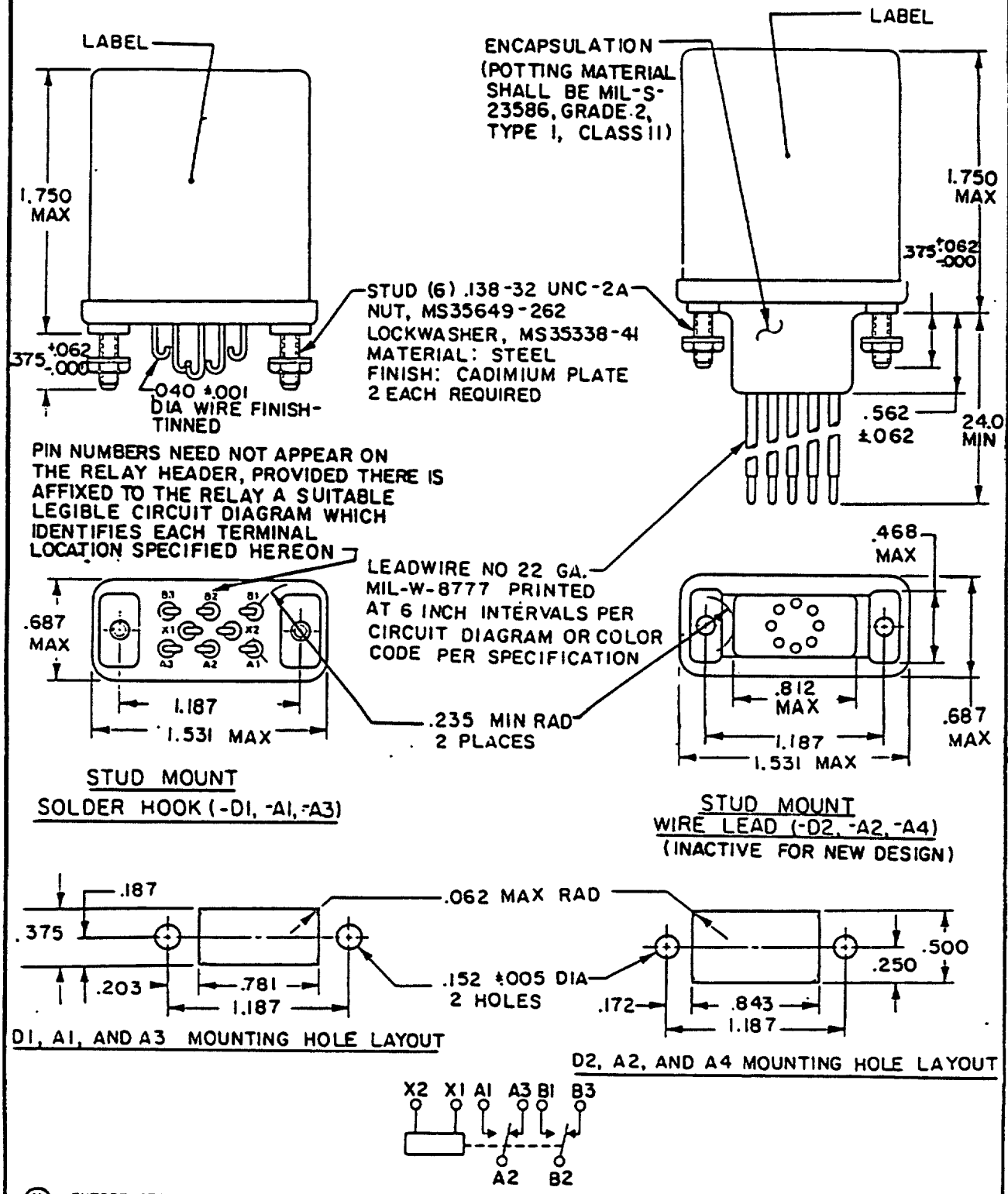
FED. SUP CLASS
5945



(H) ENTIRE STANDARD REVISED

P.A AF - 85 Other Cust Navy - AS	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 2 POT, 5 AMPERES, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD MS25395
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 1 OF 5

DD FORM 1 MAY 73 672 (Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE. 5945-0745-14

AMSC N/A

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

User activities: Army - Navy - Air Force -

Review activities: Army - Navy - Air Force - EC 11, 99

APPROVED 12 May 1959 REVISED (H) 5 JUN 87

Inches	mm	Inches	mm
.001	0.03	.468	11.89
.005	0.13	.500	12.70
.040	1.02	.562	14.27
.062	1.57	.687	17.45
.152	3.86	.781	19.84
.172	4.37	.812	20.62
.187	4.75	.843	21.41
.203	5.16	1.187	30.15
.235	5.97	1.531	38.89
.250	6.35	1.750	44.45
.375	9.53	24.0	610.

