

User activities: Army -
Navy -
Air Force -

Review activities: Army -
Navy - EC
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INACTIVE FOR NEW DESIGN AFTER 5 JUN 87 NO SUPERSEDING STANDARD (FOR NEW DESIGN USE MIL-R-6106/51)		FED. SUP CLASS 5945																																																	
		LOCATING PIN .093 ±.005 DIA																																																	
SILICONE RUBBER GASKET PER AMS 3332; THICKNESS .075; RECESSED .047 IN BRACKET		12 PINS, .0625 ±.0010 DIA 4 PINS, .040 ±.001 DIA (X1, X2, Y1, ND Y2) GOLD PLATED, MIL-G-45204, TYPE II, CLASS I, UNDERPLATING, NICKEL 50 TO 150 MICROINCHES THICK																																																	
		<table border="1"> <thead> <tr> <th>Inches</th> <th>mm</th> </tr> </thead> <tbody> <tr><td>.000</td><td>0.00</td></tr> <tr><td>.001</td><td>0.03</td></tr> <tr><td>.005</td><td>0.13</td></tr> <tr><td>.040</td><td>1.02</td></tr> <tr><td>.047</td><td>1.19</td></tr> <tr><td>.062</td><td>1.57</td></tr> <tr><td>.0625</td><td>1.59</td></tr> <tr><td>.093</td><td>2.36</td></tr> <tr><td>.145</td><td>3.86</td></tr> <tr><td>.147</td><td>3.73</td></tr> <tr><td>.203</td><td>5.16</td></tr> <tr><td>.290</td><td>7.37</td></tr> <tr><td>.344</td><td>8.74</td></tr> <tr><td>.375</td><td>9.53</td></tr> <tr><td>.435</td><td>11.05</td></tr> <tr><td>.580</td><td>14.73</td></tr> <tr><td>.725</td><td>18.42</td></tr> <tr><td>.870</td><td>22.10</td></tr> <tr><td>1.500</td><td>38.10</td></tr> <tr><td>1.562</td><td>39.67</td></tr> <tr><td>1.812</td><td>46.02</td></tr> <tr><td>1.844</td><td>46.84</td></tr> <tr><td>2.187</td><td>55.55</td></tr> </tbody> </table>		Inches	mm	.000	0.00	.001	0.03	.005	0.13	.040	1.02	.047	1.19	.062	1.57	.0625	1.59	.093	2.36	.145	3.86	.147	3.73	.203	5.16	.290	7.37	.344	8.74	.375	9.53	.435	11.05	.580	14.73	.725	18.42	.870	22.10	1.500	38.10	1.562	39.67	1.812	46.02	1.844	46.84	2.187	55.55
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(F) ENTIRE STANDARD REVISED																																																			
P.A. AIR FORCE - 85 Other Cust Navy - AS	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 4 PDT, TYPE I, MAGNETIC LATCH, SOCKET MOUNTED, HERMETICALLY SEALED	MILITARY STANDARD MS25461																																																
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 1 OF 5																																																

DD FORM 1 MAY 73 672
AMSC N/A

(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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5945-0745-18

APPROVED 1 Nov 1960 REVISED (F) 6 JUN 87

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. Relay is magnetically latched in both positions. Caution note to observe polarity must appear on relays with dc coils.
7. In the event of conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.
8. 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.
9. Shock, vibration, and acceleration requirements application with coils de-energized.
10. Pins to be perpendicular to header surface within one degree

TABLE I. Dash numbers and characteristics.

Dash number MS 25461-	Type	Coil	Terminal type	Max weight in pounds
D1	I	dc	Plug in	0.40
A1	I	ac	Plug in	0.42
AD1	I	ac-dc	Plug in	0.42

APPROVED 1 Nov 1960
REVISED (F) ENTIRE STANDARD REVISEDP.A.
AIR FORCE - 85
Other Cust
Navy - ASInternational
interestTITLE
RELAYS, ELECTROMAGNETIC, 10 AMPERES, 4 PDT,
TYPE I, MAGNETIC LATCH, SOCKET MOUNTED,
HERMETICALLY SEALED

MILITARY STANDARD

MS25461Procurement Specification
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TABLE II. Operating characteristics.

IMS part no. IMS25461-	Coil data										Time - (milliseconds maximum)					
	Coil	Nominal		Max		Max pick-up voltage			Drop-out voltage	Operate $\frac{3}{\text{---}}$	Release $\frac{4}{\text{---}}$	Contact bounce				
		Volts $\frac{1}{\text{---}}$	Freq. Hz	Res n	Volts	Amperes	Normal $\frac{3}{\text{---}}$	High temp test				Cont current test	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 $\frac{5}{\text{---}}$	N/A	122	0.07	90	90	95	N/A	25	N/A	2	2		
AD1	X1, X2 Y1, Y2	115	400 $\frac{5}{\text{---}}$	N/A	122	0.07	90	90	95	N/A	25	N/A	2	2		
	Y1, Y2	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/ MS25461-A1 and -AD1 may be used on 60 Hz if maximum ambient temperature is limited to +85°C (maximum coil current shall be 0.077 ampere).

FED. SUP CLASS
5945

PA
AIR FORCE - 85

Other Cust
NAVY - AS

International
Interest

TITLE

RELAYS, ELECTROMAGNETIC, 10 AMPERES, 4 PDT,
TYPE I, MAGNETIC LATCH, SOCKET MOUNTED,
HERMETICALLY SEALED

MILITARY STANDARD

MS25461

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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	10	10			10	6			10	6			
Inductive	100													
Inductive	20	6	6			10	4			10	4			
Motor	100	4	4			4	3			4	3			
Lamp	100	2	2			2	1.5			2	1.5			
Transfer load													2/	
Mechanical life reduced current	400	2.5	2.5			2.5	2			2.5	2			
Intnd 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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APPROVED 1 NOV 1960 REVISED (F) ENTIRE STANDARD REVISED

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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 1,500 V rms 1,125 V rms
Dielectric strength (altitude)
Coil to case 80,000 ft
250 V rms
Aux contacts
All other points 350 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.

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