

INCH-POUND

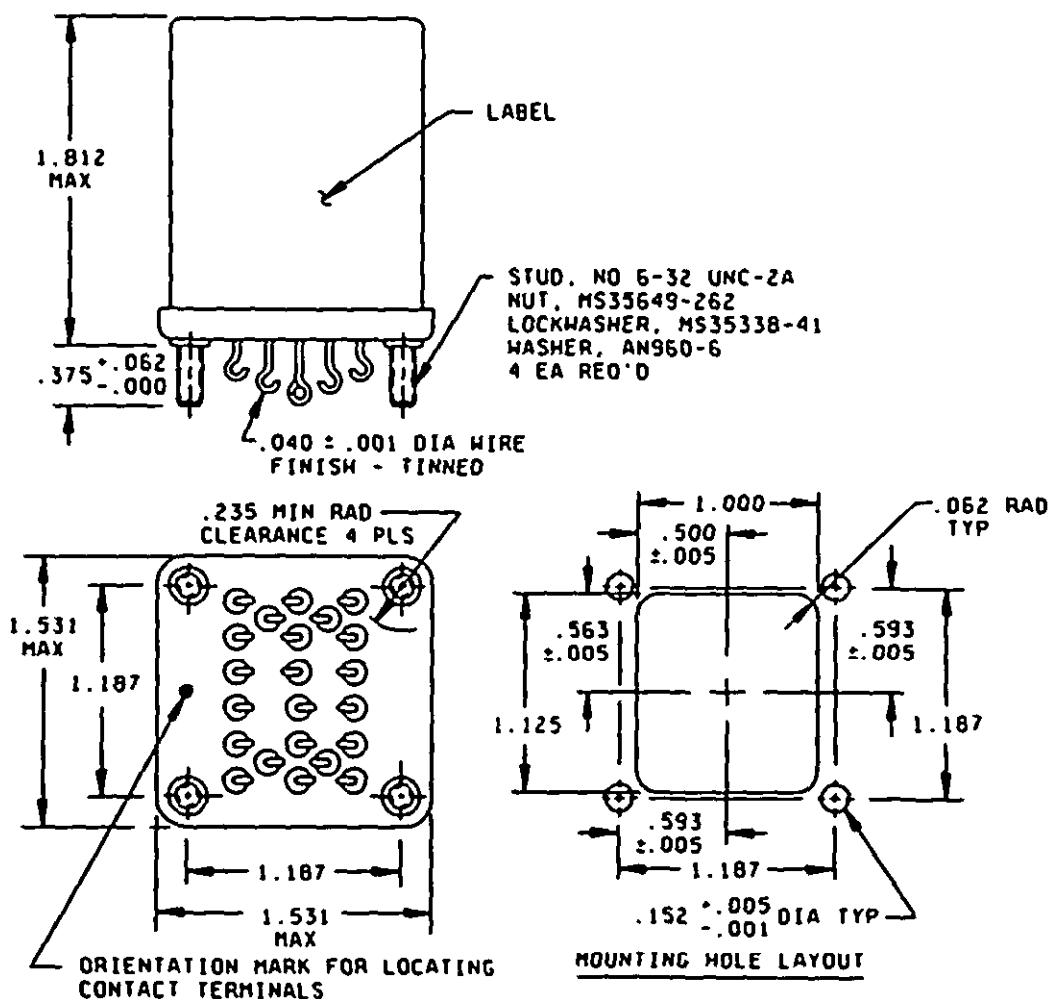
MS25469E
2 July 1993
SUPERSEDING
MS25469D
30 September 1987

MILITARY SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 6POT, 5 AMPERES, TYPE I,
MAGNETIC LATCH, STUD MOUNTED, SOLDER HOOK TERMINALS,
HERMETICALLY SEALED

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

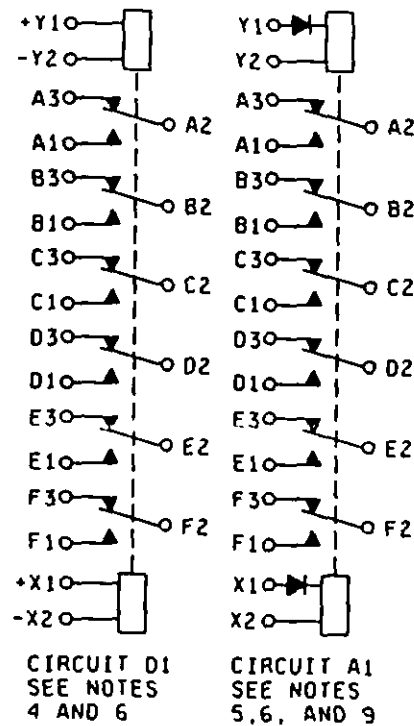
The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-R-6106.



