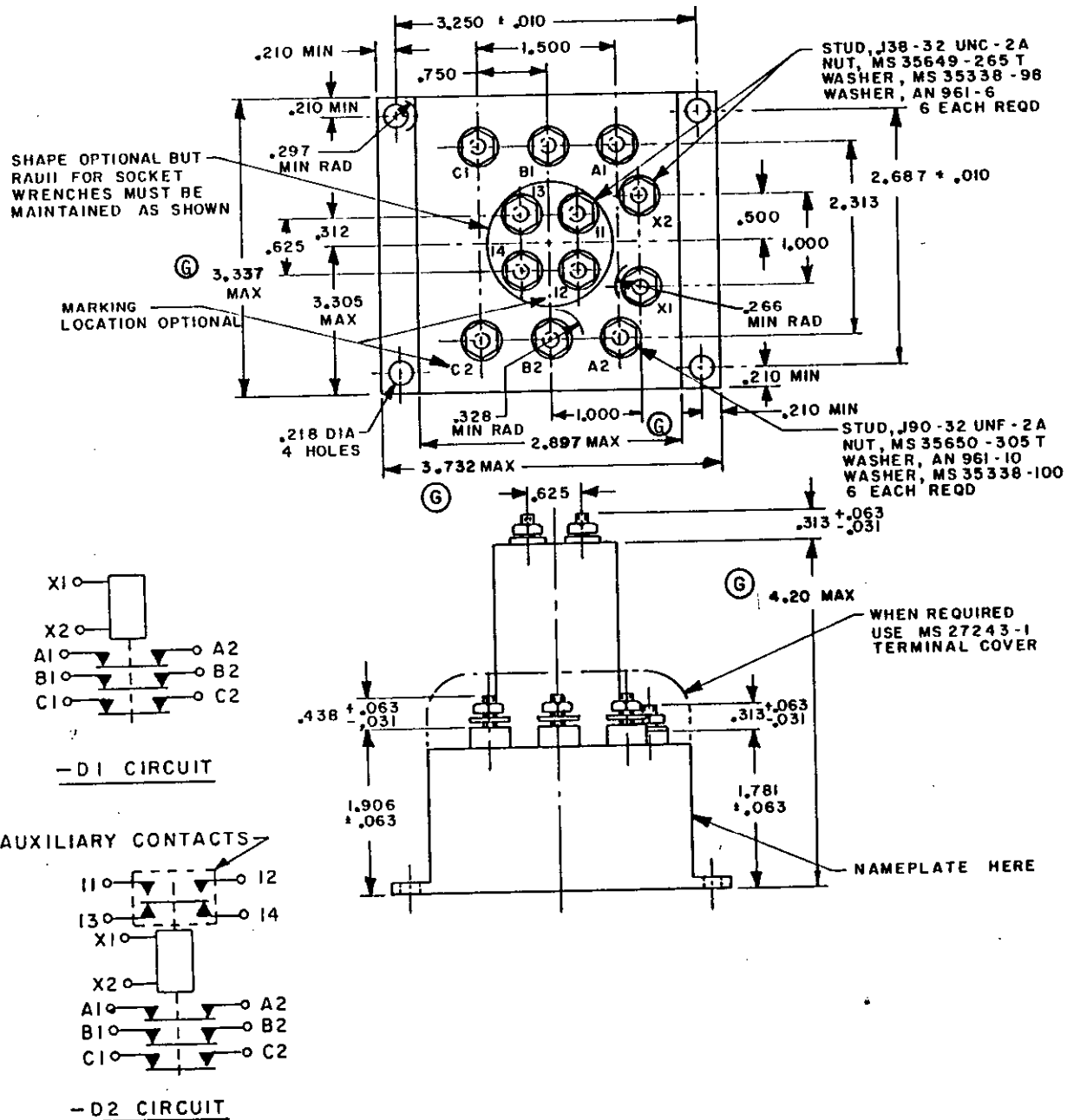


FED. SUP CLASS
5945INACTIVE FOR NEW DESIGN AFTER 5 JUN 87
NO SUPERSEDING STANDARDUser activities: Army -
Navy -
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Navy -
Air Force -

11, 99

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P.A
USAF - 85
Other Cust
Navy - ASInternational
Interest

TITLE

RELAYS, ELECTROMAGNETIC, 3 PST (NO),
12 AMPERES, TYPE I, HERMETICALLY
SEALED

MILITARY STANDARD

MS21330

Procurement Specification
MIL-R-6106

SUPERSEDES:

PAGE 1 OF 5

DD FORM 672
1 MAY 73

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5945-0773-01

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

APPROVED 14 Nov 1960 REVISED 5 JUN 87 6 Jan 1989

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

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.010	0.25	.266	6.76	.625	15.88	2.687	68.25
.031	0.79	.297	7.54	.750	19.05	2.897	73.58
.063	1.60	.312	7.92	1.000	25.40	3.250	82.55
.138	3.51	.313	7.95	1.500	38.10	3.305	83.95
.190	4.83	.328	8.33	1.781	45.24	3.337	84.76
.210	5.33	.438	11.13	1.906	48.41	3.732	94.79
.218	5.54	.500	12.70	2.313	58.75	4.172	105.97
						4.20	106.68

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .031$ (0.79 mm).
4. Coil and auxiliary terminals may use additional washer for terminal seat.
5. 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.
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 standard to the extent specified herein.

