

INCH-POUND

MS25271J
27 November 2003
SUPERSEDING
MS25271H
24 Jan 1990

DETAIL SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 10 AMPERES,
4 PDT, TYPE I, SOLDER HOOK,
HERMETICALLY SEALED

INACTIVE FOR NEW DESIGN AFTER 15 NOVEMBER
2002. 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.

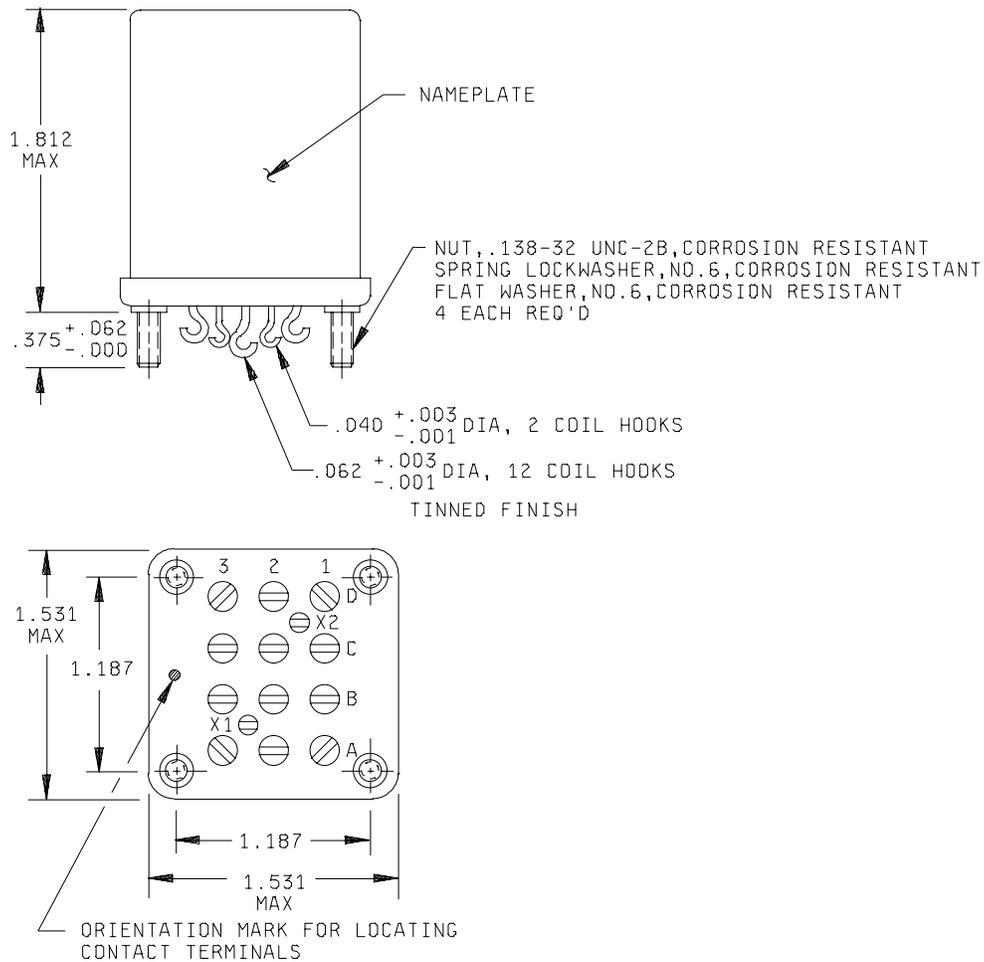
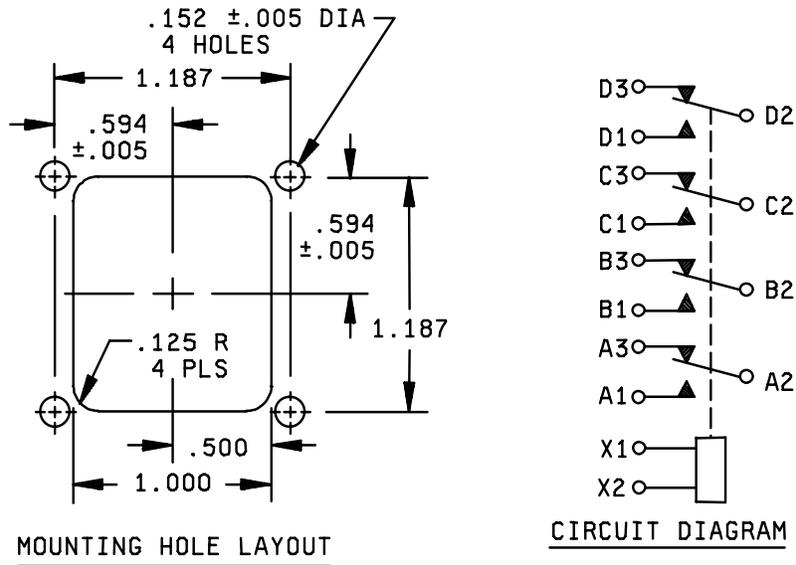


FIGURE 1. Dimensions and configurations.

