

INCH-POUND

MIL-PRF-18148/2  
30 September 2009  
SUPERSEDING  
MS25182G  
1 June 1984

## PERFORMANCE SPECIFICATION SHEET

## PLUG, ELECTRIC, FOUR-WIRE, AIRCRAFT STORAGE BATTERY

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-PRF-18148.

## REQUIREMENTS:

1. Part or identifying number. The part or identifying number (PIN) of the plug covered by this specification sheet shall be MS25182-2. The MS25182-2 is a four-wire electric plug used with aircraft storage batteries. The plug shall mate with the pins of MS3509-series receptacles to meet mechanical engagement and electrical resistance requirements.

2. Dimensions and weight. The dimensions and weight of the plug shall be as specified in 3.12.3 of MIL-PRF-18148 and 3.12.4 as modified herein and as shown on figure 1 contained herein.

3. MIL-PRF-18148 variance. The plug shall comply with MIL-PRF-18148 except as follows.

3.1 Modify the following paragraphs:

3.8.2 Electrical connections. Insert after the first sentence: "Each four-wire MS25182-2 plug shall include as its electrical connections four sockets with their axes horizontal and in a plane parallel to the face of the receptacle. Each plug shall be usable with four 000-gauge wires conforming to SAE-AS50861/2 for Type 2. Each plug shall include four wire entry holes on the sides, through which the wires may be brought into the sockets. Each plug shall be made so that the wires shall enter it horizontally and in a plane parallel to the face of the receptacle. Each plug shall be made so that the wire which enters the left wire entry hole, as viewed looking at the front (handle) face of the plug, can be connected to the negative contact only, and the wire which enters the right wire entry hole can be connected to the positive contact only. "-" and "+" shall be marked on the front, back, bottom, or sides of the plug so as to identify the wires connected to

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the plug. The plug shall be made so that it is not possible to assemble it with any of the marking not in its proper location. Each plug shall include two setscrews for retaining the wires in the sockets that can be accessed after removing the cover of the plug. Each plug shall include two threaded terminals for retaining the wires in the sockets. The axes of the threaded terminals shall be perpendicular to the face of the receptacle. Each threaded terminal shall include a hexagonal wrenching socket. Each plug shall include two wrench entry holes on the front face, and shall be made so that the threaded terminals can be operated by a wrench inserted in the wrench entry holes. No part of the electric circuit of the plug shall be exposed except through the wire, wrench, and contact entry holes."

3.10.1 Delete this paragraph.

3.12.4 Weight. Insert after the first sentence: "The weight of each four-wire MS25182-2 plug shall be not greater than 1.10 pounds."

## VERIFICATION

1. MIL-PRF-18148 variance. The plug shall comply with MIL-PRF-18148 except as follows.

4.2 Qualification inspection. Insert after the end of the first sentence: "(see table I of the specification sheet)."

4.3 Conformance inspection. Insert after the end of the first sentence: "(see table I of the specification sheet)."

4.5.5 Plug preparation procedure. Insert as a new first sentence: "Whenever electric connection must be made to the plug, four 000-gauge wires conforming to SAE-AS50861/2 for Type 2 shall be connected to the plug in accordance with 3.8.2 as modified by MIL-PRF-18148/2."

6.9 Supersession data. Delete the text and insert. "Connector plugs previously procured to MS25182 are superseded by MIL-PRF-18148/2".

6.10 International standardization agreement implementation. This specification implements STANAG-3660 ED.2(8). When amendment, revision, or cancellation of this specification is proposed, the preparing activity must coordinate the action with the U.S. National Point of Contact for the international standardization agreement, as identified in the ASSIST database at <http://assist.daps.dla.mil>.

