

INCH-POUND

MS25030N
27 November 2003
SUPERSEDING
MS25030M
28 April 1995

DETAIL SPECIFICATION SHEET

RELAY, 50 AMP, 2 PDT (N.O.),
TYPE II, NON-HERMETICALLY SEALED,
MECHANICALLY INTERLOCKED

Inactive for new design effective 28 April 1995
No superseding specification.

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 and the latest issue of MIL-PRF-6106.

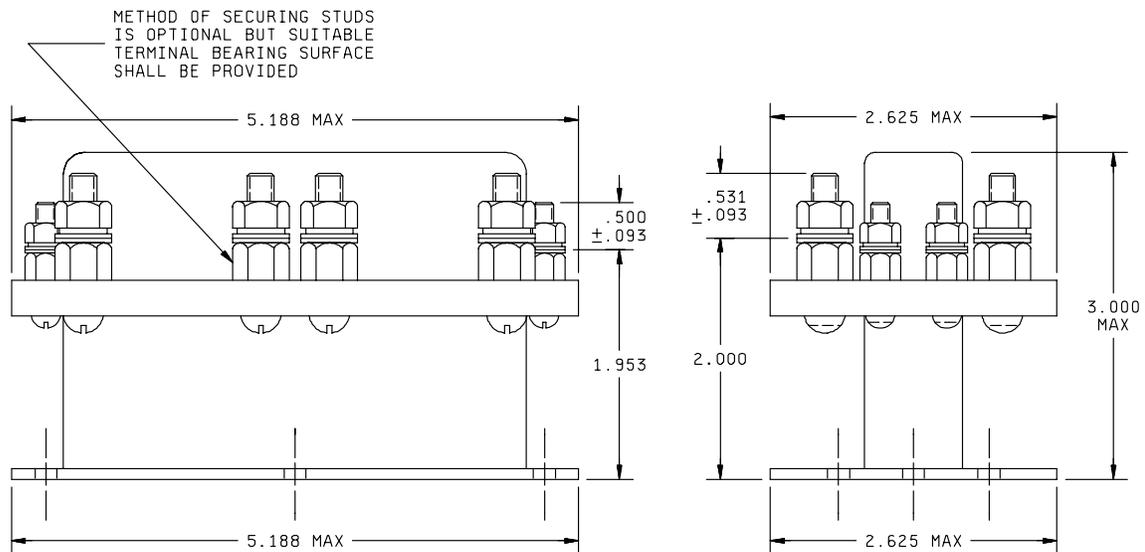
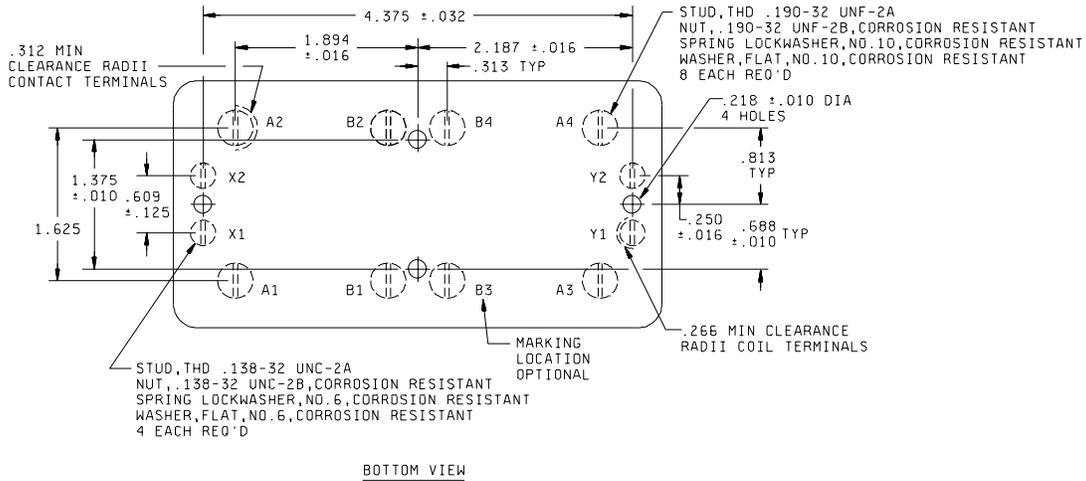


FIGURE 1. Dimensions and configuration.

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Inches	mm	Inches	mm	Inches	mm
.010	0.25	.313	7.95	2.000	50.80
.093	2.36	.500	12.70	2.281	57.94
.125	3.18	.531	13.49	2.625	66.68
.138	3.51	.609	15.47	3.000	76.20
.190	4.83	.688	17.48	4.562	115.88
.218	5.54	.813	20.65	5.188	131.78
.266	6.76	1.375	34.93		
.305	7.75	1.625	41.28		
.312	7.93	1.938	49.23		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ±.062 (1.57 mm).
4. Coil and auxiliary terminals may use additional flat washer for terminal seat.
5. Mechanical linkage shall be provided to prevent both relays from being closed simultaneously.
6. Referenced Government documents of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation forms a part of this standard to the extent specified herein.
7. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

FIGURE 1. Dimensions and configuration - Continued.

