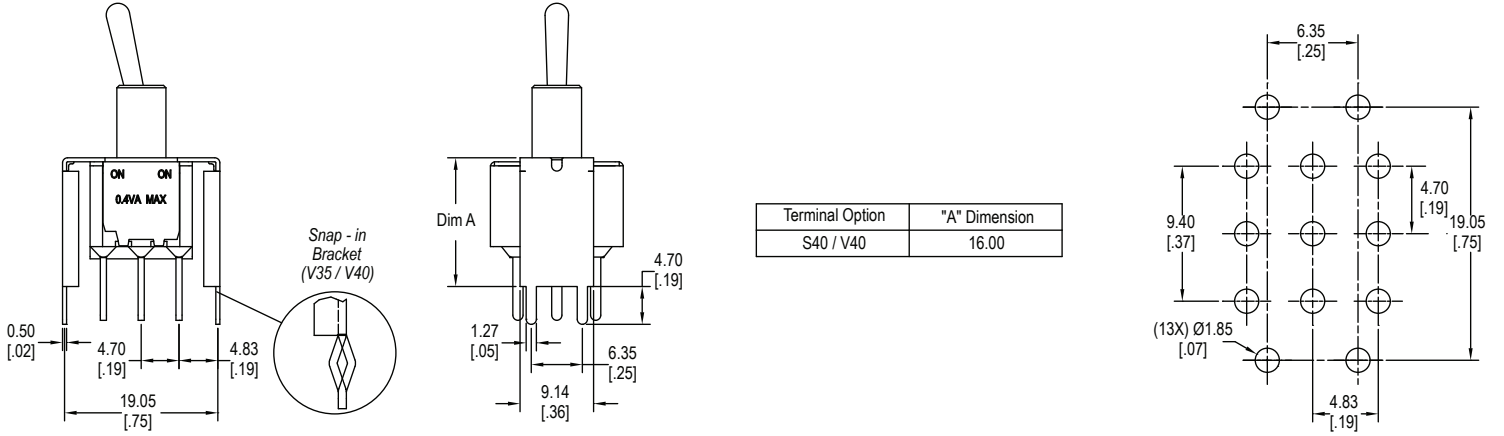


S35 (V35 - Snap-in) = PC pins with support bracket, double pole

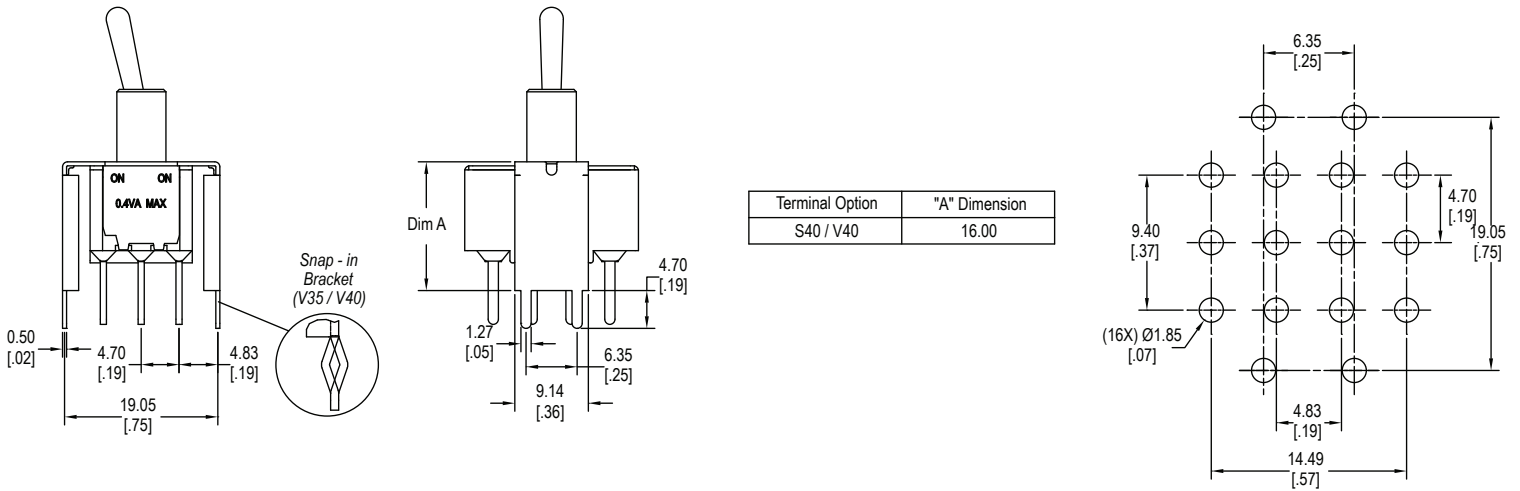
ANT

Miniature Toggle

Terminal Options



S40 (V40 - Snap-in) = PC pins with support bracket, three pole

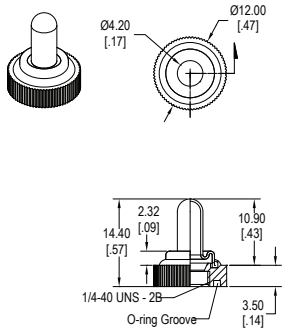


S40 (V40 - Snap-in) = PC pins with support bracket, four pole

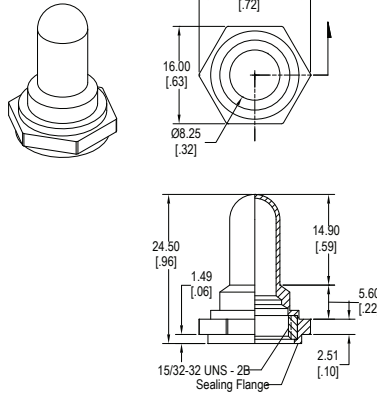
Contact Options

Designator	Contact Material	Terminal Material	Electrical Ratings
Q	Silver Plating	Silver Plating	5A @ 120VAC, 28VDC; 2A @ 250VAC
R	Gold over Nickel Plating	Gold over Nickel Plating	0.4VA max @ 20VAC or VDC max
G	Gold over Silver Plating	Gold over Silver Plating	0.4VA max @ 20VAC or VDC max or 5A @ 120VAC, 28VDC; 2A @ 250VAC

