

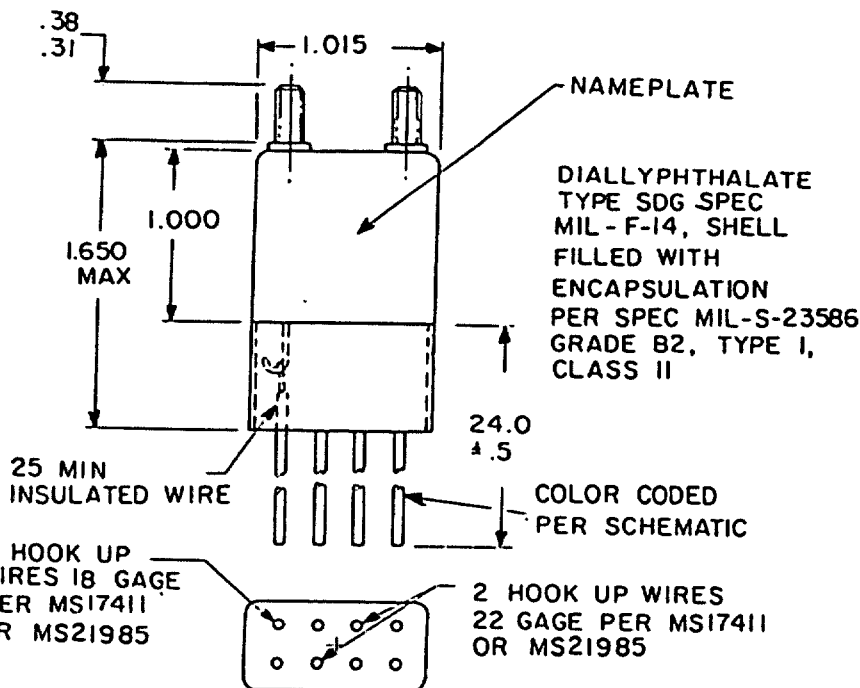
INACTIVE FOR NEW DESIGN AFTER 5 JUN 87  
 NO SUPERSEDING STANDARD  
 FOR NEW DESIGN USE MS27401

FED. SUP CLASS  
 5945

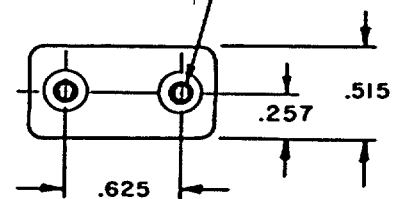
User activities:  
 Army -  
 Navy -  
 Air Force -

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

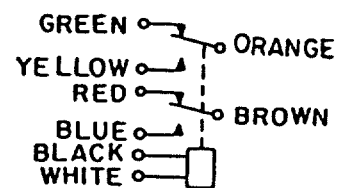
Military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications for repetitive use shall be made from this document when applicable.



.138-32 UNC - 2A THD  
 2 MTG STUDS

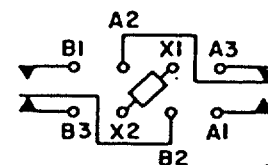
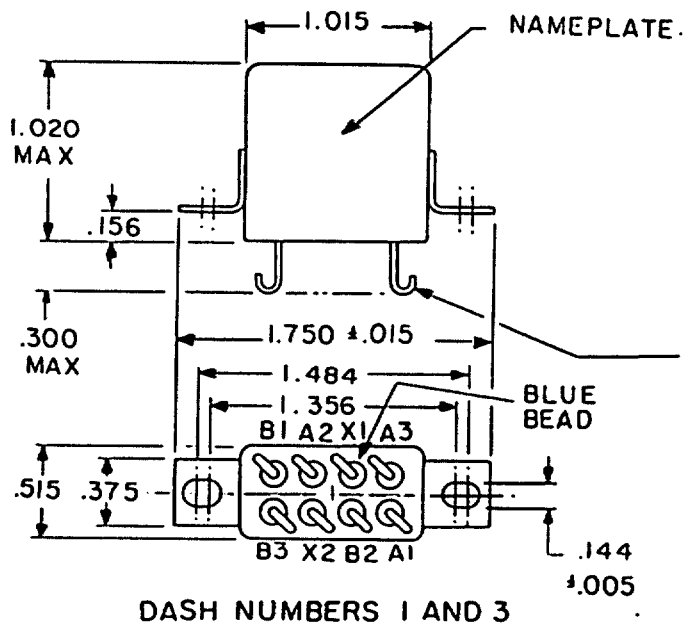


MOUNTING LAYOUT



CIRCUIT DIAGRAM

DASH NUMBERS 2 AND 4



CIRCUIT DIAGRAM

DASH NUMBERS 1 AND 3

(M) denotes changes

P.A. USAF - 85	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD
Other Cust Navy - EC			MS27245
Procurement Specification MIL-R-6106	SUPERSEDES:		PAGE 1 OF 8

