

INCH-POUND

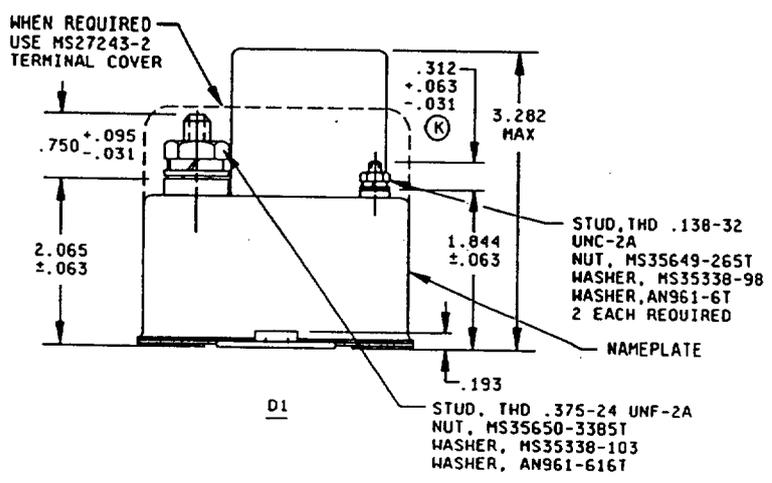
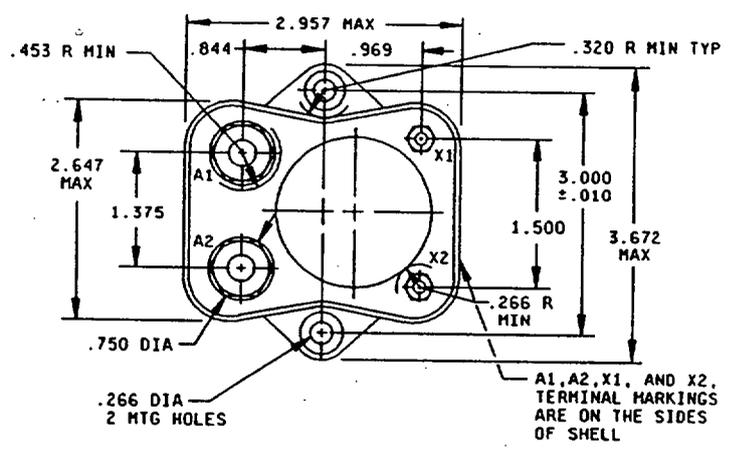
MS24183K
 10 Nov 1993
 SUPERSEDING
 MS24183J
 20 February 1990

MILITARY SPECIFICATION SHEET

RELAY, ELECTROMAGNETIC, 200 AMPERES,
 1PST (NO), TYPE I, HERMETICALLY SEALED

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

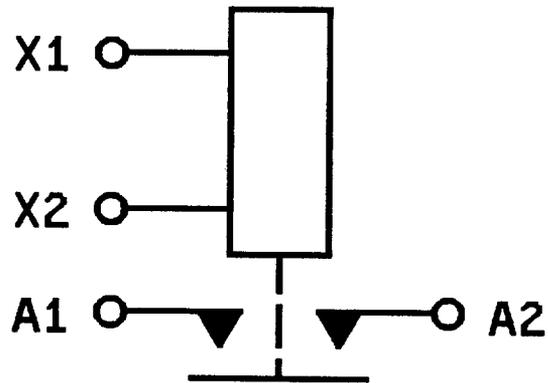
The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-R-6106.



(K) FIGURE 1. Dimensions and configuration.

(K) denotes changes

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CIRCUIT D1

Inches	mm	Inches	mm
.010	0.25	.969	24.56
.031	0.79	1.375	34.93
.063	1.60	1.500	38.10
.095	2.41	1.844	46.84
.193	4.90	2.065	52.45
.266	6.76	2.647	67.25
.312	7.92	2.957	75.11
.320	8.13	3.000	76.20
.453	11.51	3.282	83.36
.750	19.05	3.672	93.27
.844	21.44		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.031 .
4. This specification sheet takes precedence over documents referenced herein. Referenced documents shall be of the issue in effect on date of invitation for bid.
5. Coil and auxiliary terminals may use additional flat washer for terminal seat.

FIGURE 1. Dimensions and configurations - Continued.

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REQUIREMENTS:

Dimensions and configurations: See figure 1.

PIN's and general characteristics: See table I.

Contact data:

Load ratings: See table II.

Maximum contact drop:

Initial: 0.150 volt.

After life test: 0.175 volt.

Overload current (NO): 1,600 amperes.

Rupture current (NO): 2,000 amperes.

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): 2-5 seconds.

	Initial		After life tests	
	28 V dc	115 V ac	28 V dc	115 V ac
Coil to case	1,250 V rms	1,500 V rms	1,000 V rms	1,125 V rms
All other points	1,250 V rms	1,500 V rms	1,000 V rms	1,125 V rms

Dielectric strength (altitude): 1 minute.

	28 V dc	115 V ac
	Coil to case	500 V rms
All other points	500 V rms	500 V rms

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ENVIRONMENTAL CHARACTERISTICS:

Temperature range : -70°C to +71°C.

Maximum altitude rating: 80,000 ft.

Shock G-level: 25 g's.

Duration: 6-9 ms.

Max duration contact opening: 2 ms.

Vibration (sinusoidal): See table IV.

Vibration (random) and high shock: Not applicable.

Acceleration: 15 g's.

Qualification by similarity: Not applicable.

Part or Identifying Number (PIN): MS24183-D1.

TABLE I. PIN's and general characteristics. 1/

PIN MS24183-	Type	Coil	Terminal type	Mounting or mating socket	Auxiliary contacts	Maximum weight (pounds) <u>2/</u>
D1	I	dc	Stud	Flange	None	1.7

- (K) 1/ A1 and A2 have been canceled without replacement. D2 has been superseded by MS24142-D2.
2/ Weights include covers and barriers.

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

Type of load	Life operating cycles x 10 ³	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase ^{2/}			
		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					200						
Inductive	10	100											
Motor	50	200					150						
Mechanical life reduced current	100	50					50						
Inter-mediate current	50	20	Applicable per MIL-R-6106				10						

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

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

(K) TABLE III. Operating characteristics.

PIN	Coil	Coil data										Time (milliseconds maximum) ^{1/}						
		Rated			Max		Max pick-up voltage			Hold voltage ^{1/}	Drop out voltage ^{1/}	Operate ^{3/}	Release ^{4/}	Contact bounce ^{5/}				
		Volts ^{2/}	Freq. Hz	Ω Res. +15% -10%	Volts	Am-peres	Normal ^{1/}	High temp test	Cont current test					Main	Aux	NO	NC	NO
D1	X1,X2	28	dc	64.5	29	.55	18	21	22.5	7	1.0	30	10	4				

1/ Over the temperature range.

2/ CAUTION: Use of any coil voltage less than rated coil voltage will compromise the operation of the relay.

3/ With rated coil voltage.

4/ From rated coil voltage.

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

(K) TABLE IV. Vibration Levels.

PIN	5-10 Hz	10-55 Hz	55-250 Hz	250-500 Hz	500-1,500 Hz
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D1	.08 DA	.06 DA	8 g's	8 g's	5 g's

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CONCLUDING MATERIAL

Custodians:

Navy - AS
Air Force - 85
DLA - ES

Review activities:

Navy - EC
Air Force - 99

Preparing activity:

Air Force - 85

Agent:

DLA - ES

(Project 5945-0912)