

INCH-POUND

MS24183L
 15 April 2003
 SUPERSEDING
 MS24183K
 10 Nov 1993

DETAIL SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 200 AMPERES, 1 PST (N.O.),
 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 relay described herein shall
 consist of this specification and the latest issue of MIL-PRF-6106.

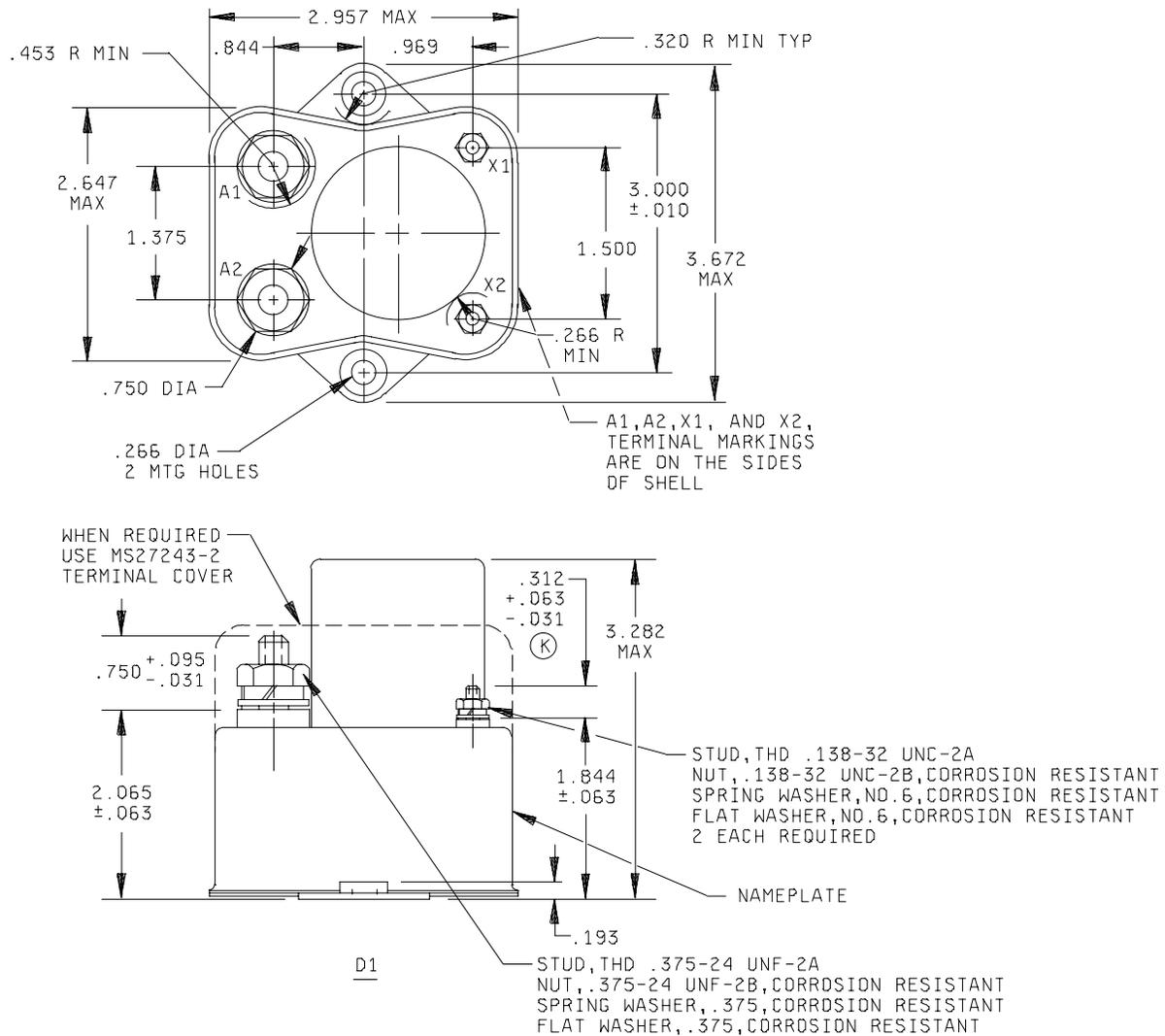
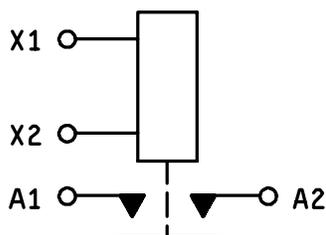


FIGURE 1. Dimensions and configurations.

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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 $\pm .031$.
4. 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.
5. Coil and auxiliary terminals may use an additional flat washer for terminal seat.
6. Cadmium or cadmium compounds are prohibited on external hardware. A transition period to non-cadmium hardware is authorized for up to 1 year from the date of this revision.
7. Spring washer on drawing is a spring lock washer.

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
All other points	1,250 V rms	1,500 V rms	1,000 V rms	1,125

Dielectric strength (altitude): 1 minute.

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

Environmental characteristics:

Temperature range: -70°C to + 71°C.

Max altitude rating: 80,000 feet.

Shock, g-level: 25 g's.

Duration: 6-9 ms.

Maximum duration contact opening: 2 ms.

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Vibration, (sinusoidal): See table IV.

Vibration (random) and high shock: Not applicable.

Acceleration: 15 g's.

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

1/ A1 and A2 have been canceled without replacement. D2 has been superseded by MS24142-D2.

2/ Weights include covers and barriers.

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

Type of load	Life operat ing cycles x 10 ³	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase <u>2/</u>			
		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							
Mixed loads	50	20	Applicable per MIL-PRF-6106			10							

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

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

TABLE III. Operating characteristics.

PIN MS 24183-	Coil data										Time - milliseconds max <u>1/</u>						
	Coil	Rated			Max		Max pick-up voltage			Hold vol- tage <u>1/</u>	Drop out vol- tage <u>1/</u>	Oper- ate <u>3/</u>	Rel- ease <u>4/</u>	Contact Bounce <u>5/</u>			
		Volts <u>2/</u>	Freq Hz	Ω Res +15% -10	Volts	Amp	Nor- mal <u>1/</u>	High temp test	Cont cur- rent test					Main		Aux <u>5/</u>	
														NO	NC	NO	NC
D1	X1,X2	28	dc	64.5	29	.55	18	21	22.5	7.0	1.0	30	10	4.0	---	---	---

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.

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TABLE IV. Vibration levels.

Part number	5-10 Hz	10-55 Hz	55-250 Hz	250-500 Hz	500-1,500 Hz
MS24183-D1	.08 DA	.06 DA	8 g's	8 g's	5 g's

Qualification by similarity: See MIL-PRF-6106.

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

For government logistical purposes, use MS24183-D1 in lieu of the MS25033-1.

Custodians:
Navy - AS
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC
(Project 5945-1206-16)

Review activities:
Navy - EC