DD FORM 1 MAY 73 672

(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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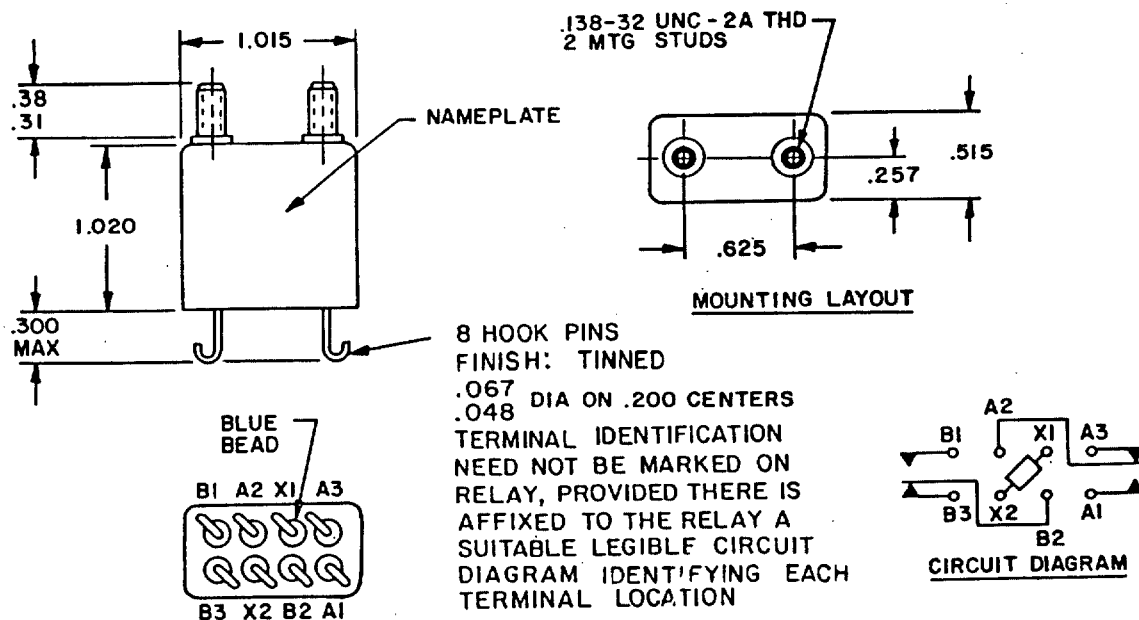
NSC N/A

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APPROVED 10 Aug 1964 REVISED (L) 5 JUN 87 (M) 10 FEB 89

User activities: Army -  
Navy -  
Air Force -Review activities: Army - AS  
Navy -  
Air Force - 11, 99

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## DASH NUMBERS 5 AND 6

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.005	0.13	.156	3.96	.38	9.7	1.020	25.91
.015	0.38	.25	6.4	.5	13.	1.356	34.44
.048	1.22	.257	6.53	.515	13.08	1.484	37.69
.067	1.70	.300	7.62	.625	15.88	1.650	41.91
.138	3.51	.31	7.9	1.000	25.40	1.750	44.45
.144	3.66	.375	9.52	1.015	25.78	24.0	610.

## 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. 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.

P.A. USAF - 85 Other Cust Navy - EC	International interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE 1, HERMETICALLY SEALED	MILITARY STANDARD <b>MS27245</b>
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 2 OF 8

User activities: Army -  
Navy -  
Air Force -

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

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TABLE I. Dash numbers and characteristics.

Dash number MS25245-	Type	Coil	Terminal type	Mounting socket	Auxiliary contacts	Max weight in pounds
1	I	dc	Solder hook	Flange	N/A	0.08
2	I	dc	Wire lead	Stud	N/A	0.23
3	IER	dc	Solder hook	Flange	N/A	0.08
4	I	dc	Wire lead	Stud	N/A	0.23
5	I	dc	Solder hook	Stud	N/A	0.23
6	I	dc	Solder hook	Stud	N/A	0.23

(M) TABLE II. Operating characteristics (-1 and -3).

IMS part no.	Coil data										Time (milliseconds-maximum)			
	Coil	Nominal	Max	Max pick-up voltage		Hold voltage	Drop- out voltage	Operate		Release	Contact bounce			
	Volts 1/ Hz	Freq. Hz	Res $\Omega$ $\pm 10\%$	Volts	Amperes	Normal 2/ temp test	High temp test	Cont current test	2/ 2/	3/ 4/	Main	Aux	NO	NC
MS27245-1  X1, X2	28	dc	300	29	.12	18	18	19.8	7.0	10	2	5		
MS27245-3  X1, X2	28	dc	300	29	.12	18	18	19.8	7.0	10	2	5		

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.

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P.A. USAF - 85 Other Cust Navy - EC	International interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD <b>MS27245</b>
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 3 OF 8

User activities: Army -  
Navy -  
Air Force -

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

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.

