INCH-POUND
MS25917H
16 March 2011
SUPERSEDING
MS25917G
28 July 2009

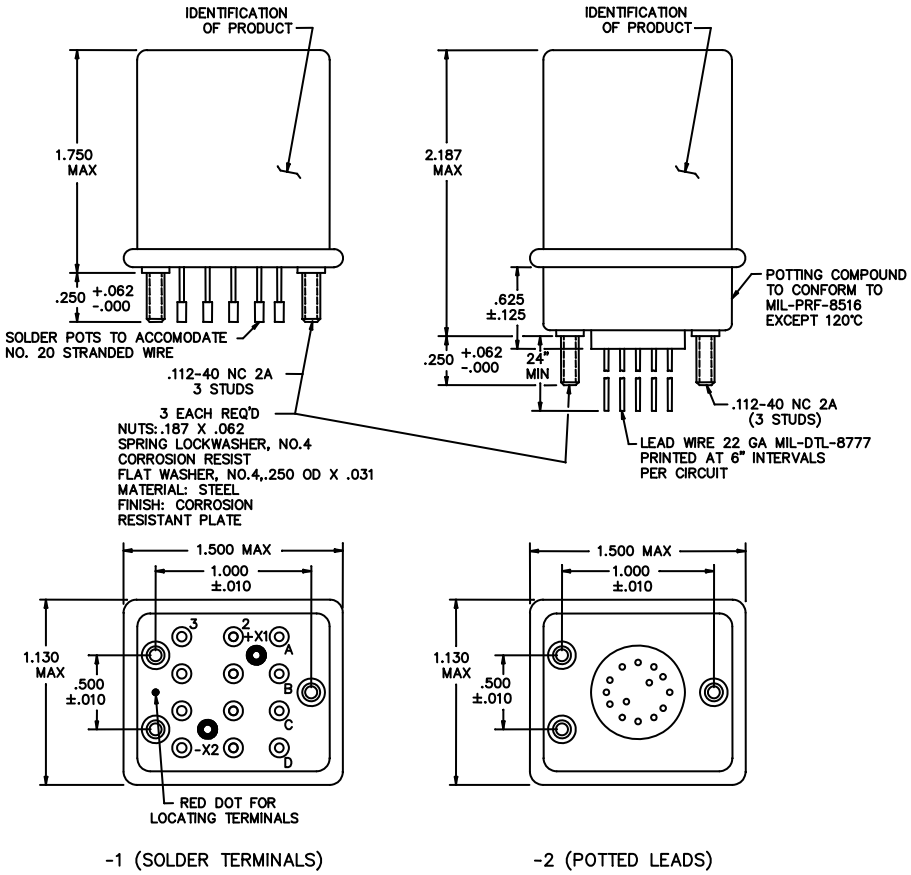
DETAIL SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 3 AMPERES, 4 PDT, TYPE I

INACTIVE FOR NEW DESIGN AFTER 2 MARCH 1987.
NO SUPERSEDING STANDARD.

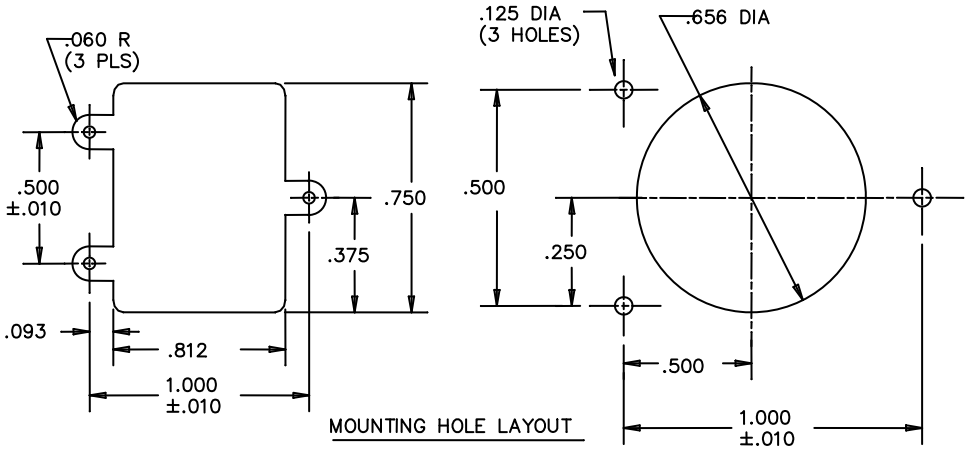
This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the relay described herein shall consist of this specification sheet and MIL-PRF-6106.

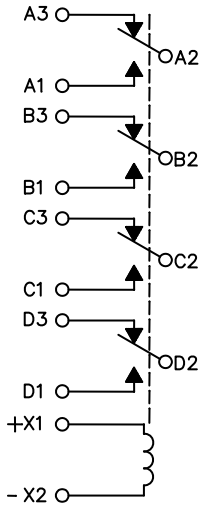


-1(SOLDER TERMINALS) -2(POTTED LEADS)

FIGURE 1. Dimensions and configurations.



