

INCH-POUND

MS25323L

21 September 94

SUPERSEDING

MS25323K

20 January 1989

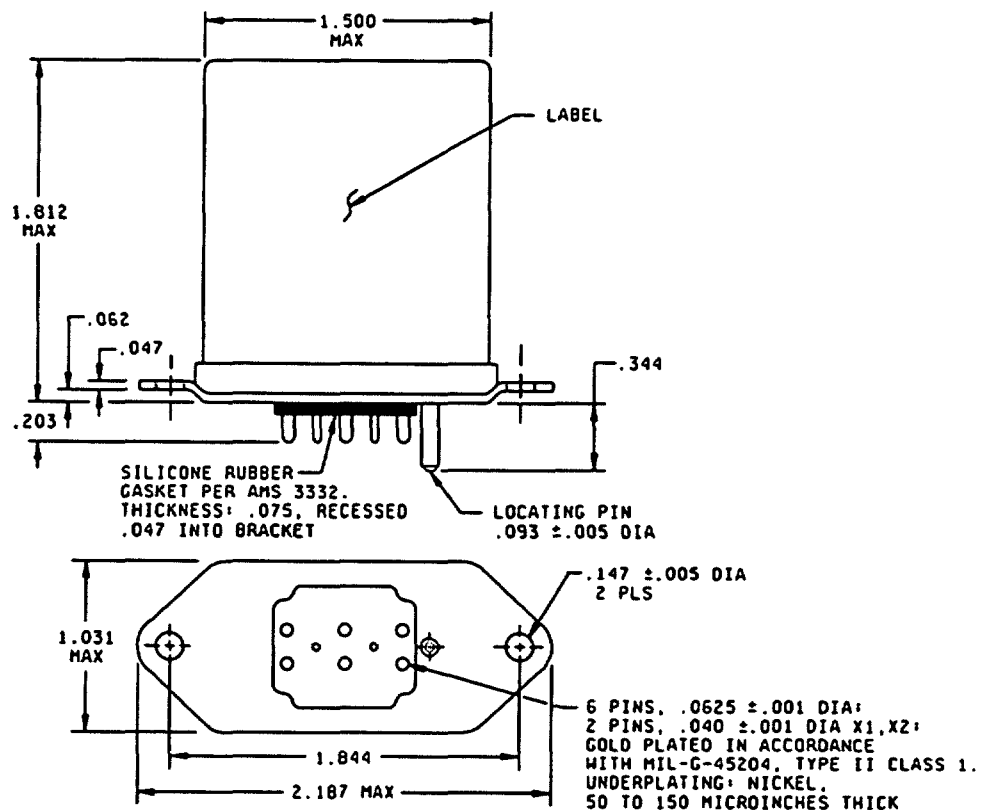
## MILITARY SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2 PDT,  
TYPE I, SOCKET MOUNTED, HERMETICALLY SEALED

Inactive for new design after 5 June 1987.  
For new designs use MS27401.

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.



① FIGURE 1. Dimensions and configuration.

① denotes changes

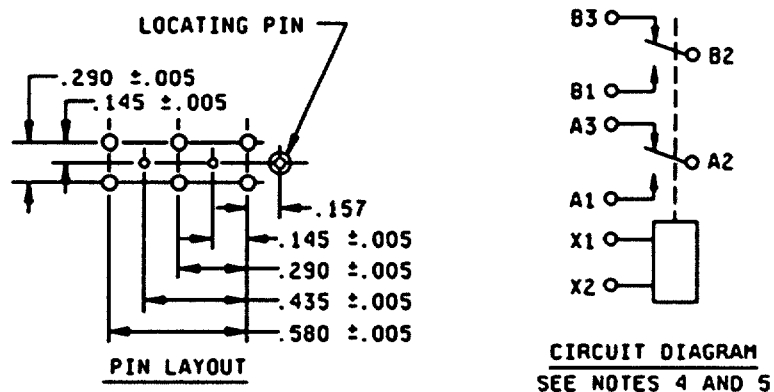
AMSC N/A

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FSC 5945

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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Inches	mm	Inches	mm	Inches	mm
.0010	0.025	.093	2.36	.435	11.05
.001	0.03	.145	3.68	.580	14.73
.005	0.13	.147	3.73	1.031	26.19
.040	1.02	.157	3.99	1.500	38.10
.047	1.19	.203	5.16	1.812	46.02
.062	1.57	.290	7.37	1.844	46.84
.0625	1.588	.344	8.74	2.187	55.55
.075	1.91				

