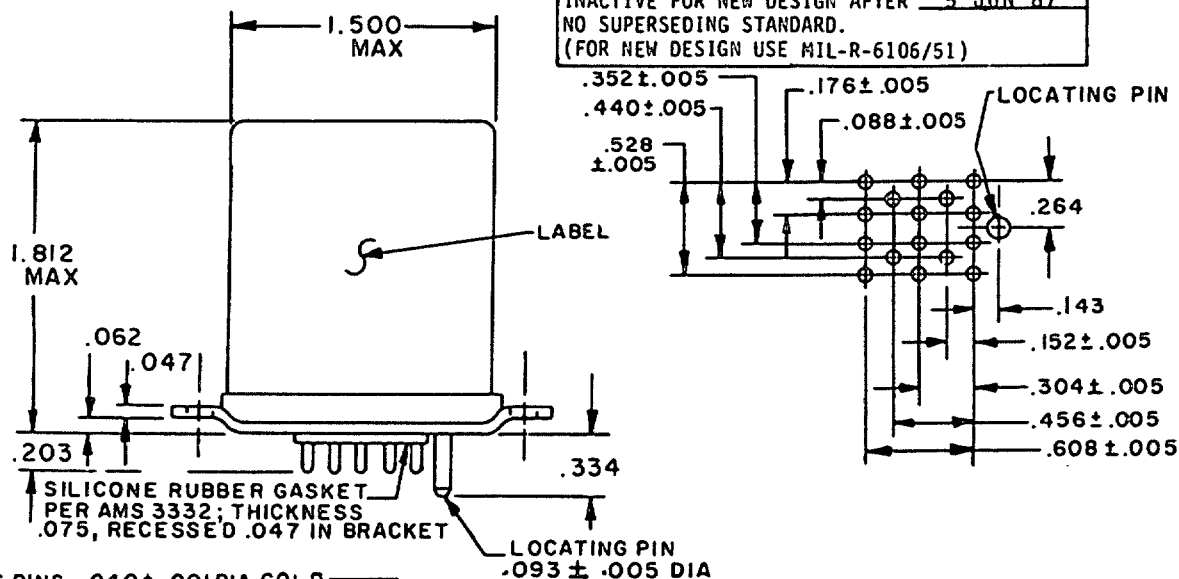


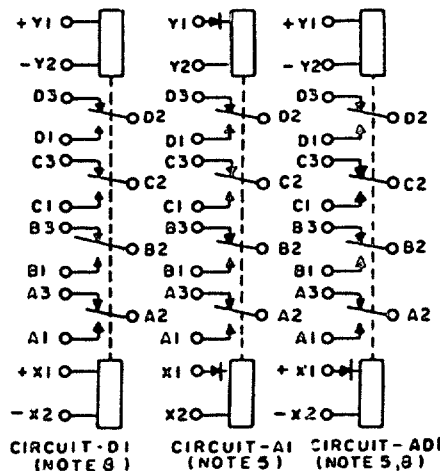
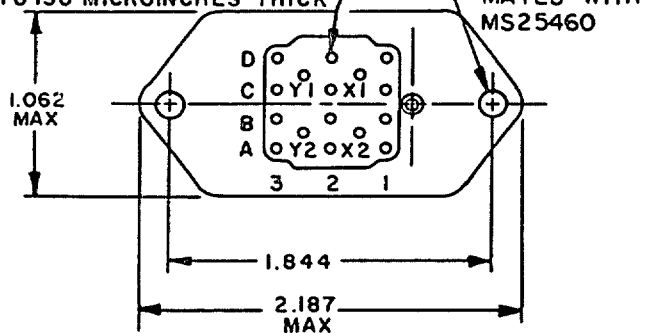
FED. SUP CLASS

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	MIL	Inches	MIL
.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	1.062	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

Ⓔ denotes changes

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

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MAY 73  
AMSC N/A

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5945-0791-03

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

User activities: Army -  
Navy -  
Air Force -

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

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.

REVISED Ⓔ 20 Jan 1989

APPROVED 1 Nov 1960

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User activities: Army -  
Navy -  
Air Force -

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

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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  $\pm 0.010$  (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 1 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

APPROVED 1 Nov 1960 REVISED ⑥ For changes see page 5

P.A. <b>AIR FORCE 85</b> Other Cust Navy - AS	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 5 AMPERES, 4 PDT, TYPE I, MAGNETIC LATCH, HERMETICALLY SEALED	MILITARY STANDARD
Procurement Specification MIL-R-6106		SUPERSEDES:	<b>MS25459</b>
			PAGE 2 OF 5

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

User activities: Army - Navy - Air Force -

TABLE II. Operating characteristics.

IMS part no. IMS25459-	Coil data										Time - (milliseconds maximum)					
	Coil	Nominal		Max		Max pick-up voltage				Drop-out voltage	Operate $\frac{3}{\rule{0.5em}{0.4pt}}$	Release $\frac{4}{\rule{0.5em}{0.4pt}}$	Contact bounce			
		Volts $\frac{1}{\rule{0.5em}{0.4pt}}$	Freq. Hz	Res $\Omega$	Volts	Amperes	Normal $\frac{2}{\rule{0.5em}{0.4pt}}$	High temp test	Cont current test				Main	Aux		
01	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 $\frac{5}{\rule{0.5em}{0.4pt}}$	N/A	122	0.07	90	90	95	N/A	25	N/A	2	2		
AD1	X1, X2 Y1, Y2	115	400 $\frac{5}{\rule{0.5em}{0.4pt}}$	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		

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/ MS25455-A1 and -AD1 ac coils may be used on 60 Hz if maximum ambient temperature is limited to +85°C (coil current 0.066 ampere maximum).

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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 SEALED

MILITARY STANDARD

MS 25459

Procurement Specification  
MIL-R-6106

SUPERSEDES:

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1 MAY 73

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APPROVED 1 NOV 1960

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Review activities: Army - EC  
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 <sup>3</sup>	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	
		NO	NC	NO	NC	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. <b>AIR FORCE 85</b> Other Cust <b>NAVY-AS</b>	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 5 AMPERES, 4 PDT, TYPE I, MAGNETIC LATCH, HERMETICALLY SEALED	MILITARY STANDARD <b>MS25459</b>
Procurement Specification <b>MIL-R-6106</b>	SUPERSEDES:	PAGE 4 OF 5	

APPROVED 1 NOV 1960 REVISED (G) For changes see page 5

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.

Review activities:

Army -  
Navy - EC  
Air Force - II

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, 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		
--------------	--	--

All other points	1,000 V rms	1,000 V rms
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Dielectric strength (Altitude)	(When mounted in mating socket)
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Coil to case	80,000 ft
--------------	-----------

Aux contacts	500 V rms
--------------	-----------

All other points	500 V rms
------------------	-----------

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.

(G)

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

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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 SEALED	MILITARY STANDARD  MS25459
Procurement Specification MIL - R - 6106	SUPERSEDES:		PAGE 5 OF 5

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