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REQUIREMENTS:

Dimensions and configurations: See figure 1.

Dash numbers and general characteristics: See table I.

Contact data:

Load ratings: See table II.

Maximum contact drop, initial: 0.150 V.

After life test: 0.175 V.

Overload current (NO): 400 amperes.

Rupture current (NO): 500 amperes.

Coil data: See table III.

Duty rating: continuous.

RFI specification: MIL-STD-461 (applicable to coil circuits of ac operated relays).

Electrical data:

Minimum insulation resistance:

Initial: 100 megohms.

After life or environmental test: 50 megohms.

Dielectric strength:

Sea level, 2-5 seconds:

	Initial		After life tests	
	<u>28 V dc</u>	<u>115 V ac</u>	<u>28 V dc</u>	<u>115 V ac</u>
Coil to case	1,250	N/A	1,000	N/A
Aux contacts	1,250	N/A	1,000	N/A
All other points	1,250	1,500	1,000	1,125

Altitude, 1 minute:

	<u>28 V dc</u>	<u>115 V ac</u>
Coil to case	500 V rms	N/A
Aux contacts	500 V rms	N/A
All other points	500 V rms	500

Environmental characteristics:

Temperature range -55° to +71°C.

Maximum altitude rating: 50,000 feet.

Shock g-level: 25 g's.

Duration: 6-9 ms.

Max duration contact opening: 2 ms.

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Vibration - sinusoidal: See table IV.

Vibration - random: Not applicable.

Acceleration: 10 g's.

Part or Identifying Number (PIN): MS25030- (plus applicable dash number from table I).

Qualification by similarity: See MIL-PRF-6106.

Assurance provisions: Group B and group C testing are not required. In the event of a change in the design or construction of the part, the manufacturer shall notify the qualifying activity and shall impose additional testing requirements as necessary.

Supersession data: See table V.

TABLE V. Dash numbers and general characteristics. 1/ 2/

PIN	Type	Coil type	Terminal type	Mounting or mating socket	Auxiliary contacts	Maximum weight in pounds 1/
MS25030-D1B	II	dc	Stud	Plate	N/A	1.7

TABLE II. Rated contact load (amperes per pole) (case grounded). 1/

Type of load	Life operating cycles x 10 ³	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase				See notes
		Main		Aux		Main		Aux		Main		Aux		
		NO	NC	NO	NC	400 Hz	60 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	
Resistive	50	50				50			5					
Inductive	10	50							5					
Motor	50	50				35								
Lamp									.75					
Transfer load														2/
Mechanical life reduced current	100	12.5				12.5			1.25					
Mixed loads	50	5				10								

1/ Absence of value indicates relay is not applicable to this specification sheet.

2/ Transfer load indicates relay is suitable for transfer between unsynchronized ac power supplies at rating indicated.

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TABLE III. Operating characteristics.

PIN MS25030-	Coil data										Time - milliseconds max <u>2/</u>						
	Coil	Rated			Max		<u>1/</u> Max pick-up voltage			Hold vol- tage <u>2/</u>	Drop out vol- tage <u>2/</u>	Ope- r- ate <u>3/</u>	Rel- ease <u>4/</u>	Bounce			
		Volts <u>1/</u>	Freq Hz	Ω Res +15% -10	Volts	Amp	Nor- mal <u>2/</u>	High temp test	Cont cur- rent test					Main		Aux	
													NO	NC	NO	NC	
D1B	X1, X2 Y1, Y2	28	dc	66	29	.5	18	21	22.5	7.0	1.5	25	15	5	N/A	N/A	N/A

1/ Over the temperature range.

2/ With rated coil voltage.

TABLE IV. Vibration levels (sinusoidal).

Dash number	5-10 Hz	10-55 Hz	55-250 Hz	250-500 Hz	500-1,500 Hz
D1B	.08 DA	.06 DA	2 g's	2 g's	N/A

TABLE V. Supersession data.

Superseded PIN MS25030-	Replacement PIN MS25030-
2	D1B
3	D1B
D1A	D1B

NOTES

Referenced documents. In addition to MIL-PRF-6106, this specification sheet references the following documents. (Government documents are available on line at <http://assist.daps.dla.mil/quicksearch> or www.dodssp.daps.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094).

STANDARDS

Department of Defense

MIL-STD-461 - Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment

Custodians:
NAVY - AS
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5945-1221-05)

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 ASSIST Online database at www.dodssp.daps.mil.