

EMI/RFI Shielded Environmental Sealing Boots for Toggle, Pushbutton and Rotary-Activated Switches & Circuit Breakers



DESCRIPTION

APM HEXSEAL'S proprietary shielded toggle, pushbutton and rotary-activated switch and circuit breaker boots:

- Protect the mechanism from damage and/or performance degradation due to environmental contaminants such as oil, grease, water, cleaning solvents, dust and dirt.
- Seal the panel cutout in which the switch/breaker is mounted, thus protecting behind-panel components from damage due to leakage.
- Provide up to 120dB of shielding effectiveness to contain spurious EMI/RFI that might be transmitted through the switch/breaker or panel cutout.

Each is fabricated from a rugged, high tear-resistant silicone rubber with an integral EMI/RFI shielding screen.

FEATURES and BENEFITS

- **UL & CSA-recognized** ... facilitates easier "listing" of the equipment in which they are used.
- **Meets MIL-B-5423 Specifications.**
- **Up to 120dB of shielding effectiveness** ... to protect against spurious EMI/RFI.
- **Rugged silicone rubber material** ... resists tearing and most environmental contaminants. Won't discolor, crack or dry out.
- **Patented perimeter sealing rib** ... seals the panel cutout in which the switch is mounted.
- **Vibration-resistant mounting** ... resists switch loosening due to vibration/shock.
- **Wide operating temperature range** ... assures long-term performance in the toughest thermal environments.
- **Wide range of available colors** ... units can be molded in an array of colors to meet your needs.

TYPICAL APPLICATIONS

Avionics • Communications • Computer • Medical • And many other EMI/RFI-sensitive applications

SPECIFICATIONS

Material: HEXSEALS: Silicone rubber conforms to A-A59588, GR 50 (unless otherwise specified) with integral MONEL shielding screen. MONEL meets requirements of QQN-281 Class A.

Mounting Nut: HEXSEALS: Brass, nickel-plated

Temperature Range: HEXSEALS: -94°F to +400°F (-70°C to +204°C).

Pressure Range: Exceeds 15 psi internal and 1,500 psi external.

Operational Life: 15,000 actuations (minimum).

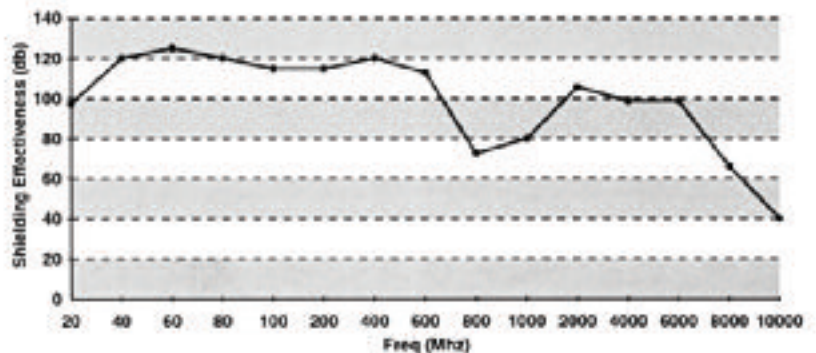
Shelf Life: Excess of 25 years.

Resistant To: Salt spray, sunlight, ozone, weather, fungus, and most acids and lubricating oils.

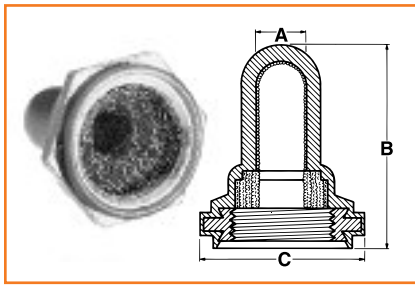
Military Approvals: Meets MIL-B-5423 specifications.

Agency Recognition: HEXSEALS are UL-listed to UL Std. 50 types 1-13 and meet CSA standards, C22.2 No. 94.

SHIELDING EFFECTIVENESS (of MONEL shielding material)



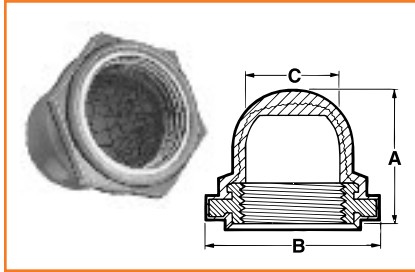
Source: Intertek Testing Services



EMI/RFI Shielded Full Toggle Boots – IP66/68 Rated

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-SEAL
		in.	mm	in.	mm	in.	mm					
1/4-40NS-2B	.36	.062	1.58	.500	12.70	.375	9.52	—	N-5030L RFI	Gray	•	
15/32-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	M5423/01-02	IN-1030 RFI	Gray	•	
1/2-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	IN-1030 RFI 1/2-32	Gray	•	
1/4-40NS-2B	.28	.062	1.58	.390	9.90	.375	9.52	—	N-5030R RFI	Gray	•	
1/4-40NS-2B	.50	.062	1.58	.594	15.08	.375	9.52	—	N-5030S RFI	Gray	•	

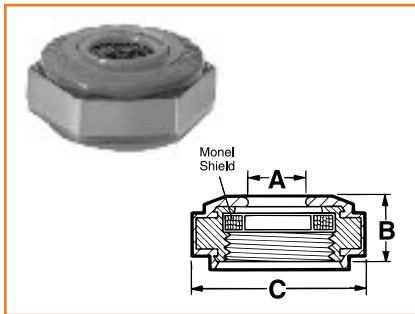
*Other colors available. Please consult factory.



