

User activity: Air Force - 21

 Review activities  
 Army - AV  
 Navy - EC  
 Air Force - 99  
 DLA - ES

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.

P A Air Force - 85 Other Cust Army - ER Navy - AS		International Intersect	TITLE SWITCH, TOGGLE, TWO POLE, ENVIRONMENTALLY SEALED, LEVER-LOCK, INTEGRATED WIRE TERMINALS	MILITARY STANDARD <b>MS27788</b>
Procurement Specification MIL-S-3950		SUPERSEDES		PAGE 1 OF 4

  

CONTOUR OF SWITCH OPTIONAL PROVIDED MAX DIMENSIONS SPECIFIED ARE NOT EXCEEDED

42 DIA

105

47

140 APPROX

1706 MAX

910 MAX

1340 MAX

165° ± 5°

165° ± 5°

076 ± 006

KEYWAY

47 LOCKING RING

47 LOCKWASHER

HEX NUT 469-32 NS-2B 2 REQD

.469-32 NS-2A THREAD TO- WITHIN .060 OF SHOULDER

C Denotes changes

DD FORM 672 1 MAY 73

(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

5930-1358-27

AMSC N/A

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Inches	mm	Inches	mm
.005	0.13	.432	10.97
.008	0.20	.469	11.91
.012	0.30	.47	11.9
.020	0.51	.910	23.11
.060	1.52	1.05	26.7
.076	1.93	1.140	28.96
.38	9.7	1.340	34.04
.42	10.7	1.706	43.33

## NOTES:

1. Dimensions are inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .020$  (0.51 mm) for two place decimals and  $\pm .005$  (0.13 mm) for three place decimals.
4. For hardware detail specifications see appendix of MIL-S-3950.
5. Contact installing/removal tool in accordance with MB1969/14-02.
6. Grommet sealing plug in accordance with MS27488A20.
7. Sealing grommet shall seal on a smooth wire insulation of .040 (1.02 mm) to .083 (2.11 mm) diameters.
8. Terminals shall adequately accept a wire contact dimensional limits of M39029/1-101.
9. The terminal end of switch shall be color coded red to indicate contact size.
10. Direction of internal mechanism movement is opposite to the direction of the toggle movement.
11. Sealing plugs may be used in nonfunctional grommet holes.
12. Maximum weight is .137 pound.
13. Locking arrangement: Positive locking shall be accomplished and shall prevent motion of the toggle lever until the locking mechanism is manually released.
14. The force required to release the locking mechanism shall be 3 to 5 pounds.
15. The locking means at the top of the toggle bushing shall be capable of withstanding a torque of 20 inch-pounds applied in both directions immediately following the humidity test.
16. Part number example: MS27788-21A (locking combination 'A').
17. In the event of a conflict between the text of this standard and the reference cited herein, the text of this standard shall take precedence.
18. Referenced Government documents of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation form a part of this standard to the extent specified herein.

APPROVED 15 May 1972 REVISED C For changes see page 2.

P A Air Force - 85 Other Cust Army - ER Navy - AS	Informational Intersect	TITLE SWITCH, TOGGLE, TWO POLE, ENVIRONMENTALLY SEALED, LEVER-LOCK, INTEGRATED WIRE TERMINALS	MILITARY STANDARD  <b>MS27788</b>
Procurement Specification MIL-S-3950		SUPERSEDES	PAGE 2 OF 4

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## Locking combinations

A	LOCKED IN THREE POSITIONS	B	LOCKED IN CENTER AND DOWN POSITIONS (KEYING SIDE)	D	LOCKED OUT OF CENTER POSITION	E	LOCKED IN CENTER POSITION	F	LOCKED IN UP POSITION (OPPOSITE KEYING)	G	LOCKED IN DOWN POSITION (KEYING SIDE)	H	LOCKED OUT OF CENTER AND DOWN POSITION (KEYING SIDE)
J	LOCKED OUT OF CENTER AND UP POSITION (OPPOSITE KEYING)	K	LOCKED IN CENTER AND UP POSITION (OPPOSITE KEYING)	L	LOCKED OUT OF DOWN POSITION (KEYING SIDE)	M	LOCKED OUT OF AND INTO UP POSITION (OPPOSITE KEYING)	N	LOCKED OUT OF UP POSITION (OPPOSITE KEYING)	P	LOCKED OUT OF AND INTO DOWN POSITION (KEYING SIDE)	FIGURES A THROUGH P DO NOT REPRESENT DETAILS OF CONSTRUCTION. THEY SCHEMATICALLY ILLUSTRATE LOCKING CONFIGURATIONS AND MOMENTARY POSITIONS	

P A  
Air Force - 85  
Other Cust  
Army - ER  
Navy - ASInternational  
Intersect

## TITLE

SWITCH, TOGGLE, TWO POLE,  
ENVIRONMENTALLY SEALED,  
LEVER-LOCK, INTEGRATED  
WIRE TERMINALS

MILITARY STANDARD

MS27788

Procurement Specification  
MIL-S-3950

SUPERSEDES

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Procurement Specification MIL-S-3950			SUPERSEDES		PAGE 4 OF 4				
<b>Detail requirements.</b>									
MS part number	Available locking combinations	Circuit with toggle lever in		Current capacity (amperes)		Current capacity (amperes) 115 volts, 60 and 400 hertz ac			
		Keying side	Center keying side	Lamp-load Resistive circuit	Inductive circuit		Lamp-load Resistive circuit	Inductive circuit	
MS27788-1	A11	1-2 On 4-5	1-2 On 5-6	2-3 On 5-6	7	7.5	4	7.5	7.5
MS27788-2	E, F, K, L, M, N	1-2 On 4-5	1-2 On 5-6	2-3 On 5-6					
MS27788-3	E, L, N	1-2 On 4-5	1-2 On 5-6	2-3 On 5-6	5	7.5	2	7.5	7.5
MS27788-21	A11	1-2 On 4-5	Off	2-3 On 5-6					
MS27788-22	D, F, G	Off	None	2-3 On 5-6	7	7.5	4	7.5	7.5
MS27788-23	D, F, G	1-2 On 4-5	None	2-3 On 5-6					
MS27788-24	E, F, K, M	None	Off	2-3 On 5-6					
MS27788-25	F	None	1-2 On 5-6	2-3 On 5-6					
MS27788-26	F	1-2 On 4-5	None	2-3 On 5-6					
MS27788-27	E, L, N	1-2 On 4-5	Off	2-3 On 5-6					
MS27788-28	E	1-2 On 4-5	Off	None	5	7.5	2	7.5	7.5
MS27788-29	F	None	Off	2-3 On 5-6					
MS27788-30	F	1-2 On 4-5	None	Off					
MS27788-31	E, F, K, L, M, N	1-2 On 4-5	Off	2-3 On 5-6					
MS27788-32	E	None	1-2 On 4-5	2-3 On 5-6					
MS27788-33	E, F, K, M	None	1-2 On 4-5	2-3 On 5-6	7	7.6	4	7.5	7.5

**Test requirements:**  
Test shall be performed in accordance with MIL-S-3950 except  
a. During all tests, switches shall be fully wired with appropriate wire and terminal contacts.  
b. Contact voltage drop - the contact voltage drop with two terminals and the switch contact in series shall not exceed 8 millivolts measured from one wire contact through the contacts to the other wire contacts.

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