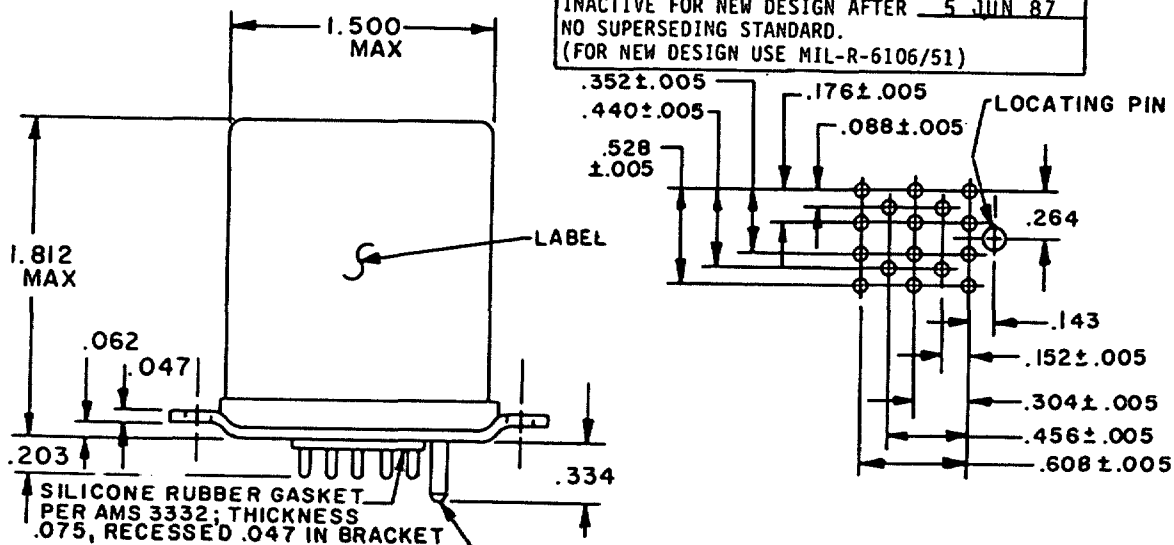


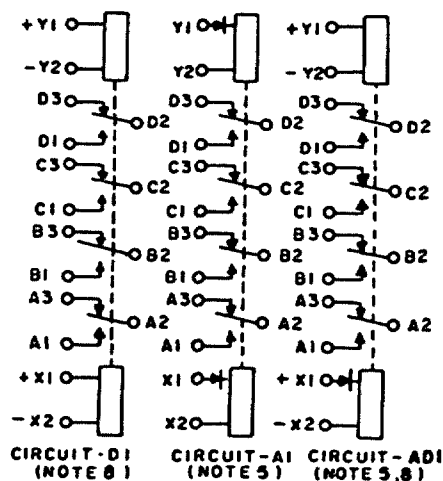
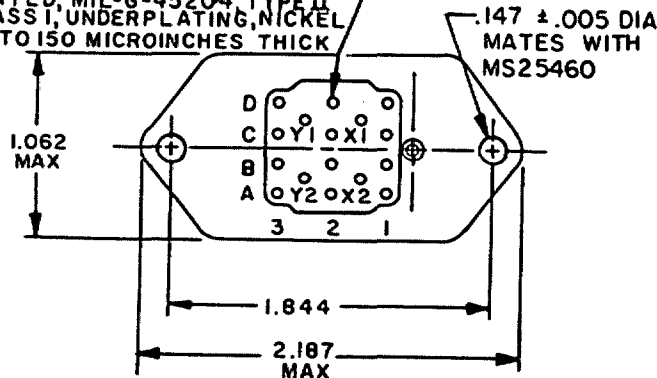
FED. SUP CLASS

5945

INACTIVE FOR NEW DESIGN AFTER 5 JUN 87
NO SUPERSEDING STANDARD.
(FOR NEW DESIGN USE MIL-R-6106/51)



16 PINS, .040 ± .001 DIA, GOLD
PLATED, MIL-G-45204 TYPE II
CLASS I, UNDERPLATING, NICKEL
50 TO 150 MICROINCHES THICK



Inches	mm	Inches	mm
.001	0.03	.264	6.71
.005	0.13	.304	7.72
.040	1.02	.334	8.48
.047	1.19	.352	8.94
.062	1.57	.440	11.18
.075	1.91	.456	11.58
.088	2.24	.528	13.41
.093	2.36	.608	15.44
.143	3.63	1.052	26.97
.147	3.73	1.500	38.10
.152	3.86	1.812	46.02
.176	4.47	1.844	46.84
.203	5.16	2.187	55.55

(F) ENTIRE STANDARD REVISED

P.A. AIR FORCE 85 Other Cust Navy - AS	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 5 AMPERES, 4 PDT, TYPE I, MAGNETIC LATCH, HERMETICALLY SEALED	MILITARY STANDARD MS25459
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 1 OF 5

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MAY 73
AMSC N/A

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5945-0745-17

APPROVED 1 Nov 1960
REVISED (F) 5 JUN 87

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.