EMI/RFI Shielded Full Pushbutton Boots – IP66/68 Rated

Thread Size	Plunger Height		A		B Flat		C I.D.		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEAL
	inch	mm	inch	mm	inch	mm	inch	mm					
15/32-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	M5423/07-06	N3030RFI	Gray	•	
15/32-32NS-2B	.438	11.11	.719	18.26	.625	15.88	.422	10.72	M5423/07-07	NC3030RFI	Gray	•	
1/2-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	M5423/07-08	NH3030RFI	Gray	•	
1/2-32NS-2B	.188	4.76	.547	13.89	.625	15.88	.422	10.72	M5423/07-10	NH3030SRFI	Gray	•	
5/8-24NEF-2B	.281	7.14	.609	15.48	.750	19.05	.516	13.10	M5423/07-09	N3040RFI	Gray	•	
1/2-32NS-2B	.469	11.91	.734	18.65	.625	15.88	.422	10.72	—	NC3030HRFI	Gray	•	

*Other colors available. Please consult factory.



EMI/RFI Shielded Rotary Shaft Seals – IP66/68 Rated

Thread Size	A Shaft Size		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEAL
	inch	mm	inch	mm	inch	mm					
1/4-32NF2B	.125	3.18	.219	5.56	.375	9.53	M5423/09-09	N9040 x 1/8 RFI	Gray	•	
3/8-32NEF-2B	.125	3.18	.219	5.56	.500	12.70	M5423/09-07	N9030 x 1/8 RFI	Gray	•	
3/8-32NEF-2B	.250	6.35	.219	5.56	.500	12.70	M5423/09-08	N9030 x 1/4 RFI	Gray	•	
3/8-32NEF-2B	.250	6.35	.359	9.12	.500	12.70	M5423/09-14	N9033 x 1/4 RFI	Gray	•	
15/32-32NS-2B	.250	6.35	.219	5.56	.625	15.88	M5423/09-10	N9060 x 1/4 RFI	Gray	•	
5/8-24NEF-2B	.375	9.53	.219	5.56	.750	19.05	M5423/09-11†	N9065 x 3/8 RFI	Gray	•	
1/2-32NS-2B	.250	6.35	.219	5.56	.625	15.88	M5423/09-12	N9063 x 1/4 RFI	Gray	•	
1/4-28NF-2B	.125	3.18	.219	5.56	.375	9.53	—	N9042 x 1/8 RFI	Gray	•	
3/8-32NEF-2B	.125	3.18	.531	13.49	.625	15.88	—	NLK9030 x 1/8 RFI	Gray	•	
3/8-32NEF-2B	.250	6.35	.531	13.49	.625	15.88	—	NLK9030 x 1/4 RFI	Gray	•	

*Other colors available. Please consult factory. †Inactive for new designs.

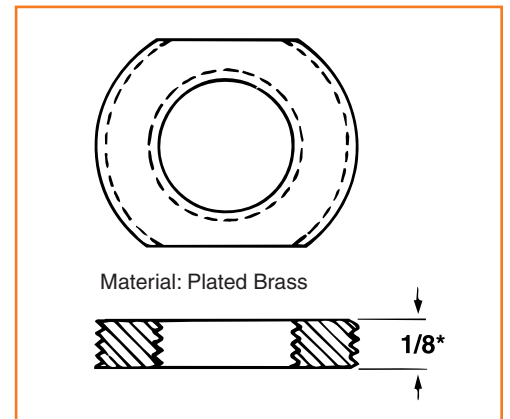
HOW TO ORDER

Specify APM Boot part number and, if necessary, the appropriate bushing adaptor part number.

Optional Threaded Bushing Adaptors

Inside (Bushing) Thread Size (Class 2B)	Outside (Boot) Thread Size (Class 2A)	APM Part Number
3/8-32	15/32-32	2500/1/5*
15/32-32	11/16-32	2500/1/7
1/2-32	11/16-32	2500/1/10
15/32-32	13/16-32	2500/1/8
1/2-24	13/16-32	2500/1/9
5/8-24	13/16-32	2500/1/11
5/8-24	7/8-32	2500/1/12
3/4-32	7/8-32	2500/1/13*
3/4-20	7/8-32	2500/1/14*

*5/32 thick. Additional sizes, including metric, available. Consult factory.



*Unless otherwise noted.

APM HEXSEAL® Sealing Specialists

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