INCH-POUND

MIL-PRF-18148/1
30 September 2009
SUPERSEDING
MS3349C
1 June 1984

PERFORMANCE SPECIFICATION SHEET

PLUG, ELECTRIC, TWO-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 MS3349-2. The MS3349-2 is a two-wire electric plug used with aircraft storage batteries.

2. Dimensions and weight. The dimensions of the plug shall be as shown on figure 1. The weight of the plug shall be not greater than 0.75 pounds (see 3.12.3 of MIL-PRF-18148 and 3.12.4 as modified herein).

3. The spacing of rigid sockets shall be as shown on figure 1. Nonrigid sockets must self-align with the MS3509 series receptacle.

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

4.1 Modify the following paragraphs:

3.8.2 Electrical connections. Insert after the first sentence: "Each two-wire MS3349-2 plug shall include as its electrical connections two sockets with their axes vertical and in a plane parallel to the face of the receptacle. Each plug shall be usable with two 000-gauge wires conforming to SAE-AS50861/2 for type 2. Each plug shall include two wire entry holes on the bottom, through which the wires may be brought into the sockets. Each plug shall be made so that the wires shall enter it vertically 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. The plug shall be marked with "-" and "+" on the front, back, bottom, or sides so as to identify the wires connected to 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. Probe holes of .188 diameter shall be incorporated in the plug body to allow monitoring of battery voltage at battery terminal posts with voltmeter probes when the plug is engaged with the battery receptacle. No part of the electric circuit of the plug shall be exposed except through the wire, wrench, probe, and contact entry holes."

3.10.1 Delete this paragraph.

3.12.4 Weight. Insert after the first sentence: "The weight of each two-wire MS3349-2 plug shall be not greater than 0.75 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, two 000-gauge wires conforming to SAE-AS50861/2 for Type 2 shall be connected to the plug in accordance with 3.8.2 of MIL-PRF-18148/1."

6.9 Supersession data. Delete the text and insert: "Plugs PIN MS3349-1 and MS3349-3 are hereby cancelled without replacement. They were specified by MIL-P-18148 (superseded by MIL-PRF-18148) and MS3349. Connector plugs previously procured to MS3349-2 are superseded by plugs in accordance with MIL-PRF-18148/1."

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.