(E) FIGURE 1. Design, dimensions, and circuit diagrams.

(E) denotes changes

MS25469E



Inches	mm	Inches	mm
.001	0.03	.375	9.53
.005	0.13	.812	20.62
.031	0.79	1.125	28.58
.040	1.02	1.187	30.15
.062	1.57	1.531	38.89
.138	3.51	1.812	46.02
.152	3.86		
.235	5.95		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.010 (0.25 mm).
4. Caution note to observe polarity must appear on relays with dc coils.
5. The use of diodes on ac relays is optional. Actual application must be shown on label.
6. Relay is magnetically latched in both positions.
7. Shock, vibration, and acceleration requirements are applicable with coils de-energized.
8. Terminal numbers shall not appear on relay header. There shall be affixed to the relay a legible circuit diagram that permanently and positively identifies each terminal location specified herein.

FIGURE 1. Design, dimensions, and circuit diagrams - Continued.

MS25469E

REQUIREMENTS:

Design, dimensions, and circuit diagrams: See figure 1.

Part or Identifying Number (PIN) and general characteristics: See table 1.

Contact data:

Load ratings: See table II.

Maximum contact drop, initial: 0.150 V.

After life test: 0.175 V.

Overload current: 20 amperes.

Rupture current: 25 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):

	Initial	After life tests
Coil to case:	1,000 V rms	1,000 V rms
Aux. contacts:		
All other points:	1,000 V rms	1,000 V rms

Dielectric strength (80,000 ft):

Coil to case:	250 V rms
Aux. contacts:	
All other points:	250 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.

Maximum duration contact opening: 10 μs.

Vibration, sinusoidal: .06 DA, 5 Hz to 60 Hz, 10 g's, 60 Hz to 1,500 Hz.

Acceleration: 15 g's.

PIN: MS25469- (plus applicable dash number from table I).

MS25469E

(E) TABLE I. PIN and general characteristics. 1/

PIN MS25469-	Type	Coil	Terminal type	Mounting or mating socket	Auxiliary contacts	Max weight in pounds
D1	I	dc	Solder hook	Stud	None	0.37
A1 2/	I	ac	Solder hook	Stud	None	0.38

1/ MS25469-AD1 is cancelled without replacement.

2/ MS25469-A1 is inactive for new design without replacement 30 Sep 1987.

(E) 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				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	5	5			5	4							
Inductive	100													
Inductive	20	3	3			3	2							
Motor	100	1.5	1.5			1.5	1							
Lamp	100	0.8	0.8			0.8	0.6							
Transfer load														2/
Mechanical life reduced current	400	1.25	1.25			1.25	1							
Intermediate current		Applicable in accordance with MIL-R-6106												

1/ Absence of value indicates that relay is not rated for three phase applications.

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

MS25469E

TABLE III. Operating characteristics.

TABLE 1.1. 22																
PIN MS25669-	Coil data										Time (milliseconds maximum)					
	Coil	Rated		Max		Max pick-up			Operate 3/	Release 5/	Contact bounce					
		Volts 1/	Freq. Hz	Res Ω	Volts A	Nor- mal 2/	High temp test	Cont cur- rent test			Main			Aux		
											NO	NC	NO			
															NC	NO
D1	X1,X2 Y1,Y2	28	dc		29	0.17	18	18	19.8	25	N/A	2	2			
A1 6/	X1,X2 Y1,Y2	115	400 5/		122	0.07	90	90	95	25	N/A	2	2			

Excessive voltage will compromise the operation of the relay.

- 1/ CAUTION: Use of any coil voltage less than rated coil voltage will compromise
2/ Over the temperature range.
3/ With rated coil voltage.
4/ From rated coil voltage.
5/ MS25469-A1 may be used on 60 Hz if maximum ambient temperature is limited to +85°C. Maximum coil current shall be 0.077 ampere.
6/ MS25469-A1 is inactive for new design without replacement effective 30 September 1987.

MS25469E

Quality conformance inspection: Performance of groups B and C tests is not applicable to MS25469-A1.

CONCLUDING MATERIAL

Custodians:

Navy - AS
Air Force - 85

Review activities:

Navy - EC
Air Force - 17, 99
DLA - ES

Preparing activity:

Air Force - 85

Agent:

DLA - ES

(Project 5945-F742-03)