

INCH-POUND

MS25032K  
 6 February 1996  
 SUPERSEDING  
 MS25032J  
 28 September 1990

## MILITARY SPECIFICATION SHEET

(K) RELAY, ELECTROMAGNETIC, 200 AMPERES, 2 PDT,  
 (N.O.) TYPE II, NONHERMETICALLY SEALED,  
 MECHANICALLY INTERLOCKED

(K)

INACTIVE FOR NEW  
 DESIGN AFTER 28 SEPTEMBER  
 1990. NO SUPERSEDING  
 STANDARD.

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.

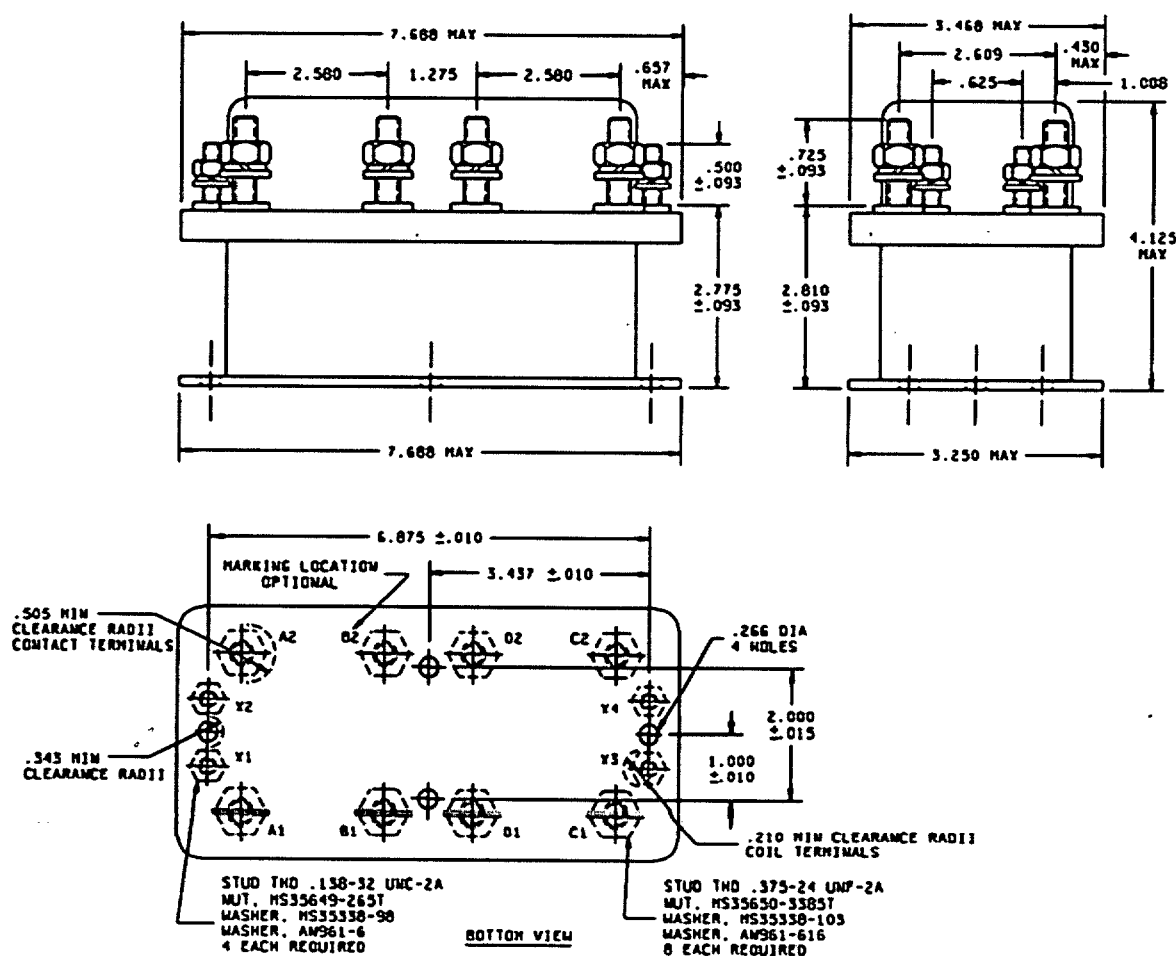


FIGURE 1. Dimensions and configurations.

