

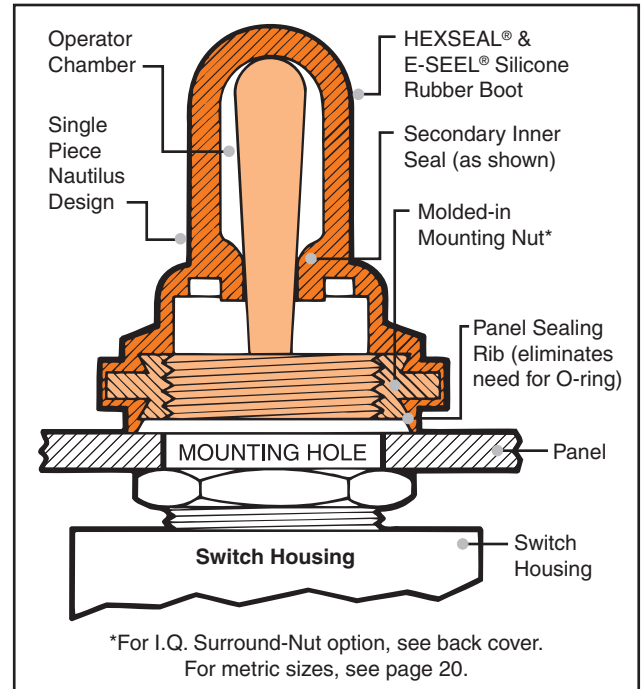
Toggle Switch Boots

HEXSEAL® and E-SEEL® toggle switch boots are molded from a high tear-strength silicone rubber (other materials available for specific environments) bonded to a built-in mounting nut. Each encloses the base of the protruding switch bushing and forms a watertight and dust-tight seal against the front panel surface.

SPECIFICATIONS

Material	HEXSEALS: Silicone rubber conforms to A-A-59588, Class 3B, GR 50 (unless otherwise specified). E-SEELS: Silicone rubber polymer type ASTM D 1418
Mounting Nut	HEXSEALS: Brass, nickel-plated E-SEELS: Brass, black-oxide
Temperature Range	HEXSEALS: -94°F to +400°F (-70°C to +204°C) E-SEELS: -80°F to +400°F (-62°C to +204°C)
Enclosure Protection	NEMA/UL/ULC Types 1, 2, 3, 3S, 3R, 4, 4X, 6P, 12, 13; IEC IP66/IP68
Pressure Range	Exceeds 15 psi internal and 1500 psi external (N5032B: 10 psi)
Operational Life	100,000 actuations (minimum)
Shelf Life	Excess of 25 years
Resistant to	Salt spray, sunlight, ozone, weather, fungus, and most acids and lubricating oils
Military Specs*	Most HEXSEALS meet MIL-DTL-5423. (See listing on page 6)
Agency Recognition	UL & ULC Recognized Component to UL Std. 50
Installation	Please see installation instructions on page 19

*APM's policy is to manufacture our HEXSEAL® sealing boots as defined by the requirements of MIL-Spec MIL-DTL-5423 which we regard as the standard for the switch, circuit breaker and potentiometer industry. These requirements were formulated based on our original patent.

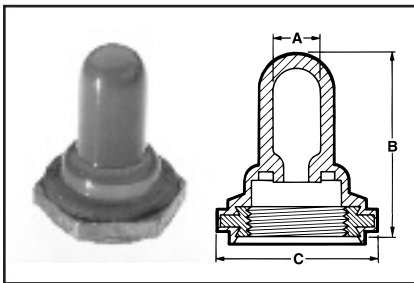


HOW TO ORDER

Specify APM boot part number and, if necessary, the appropriate bushing adaptor part number (please see page 19).