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.010 (0.25 mm).
4. In the event of a conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.
5. 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.
6. The use of diodes on ac relays is optional. Actual application must be shown on label (dash numbers -D2, -A2, and -A4 are inactive for new design).

TABLE I. Dash numbers and characteristics.

Dash number MS25395-	Type	Coil	Terminal type	Mounting or mating socket	Max weight in pounds
D1	I	dc	Solder hook	Stud	0.15
D2 1/	I	dc	Potted lead	Stud	0.26
A1	I	ac	Solder hook	Stud	0.17
A2 1/	I	ac	Potted lead	Stud	0.28
A3	I	ac	Solder hook	Stud	0.17
A4 1/	I	ac	Potted lead	Stud	0.25

1/ Dash numbers -D2, -A2, and -A4 are inactive for new design and for support of existing systems only.

APPROVED 12 May 59 REVISED (H) ENTIRE STANDARD REVISED.

Review activities: Army - Navy - EC Air Force - 11, 99

User activities: Army - Navy - Air Force -

TABLE II. Operating characteristics.

MS part no. MS25395-		Coil data												Time - (milliseconds maximum)					
		Coil	Nominal			Max		Max pick-up voltage			Drop-out voltage 2/	Hold voltage 2/	Operate 3/	Release 4/	Contact bounce			
			Volts 1/	Freq. Hz	Res Ω ±10%	Volts	Amperes	Normal 2/	High temp test	Cont current test					Main		Aux	
															NO	NC	NO	NC
D1	D2 5/	X1, X2	28	dc	248	29	0.15	18	19.8	22.5	1.5	7.0	20	20	2	2		
A1	A2 5/	X1, X2	115	400	N/A	122	0.06	90	95	103	5.0	35	25	50	2	2		
A3	A4 5/	X1, X2	115	50/60	N/A	122	0.07	90	95	103	5.0	35	25	50	2	2		

1/ CAUTION: Use of any coil voltage less than nominal coil voltage will compromise the operation of the relay.
2/ Over the temperature range.
3/ With nominal coil voltage.
4/ From nominal coil voltage.
5/ Dash numbers -D2, -A2, and -A4 are inactive for new design.

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

Type of load	Life operating cycles X 10^3	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase 1/				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	5	5			5	4							
Inductive	100													
Inductive	20	3	3			3	2							
Motor	100	1.5	1.5			1.5	1							
Lamp	100	0.8	0.8			0.8	0.6							
Transfer load														2/
Mechanical life reduced current	400	1.25	1.25			1.25	1							
Intmd current	Applicable per specification													

1/ Absence of value indicates relay is not rated for 3-phase applications.
2/ Transfer load indicates relay suitable for transfer between unsynchronized ac power supplies at rating indicated.

Review activities: Army - Navy - EC Air Force - 11, 99

User activities: Army - Navy - Air Force -

Environmental characteristics

Temperature range	-70°C to +125°C
Max altitude rating	80,000 ft
Shock G-level	50 G
Duration	11 ms
Max duration contact opening	10 µs
Vibration - sinusoidal	
G-level	10 G
Frequency range	5 - 1500 Hz
Acceleration	15 G

Electrical characteristics

Insulation resistance	100 megohms
After life or environmental tests	50 megohms

Dielectric strength (sea level

	Initial	After life tests
Coil to case	1,000 V rms	1,000 V rms
Aux contacts		
All other points	1,500 V rms	1,125 V rms

Dielectric strength (altitude) D2-A2

	80,000 ft	80,000 ft
Coil to case	250 V rms	1,000 V rms
Aux contacts		
All other points	250 V rms	250 V rms

Max contact drop initial	0.150 volt
After life test	0.175 volt
Overload current	20 amperes
Rupture current	25 amperes
Duty rating	Continuous
RFI specification	MIL-STD-461

(Applicable to coil circuits of ac operated relays)

Quality conformance inspection

Performance of groups B and C testing not applicable to dash numbers -D2, -A2, and -A4.

P.A AF - 85
Other Cust Navy - AS
Procurement Specification MIL-R-6106
Intermediate interest
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MILITARY STANDARD
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