INCH-POUND

MS25273H
27 November 2003
SUPERSEDING
MS25273G
5 Jun 1987

DETAIL SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2 PDT, TYPE I, SOLDER TERMINALS, STUD MOUNTED, 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.

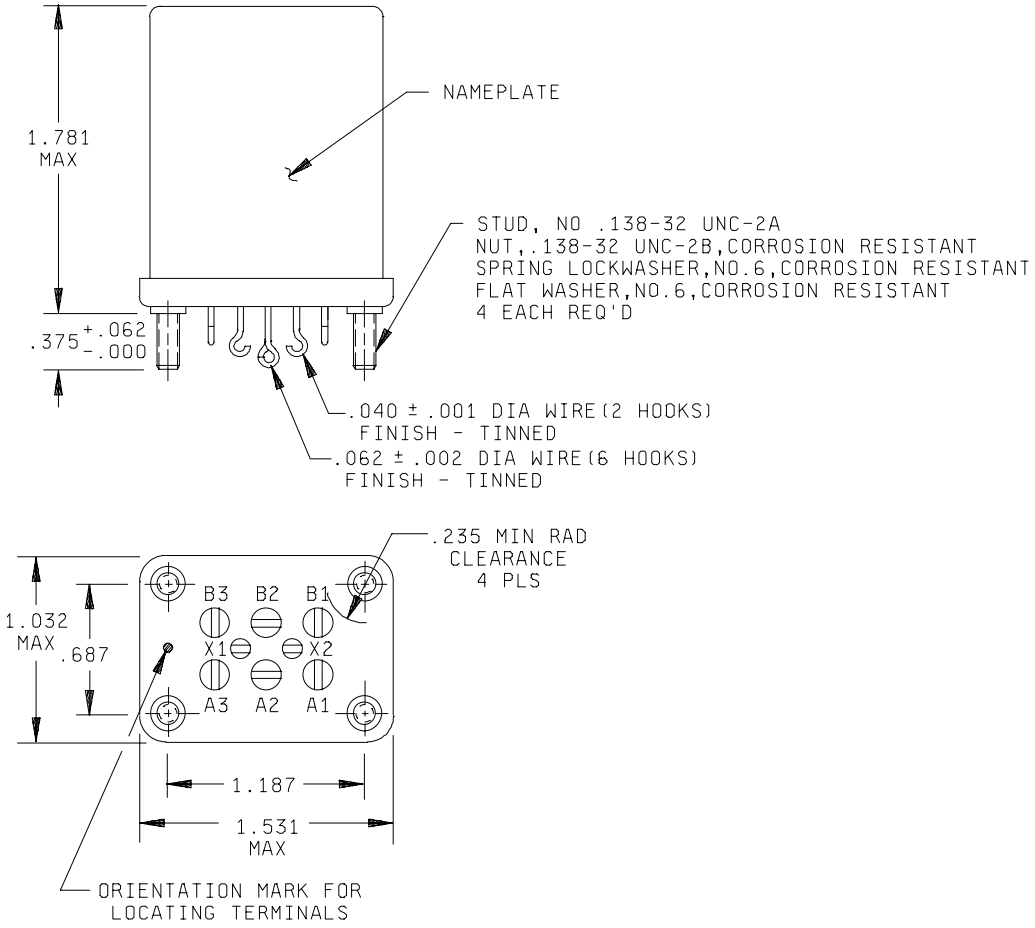
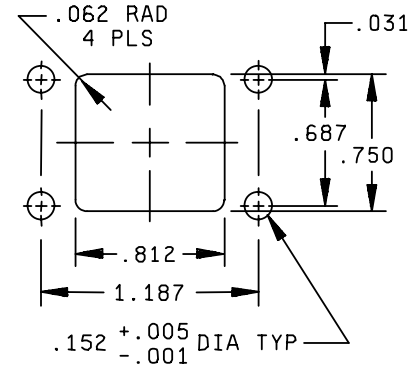
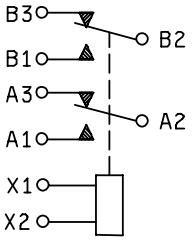


FIGURE 1. Dimensions and configurations.



MOUNTING HOLE LAYOUT



CIRCUIT DIAGRAM
SEE NOTE 7

Inches	mm	Inches	mm
.001	0.03	.235	5.97
.002	0.05	.357	9.53
.005	0.13	.687	17.45
.010	0.25	.750	19.05
.031	0.79	.812	20.62
.040	1.02	1.100	27.94
.062	1.57	1.187	30.15
.138	3.51	1.531	38.89
.152	3.86	1.781	45.24
.187	4.75		

NOTES:
1/ Dimensions are in inches.
2/ Metric equivalents are given for general information only.
3/ Unless otherwise specified, tolerance is ±.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.
7/ The use of diodes on ac relays is optional. Actual application must be shown on label (dash numbers -A1 and -A2 are inactive for new design).

TABLE I. Dash numbers and characteristics.

Dash number MS25273-	Type	Coil	Terminal type	Mounting	Max weight in pounds
D1	I	dc	Solder hook	Stud	.30
A1 1/	I	ac	Solder hook	Stud	.32
A2 1/	I	ac	Solder hook	Stud	.32

1/ Dash number -A1 and -A2 are inactive for new design and shall be used for support of existing systems only.

FIGURE 1. Dimensions and configurations - Continued.

TABLE II. Operating characteristics.

PIN MS25273-	Coil data											Time - (milliseconds max)					
	Coil	Rated			Max		1/ Max pick-up voltage			Drop out voltage 2/	Hold voltage 2/	Operate 3/	Release 4/	Contact Bounce			
														Main		Aux	
		Volts 1/	Freq Hz	Ω Res ±10%	Volts	Amp	Normal 2/	High temp test	Cont current test					NO	NC	NO	NC
D1	X1, X2	28	dc	175	29	0.20	18	19.5	22.5	1.5	7.0	20	20	2	2	N/A	N/A
A1 5/ 6/	X1, X2	115	400	N/A	122	0.07	90	95	103	5.0	30	25	50	2	2	N/A	N/A
A2 6/	X1, X2	115	50/ 60	N/A	122	0.10	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/ MS25273-A1 may be used on 60 Hz if maximum ambient temperature is limited to +85°C (maximum coil current shall be 0.0777 ampere).

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

Type of load	Life operating cycles x 10^3	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase 1/				See appropriate 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			2.5	2			2.5	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
Vibration - sinusoidal (see chart below)	
G-level	10 g's
Frequency range	5-1,500 Hz
Acceleration	15 g's

Electrical characteristics.

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

Dielectric strength (sea level).

	Initial	After life tests
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).

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

Max contact drop initial	0.150 volt.
After life test	0.175 volt.
Overload current	40 amperes dc, 60 amperes ac.
Rupture current	50 amperes, 80 amperes.
Duty rating	Continuous.
RFI specification	MIL-STD-461

(Applicable to coil circuits of ac operated relays).

Conformance inspection.

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

Qualification by similarity: See MIL-PRF-6106.

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

Review activities:
Navy - EC

Preparing activity:
DLA - CC

(Project 5945-1214-10)

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.