INCH-POUND

MS25468K
30 July 1993
SUPERSEDING
MS25468J
29 September 1987

MILITARY SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 10 AMPERES, 4PDT, TYPE I, MAGNETIC LATCH, SOLDER TERMINALS, STUD MOUNTED, HERMETICALLY SEALED

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

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-R-6106.

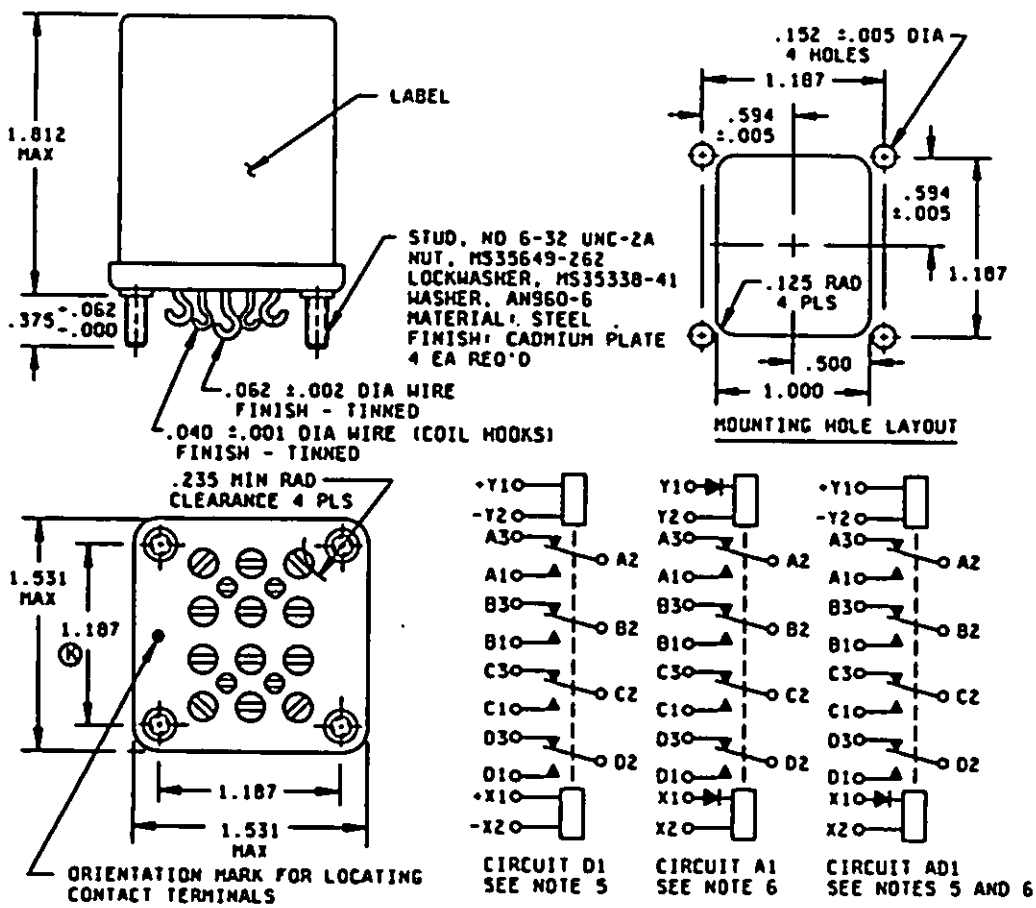

FIGURE 1. Dimensions, configurations, and circuit diagrams.

(K) denotes changes

Inches	mm	Inches	mm
.001	0.03	.235	5.97
.002	0.05	.375	9.53
.005	0.13	.500	12.70
.010	0.25	.594	15.09
.040	1.02	1.000	25.40
.062	1.57	1.187	30.15
.125	3.18	1.531	38.89
.152	3.86	1.812	46.02

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ±.010 inch (0.25 mm).
4. Terminal numbers need not appear on relay headers provided there is affixed to the relay a legible circuit diagram that permanently and positively identifies each terminal location specified herein.
5. Relay is magnetically latched in both positions. Caution note to observe polarity must appear on relays with dc coils.
6. Shock, vibration, and acceleration requirements are applicable with coils de-energized.
7. The use of diodes on ac relays is optional. The actual application must be shown on the label.
8. 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.
9. 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 form a part of this specification to the extent specified herein.