User activities: Army -
Navy -
Air Force -

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

User activities: Army -
Navy -
Air Force -

Review activities: Army - EC
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NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ± 0.010 (0.25 mm).
4. Terminal numbers need not appear on relay headers provided there is affixed to the relay a suitable legible circuit diagram that permanently and positively identifies each terminal location specified herein.
5. The use of diodes on ac relays is optional. Actual application must be shown on label.
6. Pins to be perpendicular to header surface within one degree.
7. Shock, vibration, and acceleration requirements application with coils de-energized.
8. Relay is magnetically latched in both positions. Caution note to observe polarity must appear on relays with dc coils.
9. In the event of conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.
10. 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 MS 25459-	Type	Coil	Terminal type	Max weight in pounds
D1	I	dc	Plug in	0.30
A1	I	ac	Plug in	0.32
AD1	I	ac-dc	Plug in	0.32

P.A.
AIR FORCE 85
Other Cust
Navy - AS

International
interest

TITLE
RELAYS, ELECTROMAGNETIC, 5 AMPERES, 4 PDT,
TYPE I, MAGNETIC LATCH, HERMETICALLY SEALED

MILITARY STANDARD

MS25459

Procurement Specification
MIL-R-6106

SUPERSEDES:

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APPROVED 1 Nov 1960
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User activities: Army -
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Air Force -

Review activities: Army - EC
Navy - EC
Air Force - II

P.A.
AIR FORCE 85
Other Cust
NAVY - AS

Procurement Specification
MIL-R-6106

International
Interest

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RELAYS, ELECTROMAGNETIC, 5 AMPERES, 4 PDT,
TYPE I, MAGNETIC LATCH, HERMETICALLY SEALED

SUPERSEDES:

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MS 25459

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TABLE II. Operating characteristics.

MS part no. MS25459-	Coil data										Time - (milliseconds maximum)							
	Coil	Nominal		Max		Max pick-up voltage			Drop-out voltage	Operate 3/ 4/	Contact bounce							
		Volts 1/ Hz	Freq. Hz	Res Ω	Volts	Amperes	Normal 3/ test	High temp test			Cont current test	Release 4/	Contact bounce					
													Main	Aux				
D1	X1, X2 Y1, Y2	28	dc	N/A	29	0.17	18	18	19.8	N/A	25	N/A	2	2				
A1	X1, X2 Y1, Y2	115	400 2/	N/A	122	0.07	90	90	95	N/A	25	N/A	2	2				
AD1	X1, X2 Y1, Y2	115	400 2/	N/A	122	0.07	90	90	95	N/A	25	N/A	2	2				
		28	dc	N/A	29	0.17	18	18	19.8	N/A	25	N/A	2	2				

CAUTION: Use of any coil voltage less than nominal coil voltage will compromise the operation of the relay.
1/ MS25459-A1 and -AD1 may be used on 60 Hz if maximum ambient temperature is limited to +85°C (maximum coil current: 0.077 ampere).
2/ Over the temperature range.
3/ With nominal coil voltage.
4/ From nominal coil voltage.

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Review activities: Army - Navy - EC
Air Force - II

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	Main	Aux	
		NU	NO NC	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.

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P.A.
AIR FORCE 85
Other Cust
NAVY-AS

International
Interest

TITLE

RELAYS, ELECTROMAGNETIC, 5 AMPERES,
4 PDT, TYPE I, MAGNETIC LATCH, HERMETICALLY
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Review activities:

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User activities:

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FED. SUP CLASS
5945

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, initial 100 megohms
After life or environmental tests 50 megohms
Dielectric strength initial (sea level)

	Initial	After life tests
Coil to case	1,000 V rms	1,000 V rms

Aux contacts

	1,000 V rms	1,000 V rms
All other points		

Dielectric strength (Altitude) (When mounted in mating socket)

	80,000 ft	500 V rms
Coil to case		

Aux contacts

	500 V rms
All other points	

Max contact drop initial 0.150 volt

After life test 0.175 volt

Overload current 40 amperes dc,
60 amperes ac

Rupture current 50 amperes dc,
80 amperes ac

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 tests are not applicable.

P.A. AIR FORCE-85 Other Cust NAVY - AS	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 5 AMPERES, 4 PDT, TYPE I, MAGNETIC LATCH, HERMETICALLY SEALED	MILITARY STANDARD MS25459
Procurement Specification MIL - R - 6106	SUPERSEDES:	PAGE 5 OF 5	

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