TABLE I. Dash numbers and characteristics.

Dash number	Type	Coil	Terminal type	Mounting or mating socket	Auxiliary contacts	Max weight in pounds
MS21330-						
D1	I	dc	Stud	Flange	None	1.6
D2	I	dc	Stud	Flange	Yes	1.6

P.A
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MILITARY STANDARD

MS21330

Procurement Specification
MIL-R-6106

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PAGE 2 OF 5

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APPROVED 14 Nov 1960 REVISED (C) FOR CHANGES SEE PAGES 1 AND 5

User activities: Army -
Navy -
Air Force -

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

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TABLE II. Operating characteristics.

	Coil data										Time (milliseconds maximum)								
MS21330- part or identify- ing number (PIN)	Coil	Nominal		Max	Max pick-up voltage			Hold voltage 2/ 2/	Drop out volt- age 2/ 2/	Operate 3/ 4/	Release			Contact bounce					
		Volts 1/ Hz	Freq Hz		Res +15% -10%	Volts	Amperes				Normal 2/ temp test	High temp test	Cont current test	Main	NO	NC	NO	NC	Aux
D1	X1, X2	28	dc	51	29	.6	18	21	22.5	7.0	1.5	25	10	2					
D2	X1, X2	28	dc	51	29	.6	18	21	22.5	7.0	1.5	25	10	2					

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

2/ Over temperature range.

3/ With nominal coil voltage.

4/ From nominal coil voltage.

P.A.
USAF - 85
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TITLE

RELAYS, ELECTROMAGNETIC, 3 PST (NO),
12 AMPERES, TYPE 1, HERMETICALLY
SEALED

MILITARY STANDARD

MS21330

Procurement Specification
MIL-R-6106

SUPERSEDES:

PAGE 3 OF 5

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

User activities: Army -
Navy -
Air Force -

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
Resistive	200 2/	12		1.25	1.25	12		1.25			
Inductive	200 2/	12		.75	.75	12		.75			
Inductive											
Motor	200	6				6				6	
Lamp											
Transfer load											
Mechanical life											3/
Reduced current	200 2/	3		.25	.25	3		.25		3	
Intmd current	200	1.2				1.2				1.2	

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

2/ 100,000 for auxiliary contacts.

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

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5945

P.A. USAF - 85 Other Cust Navy - AS	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 3 PST (NO), 12 AMPERES, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD
Procurement Specification MIL-R-6106		SUPERSEDES:	MS21330
			PAGE 4 OF 5

TABLE IV. Vibration level.

Dash no.	5 - 10 Hz	10 - 55 Hz	55 - 250 Hz	250 - 500 Hz	500 - 1500 Hz
MS21330-					
D1 D2	.08 DA	.06 DA	10 g's	5 g's	4 g's

TABLE V. Qualification by similarity.

Dash no.	Loads						Dynamics <u>1/</u>			Environmental <u>2/</u>		
	Type I			Type I ER			A	X	Y	A	B	C
	A	B	C	D	E	F						
MS21330-												
D1	4						2			4		
D2	4 <u>2/</u>						2			4		

1/ All units must be tested, reference appendix I, MIL-R-6106, construction, internal.

2/ Test unit with auxiliary contacts, reference appendix I, MIL-R-6106, construction, internal.

Environmental characteristics

Temperature range -70°C to +125°C
 Max 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 N/A
 High shock Acceleration 15 g's

Quality conformance inspection

Performance of groups B and C tests are not applicable.

Ⓒ

Group A acceptance reports shall be submitted to the qualifying activity on a yearly basis in order to retain qualification for this military standard sheet.

Electrical characteristics

Minimum insulation resistance, initial 100 megohms
 After life or environmental tests 50 megohms
 Dielectric strength (sea level) 2-5 seconds

	Initial	After life tests
28 V dc	1,250	1,000
115 V ac	1,500	1,125

Coil to case
 Aux contacts
 All other points

	Initial	After life tests
28 V dc	1,250	1,000
115 V ac	1,500	1,125

Dielectric strength (altitude)

	1 minute
28 V dc	500
115 V ac	500

Coil to case
 Aux contacts
 All other points

	1 minute
28 V dc	500
115 V ac	500

Max contact drop initial 0.150 volt
 After life test 0.175 volt
 Overload current (NO) 96 amperes
 Rupture current (NO) 120 amperes
 Duty rating Continuous

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MS21330

Procurement Specification
 MIL-R-6106

SUPERSEDES:

PAGE 5 OF 5