## 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. There shall be affixed to the relay a legible circuit diagram that permanently and positively identifies each terminal location specified.
5. The use of diodes on ac relays is optional. The actual application must be shown on label.
6. Pins shall be perpendicular to the header surface within one degree.
7. In the event of conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.
8. 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 standard to the extent specified herein.

FIGURE 1. Dimensions and configuration - Continued.

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## REQUIREMENTS:

Dimensions and configuration: 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 (NO): 40 amperes dc; 60 amperes ac.

Rupture current (NO): 50 amperes dc; 80 amperes ac.

Coil data: See table III.

Duty ratings: 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, 2-5 seconds:

		Initial	After life tests
Ⓐ	Coil to case:	1,000 V rms	750 V rms
	Aux. contacts:	N/A	N/A
Ⓐ	All other points:	1,000 V rms	750 V rms
	Dielectric strength (altitude) (80,000 ft.)		
Ⓐ	Coil to case:	250 V rms	N/A
Ⓐ	Aux. contacts:	N/A	N/A
Ⓐ	All other points:	250 V rms	N/A

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## Environmental characteristics:

Temperature range: -70°C to +125°C.

Maximum altitude rating: 80,000 feet.

Shock, g-level: 50 g's.

Ⓛ Duration: 6 ms.

Ⓛ Maximum duration contact opening: 100  $\mu$ s.

Vibration, sinusoidal:

G-level: 10 g's.

Frequency range: 5-1500 Hz.

Acceleration: 15 g's.

Terminal strength (high temperature pull and torque test): Not applicable.

Part or Identifying Number (PIN): MS25323- (plus applicable dash number from table I).

Ⓛ TABLE I. Dash numbers and general characteristics.

PIN MS25323-	Type	Coil type	Terminal type	Max weight (pounds)
D2	1	dc	Plug in	0.30
A2	1	ac	Plug in	0.32
A3	1	ac	Plug in	0.32

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Ⓛ TABLE II. Rated contact load (amperes per pole) (case grounded). 1/

Type of load	Life operating cycles  x 10 <sup>3</sup>	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase				2/ 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	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														3/
Mechanical life reduced current	400	2.5	2.5			2.5	2			2.5	2			
Intermediate current	Applicable in accordance with MIL-R-6106													

1/ Absence of value indicates parameter is not applicable to this specification sheet.

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

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

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TABLE III. Operating characteristics.

PIN MS25323-		Coil data										Time (milliseconds maximum)						
		Coil		Rated			Max		Max pick-up			Hold voltage 2/	Drop-out voltage 2/	Operate 3/	Re-lease 4/	Contact bounce		
				Volts 1/	Freq. Hz	Res Ω	Volts A	Nor-mal 2/	High temp test	Cont current test	Main NO NC					AUX 6/ NO NC	3/	
D2		X1,X2	28	dc	N/A	29	0.20	18	19.8	22.5	7.0	1.5	20	20	2	2		
A2		X1,X2	115	400 5/	N/A	122	0.07	90	95	103	35	5.0	25	50	2	2		
A3		X1,X2	115	50/60	N/A	122	0.10	90	95	103	35	5.0	25	50	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/ MS25323-A2 may be used on 60 Hz if maximum ambient temperature is limited to +85°C.  
 6/ Absence of value indicates parameter is not applicable.

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Quality conformance inspection:

- ① Group B and group C testing are not required. In the event of a change in the design or construction of the part, the manufacturer shall notify the qualifying activity and shall impose additional testing requirements as necessary.

Group A acceptance reports shall be submitted to the preparing activity on a yearly basis in order to retain qualification for this military standard sheet.

CONCLUDING MATERIAL

Custodians:  
Navy - AS  
Air Force - 85

Preparing activity:  
Air Force - 85

Agent:  
DLA - ES

(Project 5945-0925)