FIGURE 1. Dimensions, configurations, and circuit diagrams - Continued.

REQUIREMENTS:

Dimensions, configuration, and circuit diagram: 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: 40 amperes dc; 60 amperes ac.

Rupture current: 50 amperesdc; 80 amperes ac.

Coil data: See table III.

Duty rating: Continuous.

Electrical data:

Minimum insulation resistance:

Initial: 100 megohms.

After life or environmental test: 50 megohms.

Dielectric strength (sea level):

	Initial	After life tests
Coil to case:	1,000 V rms	1,000 V rms
Aux. contacts:	N/A	N/A
All other points:	1,500 V rms	1,125 V rms
Dielectric strength (altitude):		80,000 feet
Coil to case:	N/A	250 V rms
Aux. contacts:	N/A	N/A
All other points:	N/A	350 V rms

ENVIRONMENTAL CHARACTERISTICS:

Temperature range: -70°C to +125°C.

Maximum altitude rating: 80,000 feet.

Shock g level: 50 g's, duration: 6 ±1 ms.

Duration: 11 ms.

Maximum duration contact opening: 10 μs.

Vibration, sinusoidal:

G-level: 10 g's.

Frequency range: 20 - 2,000 Hz

Vibration, nonoperating.

G-level: 15 g's.

Frequency range: 20 - 2,000 Hz

Acceleration: 15 g's.

TABLE I. Dash numbers and general characteristics.

Dash number MS25468-	Type	Coil	Terminal type	Mounting or mating socket	Max weight (pounds)
D1	I	dc	Solder hook	Stud	0.40
A1	I	ac	Solder hook	Stud	0.41
AD1 1/	I	ac-dc	Solder hook	Stud	0.41

1/ Dash number AD1 is inactive for new design and shall be used for support of existing equipment designs only.

TABLE II. 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	
		Main		Main		Main	
		NO	NC	400 Hz	60 Hz	400 Hz	60 Hz
Resistive	100	10	10	10	6	10	6
Inductive	100	N/A	N/A	N/A	N/A	N/A	N/A
Inductive	20	6	6	10	4	10	4
Motor	100	4	4	4	3	4	3
Lamp	100	2	2	2	1.5	2	1.5
Mechanical life reduced current	400	2.5	2.5	2.5	1.5	2.5	1.5
Intermediate current	Applicable in accordance with MIL-R-6106.						

TABLE III. Operating characteristics.

PIN MS25468-	Coil data											Time (ms maximum)		
	Coil	Rated		Max		Max pick-up voltage			Drop-out voltage	Operate 3/	Release 4/	Contact bounce		
												Main		
		Volts 1/	Freq. Hz	Volts	Amperes	Normal 2/	High temp test	Cont current test				NO	NC
D1	X1,X2 Y1,Y2	28	dc	29	0.17	18	18	19.8	N/A	25	N/A	2	2
A1	X1,X2 Y1,Y2	115	400 5/	122	0.07	90	90	95	N/A	25	N/A	2	2
AD1 6/	X1,X2	115	400 5/	122	0.07	90	90	95	N/A	25	N/A	2	2
	Y1,Y2	28	dc	29	0.17	18	18	19.8	N/A	25	N/A	2	2

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 rated coil voltage.
4/ From rated coil voltage.
5/ MS25468-A1 and -AD1, ac coils may be used on 60 Hz if maximum ambient temperature is limited to +85°C (maximum coil current shall be 0.077 ampere).
6/ MS25468-AD1 is inactive for new design after 29 September 1987.

QUALITY CONFORMANCE INSPECTION:

Performance of groups B and C tests is not applicable to MS25468-AD1.

Part or Identifying Number (PIN): MS25468- (plus applicable dash number from table I. Example: MS25468-D1.)

CONCLUDING MATERIAL

Custodians:
Navy - AS
Air Force - 85

Preparing activity:
Air Force - 85

Agent:
DLA - ES

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