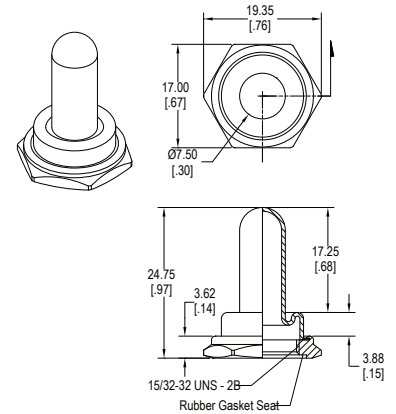
Cap Options



**Sealed Boot E
Knurled Nut**



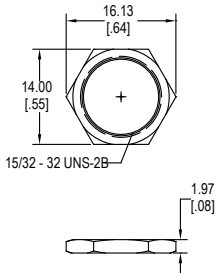
**Sealed Boot Z3
Rubber Coated**



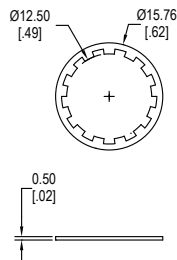
**Sealed Boot Z4
Plain Hex Nut**

Hardware

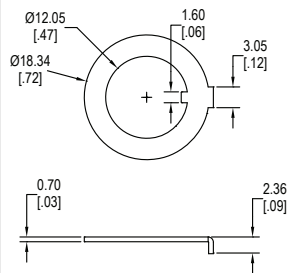
15/32 - 32 Hardware



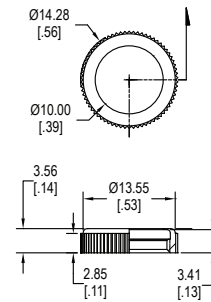
Hex Nut



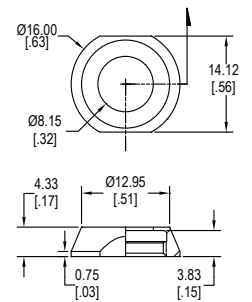
Lock Washer



Locking Ring-Keyway



Knurled Nut



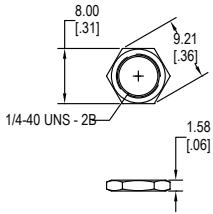
Dress Nut

ANT

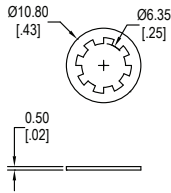
Miniature Toggle

Hardware

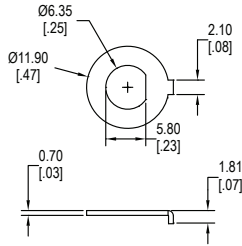
1/4 - 40 Hardware



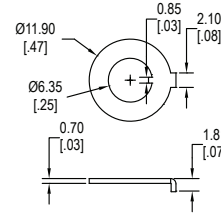
Hex Nut



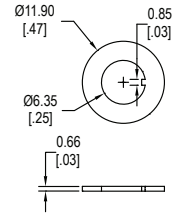
Lock Washer



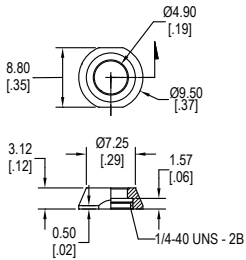
Locking Ring-Flat



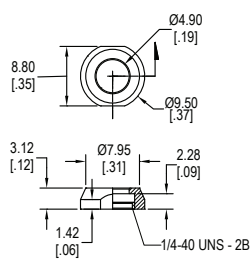
Locking Ring-Keyway



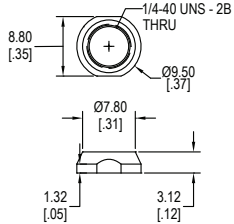
Washer-Keyway



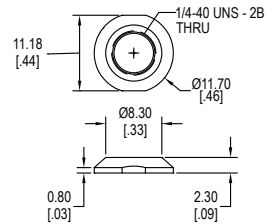
Dress Nut A



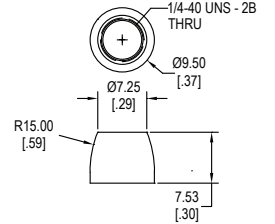
Dress Nut B



Dress Nut C

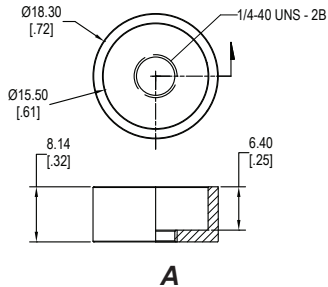


Dress Nut D

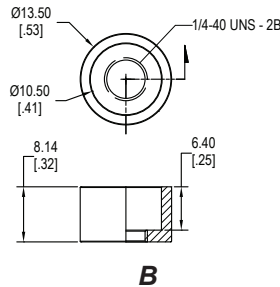


Dress Nut E

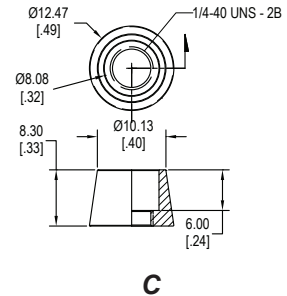
Collars



A

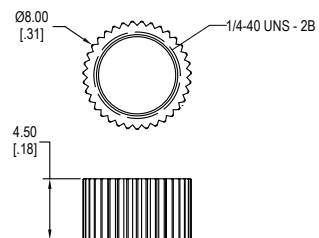
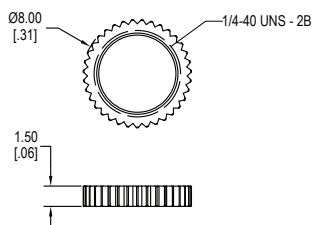


B



C

Knurled Nut



Toggle Cap "S"

