

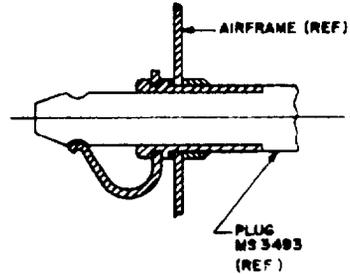
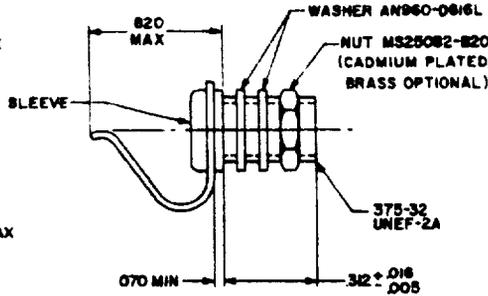
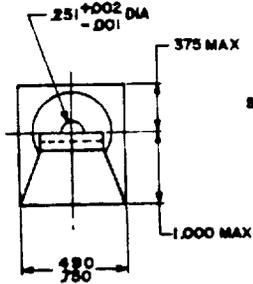
FED SUP CLASS
5935

USER SYMBOLS:
ARMY - ME
NAVY - HF

REVIEWER SYMBOLS:
AF - 85 99

Review/user information is current as of the date of this document.
For future combination of changes to this document draft circuit on
should be based on the information in the current DD01SS.

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



SECTION OF TYPICAL INSTALLATION
OF RECEPTACLE IN AIRFRAME WITH
PLUG INSERTED IN RECEPTACLE

MS PART NUMBER	SUPERSEDES
MS90298-2	MS90298-1 MS90358 AN3117-1

INCHES	mm	INCHES	mm
001	0.02	.12	3.0
.002	0.05	.17	4.3
.005	0.13	.20	5.1
.016	0.4	.50	12.7
.070	1.78	.820	20.83
.100	2.54	1.000	25.40
.200	5.08	1.700	43.18

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P.A.
NAVY - AS
Other Cust
ARMY - AV
AF - 11

TITLE
CONNECTOR RECEPTACLE ELECTRIC GROUNDING

MILITARY STANDARD

MS 90298

PROCUREMENT SPECIFICATION
NONE

SUPERSEDES
MS0090298R

SHEET 1 OF 2

APPROVED 21 APRIL 1964 REVISED 4 5 FEB 1971 (R) 7 APR 79 (C) 23 NOV 81

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USER SYMBOLS
ARMY - HE
NAVY - HC

