INCH-POUND

MS24568K
27 November 2003
SUPERSEDING
MS24568J
5 June 1987

DETAIL SPECIFICATION SHEET

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

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.

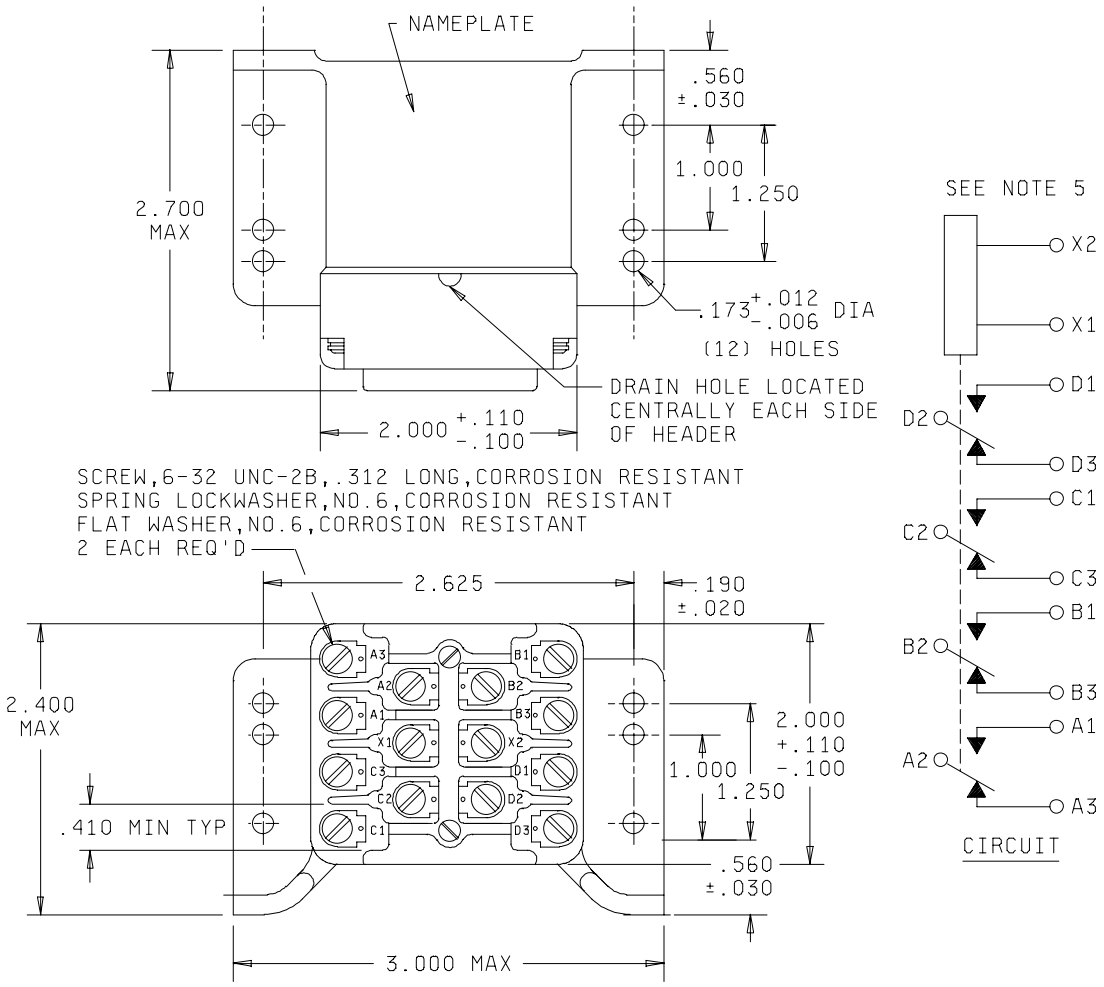

FIGURE 1. Dimensions and configurations.

Inches	mm	Inches	mm
.006	0.15	.410	10.41
.012	0.30	.560	14.22
.020	0.51	1.000	25.40
.030	0.76	1.250	31.75
.100	2.54	2.000	50.80
.110	2.79	2.300	58.42
.173	4.39	2.685	68.20
.190	4.83	2.700	68.58
		3.000	76.20

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 headers provided there is affixed to the relay a suitable legible circuit diagram that permanently and positively identifies each terminal location specified herein.
5. 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).
6. 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.
7. 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.

TABLE I. Dash numbers and characteristics.

Dash number MS24568-	Type	Coil	Terminal type	Mounting or mating socket	Auxiliary contacts	Max weight in pounds
D1	I	dc	Screw	Bracket	N/A	0.73
A1 1/	I	ac	Screw	Bracket	N/A	0.75
A2 1/	I	ac	Screw	Bracket	N/A	0.75

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

FIGURE 1. Dimensions and configurations - Continued.

TABLE II. Operating characteristics.

PIN MS 24568-	Coil data											Time - (milliseconds maximum)					
	Coil	Nominal			Max		Max pick-up voltage			Drop out voltage 2/	Hold voltage 2/	Operate 3/	Release 4/	Contact Bounce			
		Volts 1/	Freq Hz	Ω Res ±10%	Volts	Amp	Normal 2/	High temp test	Cont current test					Main		Aux	
														NO	NC	NO	NC
D1	X1, X2	28	dc	92	30	0.5	18	19.5	22.5	1.5	7.0	20	20	3	5	---	---
A1 5/	X1, X2	115	400	N/A	120	0.1	90	95	103	5.0	30	25	50	3	5	---	---
A2 5/	X1, X2	115	50/60	N/A	120	0.1	90	95	103	10	35	95	30	3	3		

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/ Inactive for new design.

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			15	10			15	10			
Inductive	100													
Inductive	20	10	10			10	6			10	6			2/
Motor	100	6	6			6	4			6	4			
Lamp	100	3	3			3	2			3	2			
Transfer load														3/
Mechanical life reduced current	400	2.5	2.5			4				4				
Mixed loads	Applicable per specification													

1/ Absence of value indicates relay is not rated for 3-phase application.
2/ Life ac inductive 50,000 operations minimum at rating indicated.
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
Duration	11 ms
Max duration contact opening	10 μs

Vibration - sinusoidal		
Sinusoidal 3 inches excursion		5 to 36 Hz
G-level		Frequency range
	20 G	36 to 500 Hz
	15 G	500 to 1,000 Hz
	10 G	1,000 to 2,000 Hz
Non-operate	15 G	20 to 2,000 Hz
Acceleration	15 G	

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	2,000 V rms	1,500 V rms

Dielectric strength (altitude).

	80,000 ft
Coil to case	500 V rms
Aux contacts	
All other points	700 V rms

Max contact drop initial:	0.150 volt.
After life test:	0.175 volt.
Overload current (NO):	40 amperes dc, 60 amperes ac
Rupture current	60 amperes dc, 80 amperes ac.
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 not applicable to dash numbers-A1 and A2.

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

Preparing activity:
DLA - CC

(Project 5945-1214-03)

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.