

MIL-DTL-83413/5C
w/AMENDMENT 1
21 December 2018
SUPERSEDING
MIL-DTL-83413/5C
04 September 2013

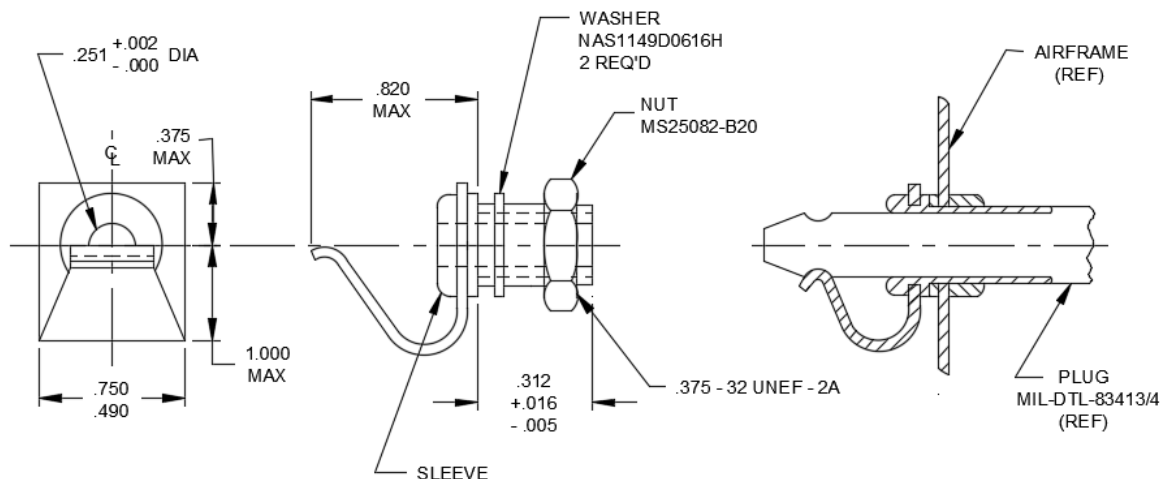
DETAIL SPECIFICATION SHEET

CONNECTORS AND ASSEMBLIES, ELECTRICAL, AIRCRAFT GROUNDING: RECEPTACLES, ONE PIECE

Inactive for new design after 01 January 1984. For
new design use MIL-DTL-83413/6.

This specification is approved for use by all Departments and
Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall
consist of this specification sheet and MIL-DTL-83413.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is $\pm .016$ (.41mm) for decimals and $\pm 0.5^\circ$ for angles.
4. Where only maximum dimensions are shown, the receptacle need not have the shape shown, but the receptacle including all protrusions shall be contained within maximum outline shown.

Inches	mm	Inches	mm
.001	0.03	.375	9.53
.002	0.05	.490	12.45
.005	0.13	.750	19.05
.016	0.41	.820	20.83
.251	6.38	1.00	25.40
.312	7.92		

FIGURE 1. Grounding receptacle, one-piece.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Material:

Sleeve: Brass in accordance with ASTM-B36/B36M.

Contact: Phosphor bronze in accordance with ASTM-B103/B103M.

Finish: Cadmium plate in accordance with SAE-AMS-QQ-P-416, type II, class 2 or Nickel Plated in accordance with ASTM B733.

Threads: In accordance with FED-STD-H28.

Detent action: Shall be provided for the mating plug.

Durability: In accordance with MIL-DTL-83413, except that the withdrawal force required to clear the detent shall be no less than 2 pounds nor more than 14 pounds. 3000 cycles shall be completed.

Contact resistance: Test current 10 ± 1 ampere, millivolts drop 50 maximum.

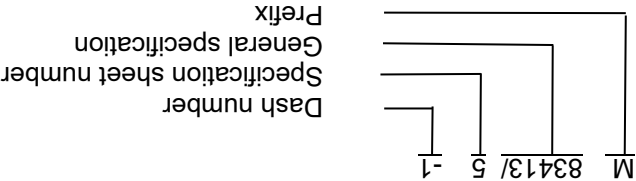
Altitude-low temperature: Not applicable.

Fluid immersion: Not applicable.

Mating plug: In accordance with MIL-DTL-83413/4.

Part or Identifying Number (PIN): M83413/5-1.

Example of PIN: M83413/5-1



QUALIFICATION: Qualification is not required. First article inspection shall consist of a visual and mechanical inspection in accordance with MIL-DTL-83413 and the requirements stated in this specification sheet. First article inspection shall consist of the inspections specified in table I.

A QPL manufacturer that periodically performs group A and B inspections on Grounding receptacles in accordance with MIL-DTL-83413, is not required to perform group II and group III First Article inspections on Grounding receptacles. Group I inspections are still required.

Samples for first article inspection shall be representative of the products proposed to be furnished to this specification. Test samples shall consist of 100% testing, up to 12 grounding receptacles. Test samples shall be examined and tested in accordance with MIL-DTL-83413 and this specification. Test results shall be submitted to the acquiring activity.

MIL-DTL-83413/5C
w/AMENDMENT 1

TABLE I. First article inspection. 1/

Inspection	Plug	Receptacle	Clamp connector	Jumper assembly	Requirement paragraph	Test Paragraph
<u>Group I</u>						
Visual and mechanical Inspection		X			3.1, 3.3, 3.4 3.6, 3.8	4.7.1
Detent action		X			3.5.1	4.7.2
Handgrip force					3.5.2	4.7.3
Engagement					3.5.5	4.7.6
Contact resistance		X			3.5.6.1	4.7.7.1
Clamp connector resistance					3.5.6.2	4.7.7.2
Assembly resistance					3.5.6.3	4.7.7.3
<u>Group II</u>						
Side loading <u>2/</u>		X			3.5.3	4.7.4
Torque <u>2/</u>		X			3.5.4	4.7.5
Cable attachment					3.5.7	4.7.8
Clamp release force (initial)					3.5.8.1	4.7.9
Clamp release force (after conditioning)					3.5.8.2	4.7.9
Clamping life					3.5.9	4.7.10
Vibration		X			3.5.10	4.7.11
Durability		X			3.5.11	4.7.12
Flexibility					3.5.13	4.7.14
Tensile strength					3.5.12	4.7.13
Crush					3.5.14	4.7.15
<u>Group III</u>						
Humidity		X			3.5.15	4.7.16
Temperature cycling		X			3.5.16	4.7.17
Drop					3.5.17	4.7.18
Altitude – low temperature					3.5.18	4.7.19
Dust					3.5.19	4.7.20
Fluid immersion					3.5.20	4.7.21
Salt spray		X			3.5.22	4.7.23
<u>Group IV</u>						
Lightning current					3.5.23	4.7.24

1/ - X indicates that a test is applicable.

2/ - Moved from Group I to Group II.

MIL-DTL-83413/5C
w/AMENDMENT 1

Certain provisions of this specification sheet are the subject of International Standardization Agreement NATO STANAG 3632. When amendment, revision or cancellation of this specification sheet is proposed that will modify the international agreement concerned, the preparing activity will take appropriate action through international agreement standardization channels, including departmental standardization offices to change the agreement or make other appropriate accommodations.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL-DTL-83413, this document references the following:

MIL-DTL-83413/4	ASTM-B36/B36M
MIL-DTL-83413/6	ASTM B733
FED-STD-H28	NATO STANAG 3632
SAE-AMS-QQ-P-416	ASTM-B103/B103M

CONCLUDING MATERIAL

Custodians:
Army - AV
Navy - AS
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

Review activities:
Army - AR, CR, CR4, MI
Navy - MC
Air Force - 02

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NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.