

INCH-POUND

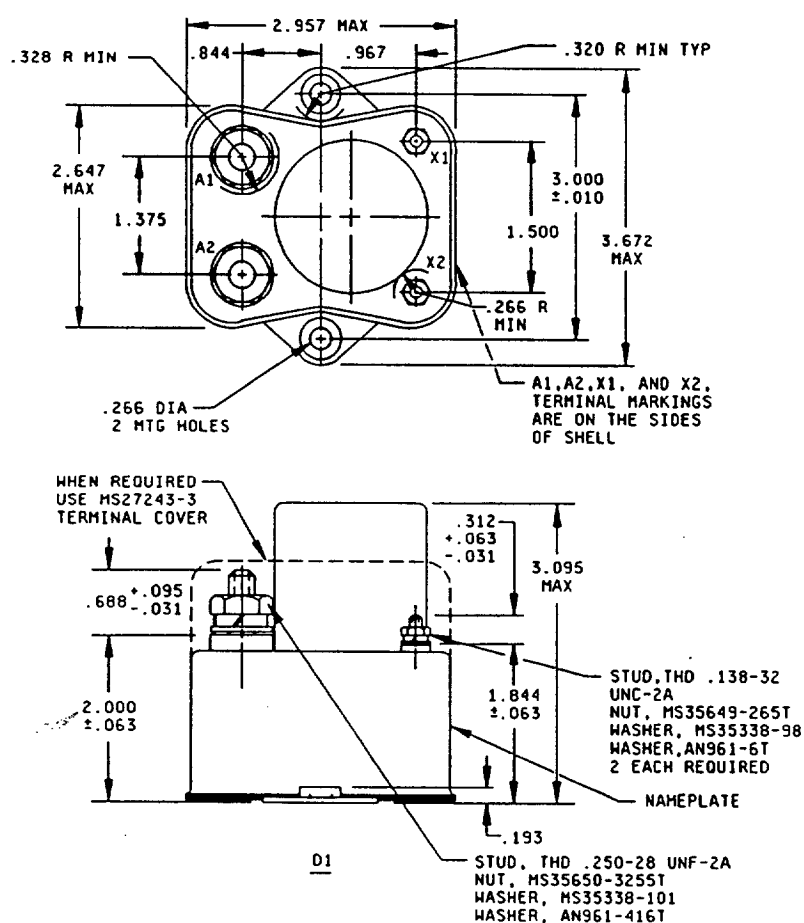
MS24182K
10 Jan 94
SUPERSEDING
MS24182J
20 February 1990

MILITARY SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 100 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.

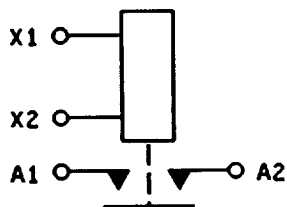
The requirements for acquiring the product described herein shall consist
of this specification sheet and the issue of the following specification
listed in that issue of the Department of Defense Index of Specifications
and Standards (DODISS) specified in the solicitation: MIL-R-6106.



(K) FIGURE 1. Dimensions and configuration.

(K) denotes changes

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CIRCUIT DIAGRAM

Inches	mm	Inches	mm	Inches	mm
.010	0.25	.312	7.92	1.500	38.10
.031	0.79	.320	8.13	1.844	46.84
.063	1.60	.328	8.33	2.000	50.80
.094	2.39	.625	15.88	2.647	67.23
.095	2.41	.688	17.48	2.957	75.11
.138	3.51	.844	21.44	3.000	76.20
.218	5.54	.967	24.56	3.095	78.61
.240	6.10	1.375	34.93	3.672	93.27
.250	6.35	1.440	36.58	4.252	108.00
.266	6.76				

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.031 (0.79 mm).
4. This specification sheet takes precedence over documents referenced herein.
5. Referenced documents shall be of the issue in effect on date of invitation for bid.
6. Coil and auxiliary terminals may use an additional flat washer for terminal seat.

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): 800 amperes.

Rupture current (NO): 1,000 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 V rms	1,500	1,000 V rms	1,125
(K) Aux. contacts:	N/A	N/A	N/A	N/A
All other points:	1,250 V rms	1,500	1,000 V rms	1,125

Altitude, 1 minute:

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

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Environmental characteristics:

Temperature range: -70°C to +71°C.

Maximum altitude rating: 80,000 feet.

Shock, g-level: 25 g's.

Duration: 6-9 ms.

Maximum duration contact opening: 2 ms.

Vibration, sinusoidal: See table IV.

Acceleration: 15 g's.

Part or Identifying Number (PIN): MS24182-D1.

(K) TABLE I. Dash number and general characteristics. ^{1/}

PIN MS24182-	Type	Coil	Terminal type	Mounting or mating socket	Auxiliary contacts	Max weight (pounds) ^{2/}
D1	I	dc	Stud	Flange	None	1.15

^{1/} Dash numbers A1, A2, and D2 have been cancelled without replacement.

^{2/} Weight includes covers and barriers.

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

Type of load	Life operating cycles $\times 10^3$	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase ^{2/}			
		Main		(K) Aux		Main		(K) 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	100				100							
Inductive	10	100											
Motor	50	100				75							
Lamp	50	50				50							
^{3/} Transfer load													
Mechanical life reduced current	100	25											
Intermediate current	50	10				10							

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

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

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

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(K) TABLE III. Operating characteristics.

PIN	Coil data											Time (milliseconds maximum)					
	Coil	Rated		Res Ω +15% -10%	Max		Max pick-up voltage		Hold volt- age 1/	Drop- out volt- age 1/	Oper- ate 3/	Re- lease 4/	Contact bounce		NO	NC	
		Volts 2/	Freq. Hz		Volts	A	Nor- mal 1/	High temp test					Cont cur- rent test	Main			Aux 5/
D1	X1,X2	28	dc	78	.5	29	18	21	22.5	7.0	1.5	20	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.

(K) TABLE IV. Vibration Levels.

PIN MS24182-	5-10 Hz	10-55 Hz	55-250 Hz	250-500 Hz	500-700 Hz	700-900 Hz	900-1,500 Hz
D1	.08 DA	.06 DA	8 g's	8 g's	5 g's	4 g's	5 g's

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CONCLUDING MATERIAL

Custodians:

Navy - AS

Air Force - 85

Preparing activity:

Air Force - 85

Agent:

DLA - ES

(Project 5945-0923)