REVIEWER SYMBOLS
USAF - 85 99

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REQUIREMENTS

1. MATERIAL (a) SLEEVE BRASS 20-5-0.3
(b) CONTACT PHOSPHOR BRONZE 50-6-5 (COMPOSITION) A - SPRING TEMPER
2. FINISH CADMIUM PLATE 20-1-1-15 TYPE II CLASS 1 OR ALUMINUM COATING OR PLATING
3. WHERE ONLY MAXIMUM DIMENSIONS ARE SHOWN THE RECEPTACLE NEED NOT HAVE THE SHAPE SHOWN BUT THE RECEPTACLE INCLUDING ALL PROTRUSIONS SHALL BE CONTAINED WITHIN MAX OUTLINE SHOWN
4. THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H26
5. THE RECEPTACLE SHALL BE USABLE AS SHOWN ABOVE WITH A MS3493-5 PLUG
6. THE RECEPTACLE SHALL PROVIDE DETENT ACTION FOR THE PLUG
7. INSERTION FORCE THE FORCE REQUIRED TO INSERT THE TEST PLUG (MS3493-5) IN THE RECEPTACLE SHALL NOT EXCEED 10 POUNDS AT ANY POINT
8. REMOVAL FORCE (a) THE FORCE REQUIRED TO MOVE THE TEST PLUG (MS3493-5) OUT OF THE RECEPTACLE DETENT SHALL BE 12 ± 2 POUNDS
(b) THE FORCE REQUIRED TO REMOVE THE TEST PLUG FROM THE RECEPTACLE SHALL NOT EXCEED 6 POUNDS AT ANY POINT OTHER THAN THE DETENT
9. CURRENT CARRYING THE RECEPTACLES SHALL BE MOUNTED ON AN ALUMINUM PANEL 0.091 INCHES THICK APPROXIMATELY 6 INCHES X 6 INCHES WITH THE TEST PLUG MATED WITH THE RECEPTACLE AND A TEST CURRENT OF 10 ± 1 AMPERE IS FLOWED THRU THE PLUG AND BACK THRU THE MOUNTING PANEL THERE SHALL BE NO DAMAGE TO THE RECEPTACLE AND NO MORE THAN 50 MILLIVOLTS POTENTIAL DIFFERENCE BETWEEN THE BACK END OF THE PLUG AND A POINT ON THE PANEL 2 ± 0.1 INCHES FROM THE AXIS OF THE RECEPTACLE
10. TORQUE TEST CONNECTOR SHALL WITHSTAND 20 INCH POUNDS TORQUE WHEN 20 INCH POUNDS TORQUE IS APPLIED TO THE CONNECTOR SLEEVE AND THE CONTACT HELD FIXED THE SLEEVE SHALL NOT TURN-IN OR BREAK LOOSE FROM THE CONTACT NOR SHALL THE CONTACT BE DEFORMED
11. LIFE TEST TEST PLUG (MS3493-5) SHALL BE INSERTED AND WITHDRAWN 3,000 TIMES MINIMUM THE CONNECTORS SHALL THEN HAVE NOT LESS THAN 8 POUNDS NOR MORE THAN 14 POUNDS WITHDRAWAL FORCE
12. ENGAGEMENT WHEN THE PLUG IS INSERTED IN THE CONNECTOR AND THE CONNECTOR CONTACT IS ENGAGED IN THE PLUG DETENT THERE SHALL BE NO FREE AXIAL MOVEMENT OF THE CONTACT TIP IN THE PLUG DETENT (DUE TO CLEARANCE BETWEEN THE CONTACT TIP AND PLUG DETENT) CONTACT TIP SHALL MAINTAIN CONNECTION IN THE PLUG DETENT DURING AXIAL MOVEMENT
13. FIRST ARTICLE TESTING SIX SAMPLES WILL BE TESTED FOR THE FOLLOWING IN THE ORDER LISTED
(a) VISUAL AND MECHANICAL FOR MATERIAL DIMENSIONS AND WORKMANSHIP
(b) INSERTION AND WITHDRAWAL TEST INITIAL
(c) CURRENT CARRYING TEST
(d) LIFE TEST
(e) TORQUE TEST
(f) ENGAGEMENT TEST
14. ACCEPTANCE INSPECTION CONNECTORS WILL BE INSPECTED FOR THE FOLLOWING
(a) VISUAL AND MECHANICAL INSERTION AND WITHDRAWAL FORCE, ENGAGEMENT TEST SAMPLING PER MIL-STD-105 WITH AN AQL OF 1
(b) TORQUE TEST AND LIFE TEST SAMPLING PER MIL-STD-105 SPECIAL INSPECTION LEVEL S-2 WITH AN AQL OF 1

NOTES

1. DIMENSIONS ARE IN INCHES
2. UNLESS OTHERWISE SPECIFIED TOLERANCES DECIMALS + 0.16
3. DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH ANSI Y14.5-1973
4. METRIC EQUIVALENTS (TO THE NEAREST 0.1 mm) ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1 INCH = 25.4 mm
5. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED
6. FOR DESIGN FEATURE PURPOSES THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN

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APPROVED 21 APRIL 1964 REVISED C FOR CHANGES SEE SHEETS 1 AND 2

P.A. NAVY - AS Other Cust ARMY - 11 AF - 11	TITLE CONNECTOR RECEPTACLE ELECTRIC GROUNDING	MILITARY STANDARD	
		MS 90298	
PROCUREMENT SPECIFICATION NONE	SUPERSEDES MS0090298B	SHEET 2	OF 2