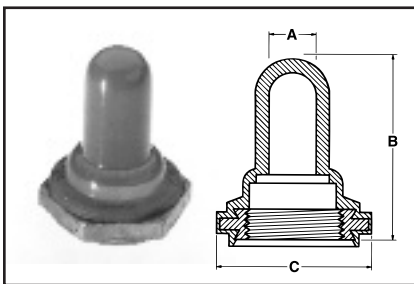
FIGURE 1 Full-Toggle Boot with Integral Secondary Inner Seal – IP66/68 Rated Figure 1



Thread Size	Max. Toggle Height Above Bushing (in.)	A Throat or I.D.		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
		in.	mm	in.	mm	in.	mm					
1/4-40NS-2B	.31	.104	2.64	.422	10.72	.375	9.58	M5423/04-01	N-5030	Gray	•	
1/4-40NS-2B	.37	.062	1.53	.500	12.70	.375	9.52	M5423/05-01	N-5030L†	Gray	•	
1/4-40NS-2B	.28	.062	1.58	.390	9.91	.375	9.52	M5423/05-02	N-5030R	Gray	•	
1/4-40NS-2B	.50	.062	1.58	.594	15.08	.375	9.52	—	N-5030S	Gray	•	
1 9/32-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	M5423/01-01	N-1030	Gray	•	
1/2-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	N-1030 1/2-32	Gray	•	
1 9/32-32NS-2B	.71	.219	5.55	.937	23.81	.625	15.88	—	C1131/27	Black		•

*Other colors available. Please consult factory. †Material conforms to A-A-59588 Gr. 25

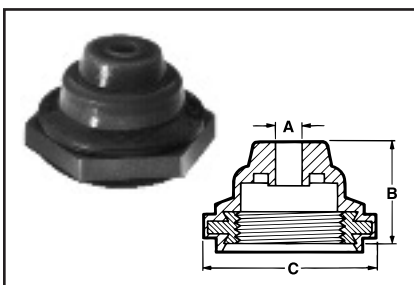
FIGURE 2 Full-Toggle Boots (with constant I.D.) – IP66/68 Rated Figure 2



Thread Size	Max. Toggle Height Above Bushing (in.)	A Throat or I.D.		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
		in.	mm	in.	mm	in.	mm					
M6 x 0.75	.37	.116	2.95	.562	14.30	.352	9.00	—	1131/25	Black	•	
1 9/32-32NS-2B	.437	.210	5.35	.625	15.88	.625	15.88	—	1131/33	Gray	•	
M12 x 1	.668	.234	5.95	.859	21.83	.625	15.88	—	1131/40	Black	•	
1 9/32-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	IN-1030	Gray	•	
1 9/32-32NS-2B	.66	.256	6.50	.844	21.44	.625	15.88	—	1131/31	Gray	•	
1 9/32-32NS-2B	.90	.219	5.55	1.093	27.77	.625	15.88	—	1131/26	Gray	•	
1 9/32-32NS-2B	1.08	.390	9.92	1.328	33.37	.625	15.88	—	N-1002	Gray	•	
1 9/32-32NS-2B	.925	.300	7.62	1.110	28.19	.625	15.88	—	50154	Gray	•	
1/2-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	IN-1030 1/2-32	Gray	•	
1/2-32NS-2B	.66	.256	6.50	.844	21.44	.625	15.88	—	1131/32	Black	•	
5/8-32UNS-2B	.78	.187	4.76	.844	21.44	.750	19.05	—	1131/23	Gray	•	
1 9/32-32NS-2B	.71	.219	5.55	.937	23.80	.625	15.88	—	C1131/28	Black		•

*Other colors available. Please consult factory. Mounting nut material: Aluminum

FIGURE 3 Half-Toggle Boots (toggle actuator protrudes) – IP66/68 Rated Figure 3



Thread Size	Toggle Diameter Accommodated (in.)	A Throat or I.D.		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
		in.	mm	in.	mm	in.	mm					
1/4-40NS-2B	.062-.188	.047	1.19	.250	6.35	.375	9.53	M5423/11-01	N-5032B††	Gray	•	
1 9/32-32NS-2B	.115-.240	.109	2.77	.437	11.10	.625	15.88	M5423/02-01	N-1030B	Gray	•	
1/2-32NS-2B	.115-.240	.109	2.77	.437	11.10	.625	15.88	—	N-1030B 1/2-32	Gray	•	
1 9/32-32NS-2B	.115-.240	.109	2.77	.437	11.10	.625	15.88	—	C1132/20	Black		•

*Other colors available. Please consult factory.

DIMENSIONS FOR REFERENCE ONLY. Current dimensional drawings can be viewed on our website and CAD drawings can also be downloaded.