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Inches	mm	Inches	mm
.001	0.03	.152	3.86
.003	0.08	.375	9.53
.005	0.13	.500	12.70
.010	0.25	.594	15.09
.040	1.02	.040	25.40
.062	1.57	.062	30.15
.125	3.18	.125	38.89
.138	3.51	.138	45.02

NOTES:

- 1/ Dimensions are in inches.
- 2/ Metric equivalents are given for general information only.
- 3/ Unless otherwise specified, tolerance is $\pm .010$ (0.25 mm).
- 4/ Terminal numbers need not appear on relay header provided there is affixed to the relay a suitable legible circuit diagram that permanently and positively identifies each terminal location specified hereon.
- 5/ In the event of conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.
- 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 specification to the extent specified herein.

TABLE I. Dash numbers and characteristics.

Dash number MS25271-	Type	Coil	Terminal type	Mounting	Max weight in pounds
D1	I	dc	Solder hook	Stud	.45
A1	I	ac	Solder hook	Stud	.45

FIGURE 1. Dimensions and configurations - Continued.

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TABLE II. Operating characteristics.

PIN MS25270-	Coil data										Time - milliseconds max						
	Coil	Rated			Max		1/ Max pick-up voltage			Drop out vol- tage 2/	Hold vol- tage 2/	Oper- ate 3/	Rel- ease 4/	Contact Bounce			
		Volts 1/	Freq Hz	Ω Res ±10%	Volts	Amp	Nor- mal 2/	High temp test	Cont cur- rent test					Main		Aux	
														NO	NC	NO	NC
D1	X1, X2	28	dc	110	29	0.350	18	19.5	22.5	1.5	7.0	20	20	2	2	N/A	N/A
A1	X1, X2	115	400 5/	N/A	122	0.073	90	95	103	5.0	30	25	50	2	2	N/A	N/A

1/ CAUTION: Use of any coil voltage less than rated coil voltage will compromise the operation of the relay.

2/ Over the temperature range.

3/ With nominal coil voltage.

4/ From nominal coil voltage.

5/ MS25271-A1 may be used on 60 Hz if maximum ambient temperature is +85°C (coil current shall be 0.077 ampere maximum).

TABLE III. Rated contact load (amperes per pole) (case grounded).

Type of load	Life operat- ing cycles x 10 ³	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase 1/				See appro- priate notes
		Main		Aux		Main		Aux		Main		Aux		
		NO	NC	NO	NC	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	
Resistive	100	10	10			10	6			10	6			
Inductive	100													
Inductive	20	6	6			6	4			6	4			
Motor	100	4	4			4	3			4	3			
Lamp	100	2	2			2	1.5			2	1.5			
Transfer load														2/
Mechanical life reduced current	400	2.5	2.5			1.25	2			1.25	2			
Mixed loads		Applicable per specification												

1/ Absence of value indicates relay is not rated for 3-phase applications.

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

Environmental characteristics.

Temperature range -70°C to +125°C

Max altitude rating 80,000 ft

Shock G-level 50 g's

Duration 11 ms

Max duration contact opening 10 μs

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Vibration - sinusoidal (see chart below)

G-level	10 g's
Frequency range	5-1,500 Hz
Vibration – random	
Applicable specification	N/A
Power spectral density	N/A
RMS G min	N/A
Frequency range	N/A
Curve	N/A
High shock	N/A
Acceleration	15 g's

Electrical characteristics.

Insulation resistance, initial	100 megohms.
After life or environmental tests	50 megohms.

Dielectric strength (sea level).

	<u>Initial</u>	<u>After life tests</u>
Coil to case	1,000 V rms	1,000 V rms
Aux contacts		
All other points	1,500 V rms	1,125 V rms

Dielectric strength (altitude).

Coil to case	<u>80,000 ft</u>
Aux contacts	250 V rms
All other points	350 V rms

Max contact drop initial	0.150 volt.
After life test	0.175 volt.
Overload current	20 amperes.
Rupture current	25 amperes.
Duty rating	Continuous.
RFI specification	MIL-STD-461
(Applicable to coil circuits of ac operated relays).	

Qualification by similarity: See MIL-PRF-6106.

Conformance inspection.

Performance of groups B and C tests may be suspended at the discretion of the qualifying activity.

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 5945-1214-08)

Review activities:

Navy - EC

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.