TABLE III. Rated contact load (amperes per pole) (case grounded) (-1 and -3)

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/ (Not applicable to -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	100	10	10			10			10		
Inductive	100	4	4			4			4		
Inductive											
Motor	100	3	3			3			3		
Lamp	100	2	2			2			2		
Transfer load											2/
Mechanical life reduced current	400	2.5	2.5								
Intmd current	50										3/

1/ 115/200 V ac for 60 Hz ratings, 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.  
3/ Minimum current ratings 0.1 ampere resistive, 0.3 ampere inductive, and 0.5 ampere resistive are applicable in accordance with acquisition specifications except monitored to a 3 ohm contact resistance.

P.A. USAF - 85 Other Cust Navy - EC	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD <b>MS27245</b>
Procurement Specification <b>MIL-R-6106</b>		SUPERSEDES:	PAGE 4 OF 8

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

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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 20 G  
G-level 10 - 2,000 Hz  
Frequency range 15 G  
Acceleration

Electrical characteristics

Insulation resistance, initial 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	1,250 V rms	1,000 V rms

Dielectric strength (altitude)

	80,000 ft	350 V rms
Coil to case		
Aux contacts		
All other points		350 V rms

Max contact drop initial 0.150 volt  
After life test 0.175 volt  
Overload current 20 amperes, 28 V dc  
Rupture current 40 amperes, 115 V ac, 400 Hz  
Duty rating Continuous

Quality conformance inspection

Performance of groups B and C tests are not applicable.

(M)

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.

DASH NUMBERS 1 AND 3

P.A. USAF - 85 Other Cust Navy - EC	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD  MS27245
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 5 OF 8

User activities: Army -  
Navy -  
Air Force -

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

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.

(M) TABLE IV. Operating characteristics (-2, -4, -5, and -6).

MS part no.	Coil data										Time (milliseconds-maximum)2/								
	Coil	Nominal		Max		Max pick-up voltage			Hold voltage 2/	Drop-out voltage 2/	Operate 3/	Release 4/	Contact bounce						
		Volts 1/	Freq. Hz	Res $\Omega$ $\pm 10\%$	Volts	Amperes	Normal 2/	High temp test					Cont current test	Main	Aux	NO	NC	NO	NC
MS27245-2	X1, X2	28	dc	300	29	.12	18	18	19.8	7.0	1.0	10	10	2	5				
MS27245-4	X1, X2	28	dc	300	29	.12	18	18	19.8	7.0	1.0	10	10	2	5				
MS27245-5	X1, X2	28	dc	300	29	.12	18	18	19.8	7.0	1.0	10	10	2	5				
MS27245-6	X1, X2	28	dc	300	29	.12	18	18	19.8	7.0	1.0	10	10	2	5				

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.

P.A. USAF - 85 Other Cust Navy - EC	International interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD <b>MS27245</b>
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 6 OF 8

User activities: Army -  
Navy -  
Air Force -

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

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.

DD FORM 1 MAY 73

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(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

P.A. USAF - 85 Other Cust Navy - EC	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD MS27245
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 7 OF 8

TABLE V. Rated contact load (amperes per pole) (case grounded) (-2, -4, -5, and -6).

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/ (not applicable to -2 and -6) appropriate			See notes
		Main		Aux	Main		Aux	Main		Aux	
		NO	NC	NO NC	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	
Resistive	50	10	10		10				10		
Inductive	50	6	6		6				4		
Inductive											
Motor	50	4	4		4				3		
Lamp	50	2	2		2				2		
Transfer load											2/
Mechanical life reduced current	400	2.5	2.5								
Intmd current	50										3/

1/ 115/200 V ac for 60 Hz ratings, 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.  
3/ Minimum current ratings 0.1 ampere resistive, 0.3 ampere inductive, and 0.5 ampere resistive are applicable in accordance with acquisition specifications except monitored to a 3 ohm contact resistance.

FED. SUP CLASS  
5945

APPROVED 10 Aug 1964 REVISED (M) For changes see pages 3, 5, 6 and 8



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## Review activities:

Army - AS  
Navy - AS  
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 20 G  
G-level 10 - 2,000 Hz  
Frequency range 15 G  
Acceleration

Electrical characteristics

Insulation resistance, initial 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 1,250 V rms 1,000 V rms  
Dielectric strength (altitude)  
Coil to case 80,000 ft  
350 V rms  
Aux contacts  
All other points 350 V rms

Max contact drop initial 0.350 volt  
After life test 0.375 volt  
Overload current 20 amperes, 28 V dc  
Rupture current 40 amperes, 115 V ac, 400 Hz  
Duty rating Continuous

Quality conformance inspection

Performance of groups B and C tests are not applicable.

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

DASH NUMBERS 2, 4, 5, AND 6

P.A USAF - 85 Other Cust Navy - EC	International interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD
Procurement Specification MIL-R-6106			MS27245
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