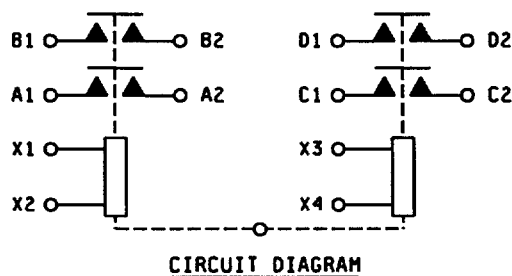
(K) denotes changes  
 1 of 6

AMSC N/A

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

FSC 5945

## MS25032K



Inches	mm	Inches	mm	Inches	mm
.010	0.25	.505	12.83	2.827	71.81
.093	2.36	.531	13.49	2.905	73.79
.138	3.51	.625	15.88	3.250	82.55
.210	5.33	.657	16.69	3.437	87.30
.266	6.76	1.000	25.40	3.468	88.09
.343	8.71	1.008	25.60	4.125	104.77
.375	9.52	1.156	29.36	6.875	174.63
.430	10.92	2.000	50.80	7.688	195.28
.500	12.70	2.609	66.27		

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.032$  (0.81 mm).
4. An additional flat washer may be used for terminal seating.
5. In the event of a conflict between the text of this specification and the references cited herein, 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 form a part of this document to the extent specified herein.
7. Terminal numbers shall not appear on the relay header. There shall be affixed to the relay a legible circuit diagram that identifies each terminal location.
8. Mechanical linkage shall be provided to prevent both relays from being closed at the same time.

FIGURE 1. Dimensions and configuration - Continued.

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## REQUIREMENTS:

Dimensions and configuration: See figure 1.

Dash number 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): 1,600 amperes.

Rupture current (NO): 2,000 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, 2-5 seconds:

	Initial		After life tests	
	28 V dc	115 V ac	28 V dc	115 V ac
Coil to case:	1.250	N/A	1.000	N/A
Aux. contacts:	1.250	N/A	1.000	N/A
All other points:	1.250	1.500	1.000	1.125

Altitude, 1 minute.

	28 V dc	115 V ac
Coil to case:	500	N/A
Aux. contacts:	500	N/A
All other points:	500	500

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## Environmental characteristics:

Temperature range: -55°C to +71°C.

Maximum altitude rating: 50,000 feet.

Shock, g-level: 25 g's.

Duration: 6-9 ms.

Maximum duration contact opening: 2 ms.

Vibration, sinusoidal: See table IV.

Acceleration: 10 g's.

Part or Identifying Number (PIN): MS25032-D1.

TABLE I. Dash number and general characteristics.

PIN MS25032-	Type	Coil	Terminal type	Mounting means	Maximum weight (pounds)
D1	II	dc	Stud	Plate	5.5

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

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 1/			
		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	50	200				150							
Inductive	10	100											
Motor	50	150				100							
Lamp													
Transfer load 2/													
Mechanical life (reduced current)	100	50											
Intermediate current		See MIL-R-6106											

1/ Absence of value indicates that the relay is not rated for 3 phase applications.

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

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(K) TABLE III. Operating characteristics.

PIN MS25032-	Coil data											Time - (milliseconds maximum)			
	Coil	Rated		Max		Max pick-up voltage			Hold voltage 2/	Drop-out voltage 2/	Operate 3/	Release 4/	Bounce		
		Volts 1/	Freq. (Hz)	Res (Ω)	Volts	Ampere	Normal 2/	High temp test					Cont current test	Main	Aux
X1,X2 Y1,Y2	28	dc	41	29	.80	18	21	22.5	7.0	1.5	40	15	5.0		

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.

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TABLE IV. Vibration (sinusoidal).

PIN MS25032-	Vibration level				
	5-10 Hz	10-55 Hz	55-250 Hz	250-500 Hz	500-1500 Hz
D1	.08 DA	.06 DA	2 g's	2 g's	N/A

- (K) Quality assurance provisions: Group B and group C testing are not required. The manufacturer shall notify the qualifying activity in the event of any design or construction changes, and shall impose additional testing requirements as necessary.
- (K) The Qualified Products List (QPL) associated with this inactive for new design specification will be maintained until acquisition of the product is no longer required, whereupon the specification and the QPL will be canceled.

## CONCLUDING MATERIAL

Custodians:  
Navy - AS  
Air Force - 85

Preparing activity:  
Air Force - 85

Agent:  
DLA - ES

(Project 5945-0971-02)