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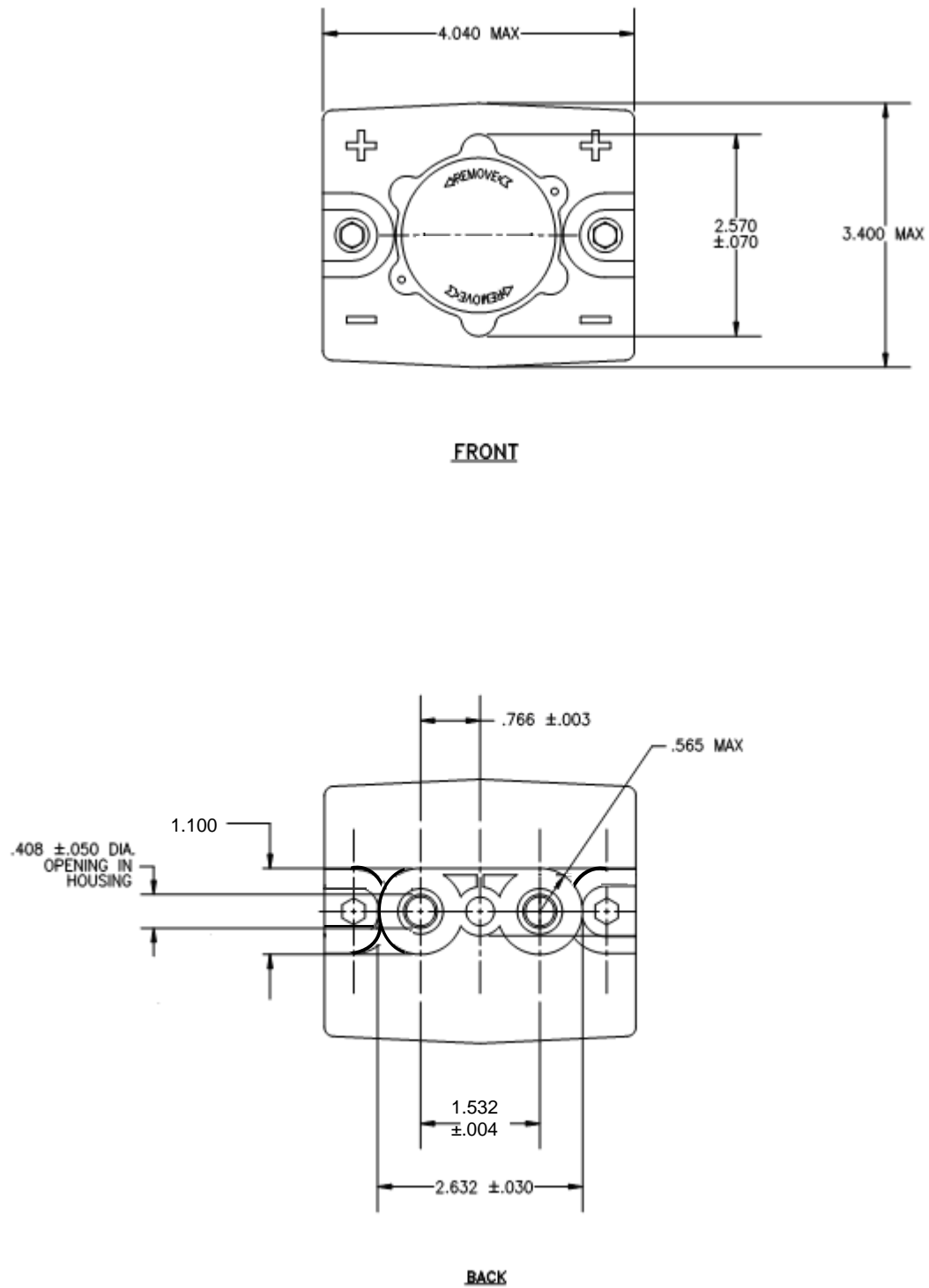
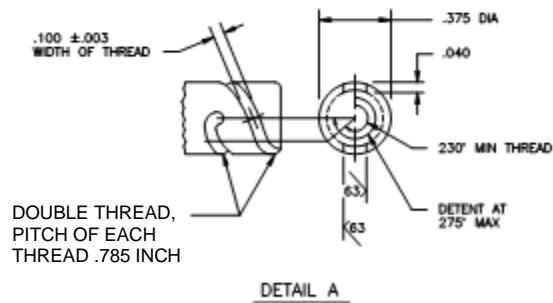
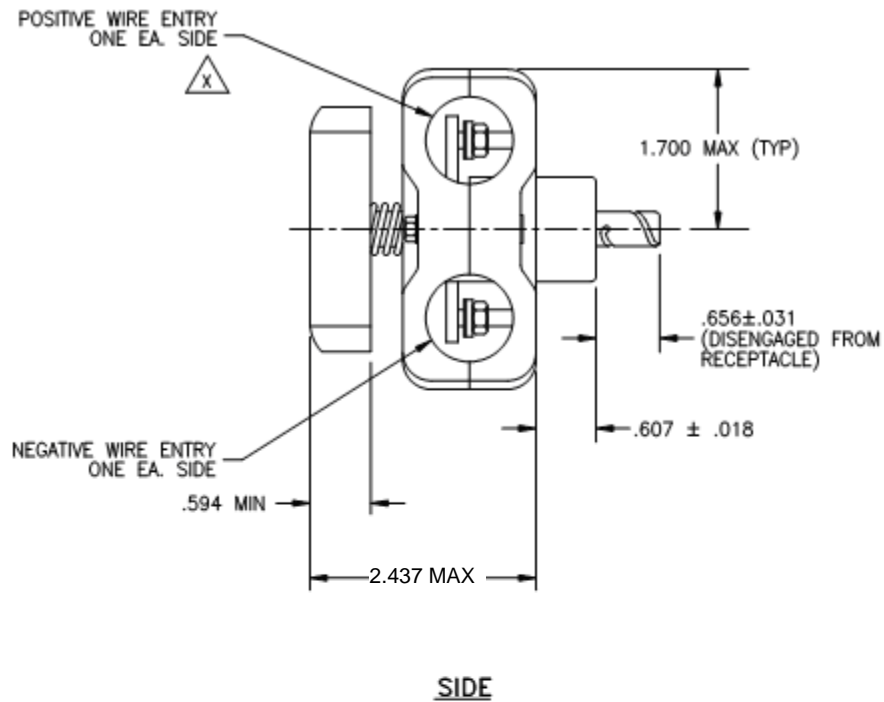