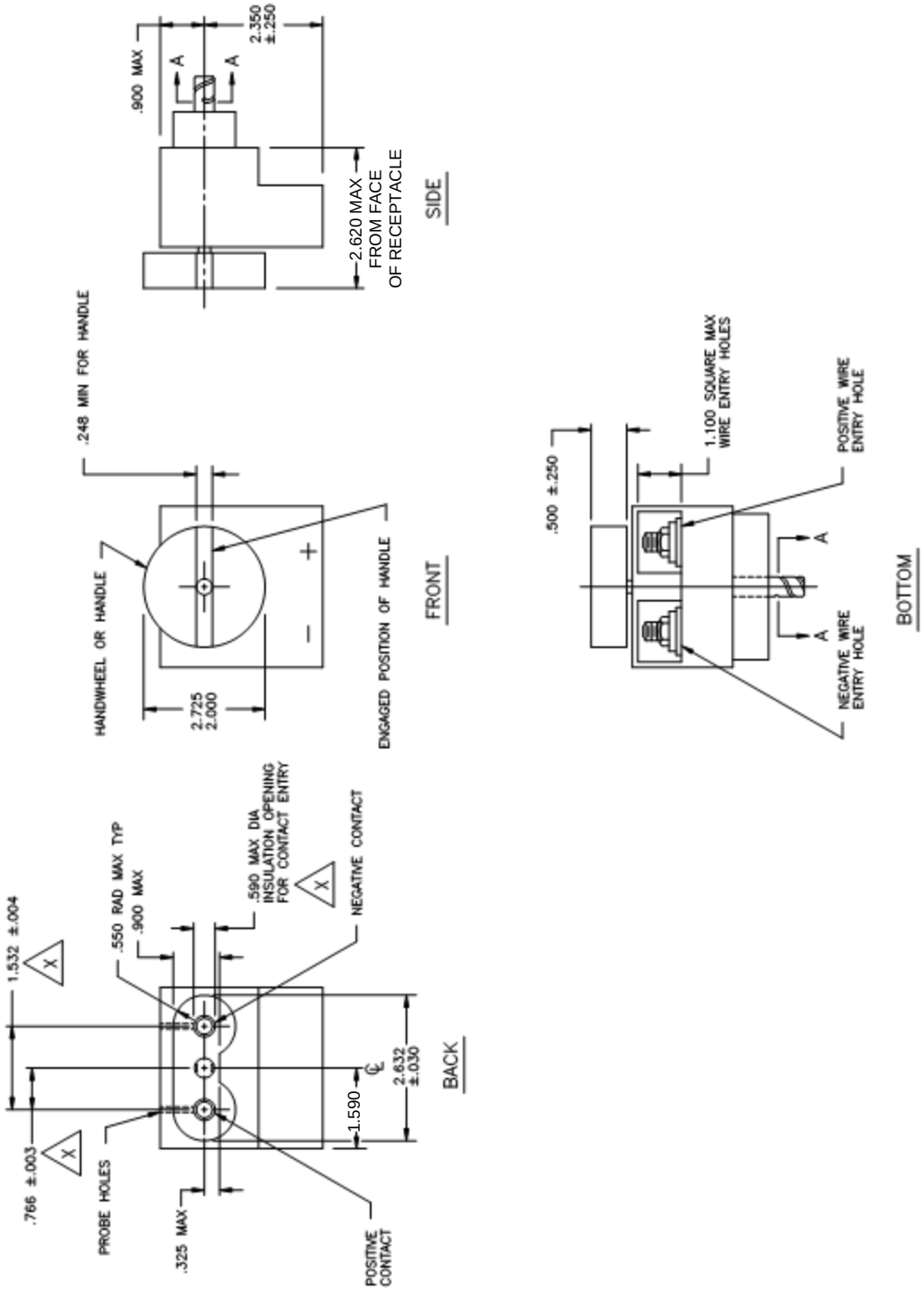

FIGURE 1. Dimensions and configuration for PIN MS3349-2.

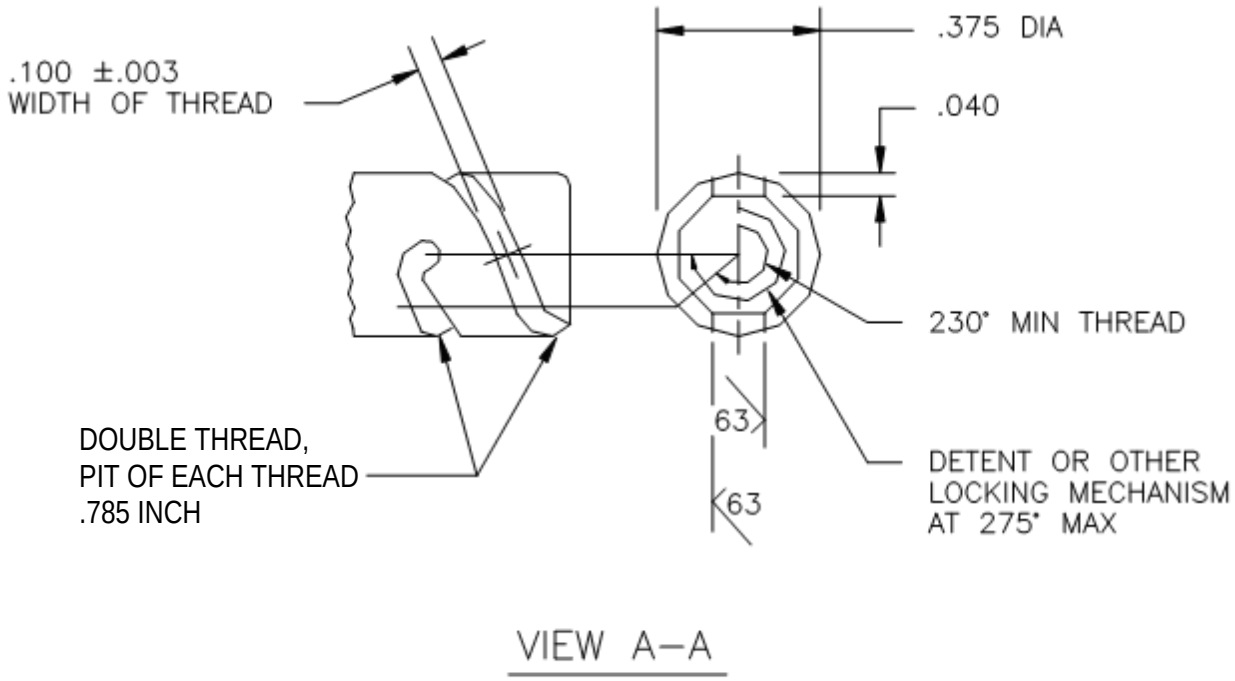

FIGURE 1. Dimensions and configuration for PIN MS3349-2 - Continued.

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	3.12.4, Reqmt 2	4.5.4
	PLUG PREPARATION	X	X	X	X	X	---	4.5.5
5	STRESS TESTS AT 77°F	X	X	X	X	X	---	---
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			X			---	---
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			X				
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

CONCLUDING MATERIAL

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

Reviewer activities:
Army - CR, MI
Air Force - 99
DLA - GS

Preparing activity:
Navy - AS

Agent:
Navy - SH

(Project 5935-2009-157)

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.