MOUNTING HOLE LAYOUT



CIRCUIT DIAGRAM

Inches	mm	Inches	mm
.010	0.25	.656	16.66
.060	1.52	.750	19.05
.062	1.57	.812	20.62
.093	2.36	1.000	25.40
.112	2.84	1.130	28.70
.125	3.18	1.500	38.10
.250	6.35	1.750	44.45
.375	9.53	2.187	55.55
.500	12.70	6.000	152.40
.625	15.88	24.000	609.60

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal numbers do not appear on the relay header. There shall be affixed to the relay a suitable legible circuit diagram that identifies each terminal location specified. Circuit diagram shown above is the terminal view.
4. In the event of a conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.
5. Referenced Government documents found on https://assist.daps.dla.mil/quicksearch/ and specified in the solicitation or contract form a part of this specification sheet to the extent specified herein.
6. Unless otherwise specified, tolerance is ± .010 (0.25 mm).

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Weight: -1 .25 pounds (113 grams).

-2 .50 pounds (227 grams).

Contact requirements:

Load ratings:

High level (relay case grounded).

Resistive: 3 amperes at 28 V dc, 115 V ac (400 Hz).

Inductive: 1.5 amperes at 28 V dc, 115 V ac (400 Hz).

Motor: 1.5 amperes at 28 V dc, 115 V ac (400 Hz).

Mixed loads: Applicable.

Coil requirements:

Nominal coil voltage: 28 V dc.

Pick up voltage: 18 V dc (over the temperature range).

Hold voltage: 7.0 V dc (over the temperature range).

Dropout voltage: 1.5 V dc (over the temperature range).

Coil current: 0.15 ampere maximum.

Electrical requirements:

Insulation resistance (minimum):

Initial: 100 megohms.

After life or environmental test: 50 megohms.

Dielectric strength:

	Sea level (V rms)		Altitude (V rms)	
	Initial	After life	80,000 feet	
			-1	-2
Coil to case:	1,000	1,000	250	500
All of the points:	1,000	1,000	250	500

Environmental requirements:

Temperature range: -65°C to +120°C.

Shock (specified pulse): Applicable, MIL-STD-202, method 213, test condition A, 25 g's, 6-9 milliseconds. Contact chatted shall no exceed 10 microseconds maximum opening for closed contacts and 1 microsecond maximum closure for open contacts.

Vibration (sinusoidal): Applicable, MIL-STD-202, method 204, test condition A, ±10 g's or .036 DA whichever is less, from 5 to 500 Hz. Contact chatter shall not exceed 10 microseconds maximum opening for closed contacts and 1 microsecond maximum closure for open contacts.

Hermetically-sealed (potted) relay: Relays shall be tested as follows:

a. Prior to installing a gasket on the relay header (if a gasket is used), the relay shall be totally immersed in a container of "tap" water. (The "tap" water as used here means ordinary drinking water that has not been altered in any way, such as by the addition of any other substance or distilling). The part of the relay closest to the surface of the water shall be a minimum of 1 inch (25.4 mm) below this surface.

b. The container and water-covered relay shall then be placed in a vacuum chamber. The chamber shall be sealed. The chamber pressure shall be reduced from room ambient to 0.82 inch (80,000 feet) +0.0 inch- 0.2 inch of mercury within 5 minutes, and shall be maintained at this level for 30 minutes minimum. The chamber pressure shall be increased to room ambient within 1 minute, and shall be maintained at room ambient pressure for 30 minutes, minimum. The foregoing shall constitute one cycle. The relay shall remain fully immersed in the water during the cycle.

c. Within a maximum of one-half hour after the cycle, each relay shall be removed from the water and dried by shaking, wiping, or blowing with contaminant-free air or gas, but not by any form of heating or baking.

d. Within a maximum of one-half hour after drying, each relay shall be subjected to the DWV and IR tests.

Life test requirements 50,000 cycles minimum.

Qualification by similarity: If the relay case, frame, or enclosure contains integral sealed electromagnetic relays (mounting means excepted) currently listed on the qualified products list of MIL-PRF-83536/5, reduced testing shall consist of subjecting four sample units to the shock and vibration requirements of this specification sheet. Post tests shall include insulation resistance, dielectric withstanding voltage and electrical characteristics, and seal. One unsealed unspotted unit shall be submitted to the qualifying activity.

VERIFICATION:

Group A:

a. Group A1: Run-in. This subgroup may be waived by the qualifying activity if fully tested sealed MIL-PRF-83536/5 relays are used internally.

b. Group A2: 100 percent.

c. Dielectric withstanding voltage:

(1) Tests to be conducted at sea level rating only.

(2) Duration of application: 5-10 seconds at a 10 percent increase in the dielectric strength voltage.

Group A acceptance reports shall be submitted to the qualifying activity on a yearly basis in order to retain qualification for this detail specification sheet.

Group B and group C testing are not required. The manufacturer shall notify the qualifying activity in the event of any design or construction changes, and the qualifying activity may impose additional testing requirements as necessary.

Part or identifying number: (PIN): MS25917-1 for solder terminals or MS25917-2 for potted leads.

Referenced documents. In addition to MIL-PRF-6106, this document references the following:

MIL-PRF-83536/5 MIL-STD-202 MIL-PRF-8516 MIL-DTL-8777

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. 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 and relationship to the last previous issue.

Custodian:
Navy - AS
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5945-2011-011)

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.daps.dla.mil/.