FIGURE 1. Dimensions and configuration for PIN MS25182-2.

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## NOTES:

1. ALL DIMENSIONS ARE TYPICAL, ALL TOLERANCES ARE ± .005 UNLESS OTHERWISE SPECIFIED.

FIGURE 1. Dimensions and configuration for PIN MS25182-2 - Continued.

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TABLE I. Qualification inspection and conformance inspection of plugs.

Test number	Examinations and tests	Qualification sample number			Conformance inspection sample number		Requirement paragraph	Method of inspection paragraph
		1	2	3	1	2		
1	INCOMING INSPECTION	X	X	X	X	X	3.9, 3.12.1	4.5.1
2	VISUAL AND MECHANICAL INSPECTION	X	X	X	X	X	3.4 through 3.10, 3.12.2, table II	4.5.2
3	DIMENSIONS	X			X		3.12.3, Reqmt 2	4.5.3
4	WEIGHT	X	X	X	X	X	3.12.4, Reqmt 2	4.5.4
	PLUG PREPARATION	X	X	X	X	X	---	4.5.5
5	STRESS TESTS AT 77°F							
5a	Dielectric strength	X	X	X	X	X	3.11, 3.12.5	4.5.6.1
5b	Insulation resistance	X	X	X	X	X	3.11, 3.12.6	4.5.7.1
5c	Operating torque	X	X	X	X	X	3.11, 3.12.7	4.5.8.1
5d	Contact resistance	X	X	X	X	X	3.11, 3.12.8	4.5.9.1
6	STRESS TESTS AT -65°F							
6a	Dielectric strength			X			3.11, 3.12.5	4.5.6.2
6b	Insulation resistance			X			3.11, 3.12.6	4.5.7.2
6c	Operating torque			X			3.11, 3.12.7	4.5.8.2
6d	Contact resistance			X			3.11, 3.12.8	4.5.9.2
7	STRESS TESTS AT 160°F							
7a	Dielectric strength			X			3.11, 3.12.5	4.5.6.3
7b	Insulation resistance			X			3.11, 3.12.6	4.5.7.3
7c	Operating torque			X			3.11, 3.12.7	4.5.8.3
7d	Contact resistance			X			3.11, 3.12.8	4.5.9.3
8	LIFE TEST	X			X		3.11, 3.12.10, 3.12.7, 3.12.8	4.5.11.1, 4.5.8.1, 4.5.9.1
9	TEMPERATURE SHOCK TEST			X			3.11, 3.12.11, 3.12.5, 3.12.7, 3.12.8	4.5.12, 4.5.6.1, 4.5.8.1, 4.5.9.1
10	MECHANICAL SHOCK TEST		X				3.11, 3.12.12, 3.12.5	4.5.13, 4.5.6.1
11	HUMIDITY TEST			X			3.11, 3.12.14, 3.12.6, 3.12.7, 3.12.8	4.5.14, 4.5.7.1, 4.5.8.1, 4.5.9.1
12	IMMERSION		X				3.10, 3.11, 3.12.15, 3.12.6, 3.12.7, 3.12.8	4.5.15, 4.5.7.1, 4.5.8.1, 4.5.9.1
13	SALT FOG TEST	X	X	X	X	X	3.10, 3.11, 3.12.15, 3.12.6, 3.12.7, 3.12.8	4.5.16, 4.5.7.1, 4.5.8.1, 4.5.9.1
14	VIBRATION TEST		X			X	3.11, 3.12.13, 3.12.5, 3.12.7, 3.12.8	4.5.17.1, 4.5.6.1, 4.5.8.1, 4.5.9.1

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CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

Navy - AS

Agent:

Navy - SH

Reviewer activities:

Army - CR, MI  
Air Force - 99  
DLA - GS

(Project 5935-2009-158)

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 <http://assist.daps.dla.mil>.