

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

**User activities:** Army -  
Navy -  
Air Force -

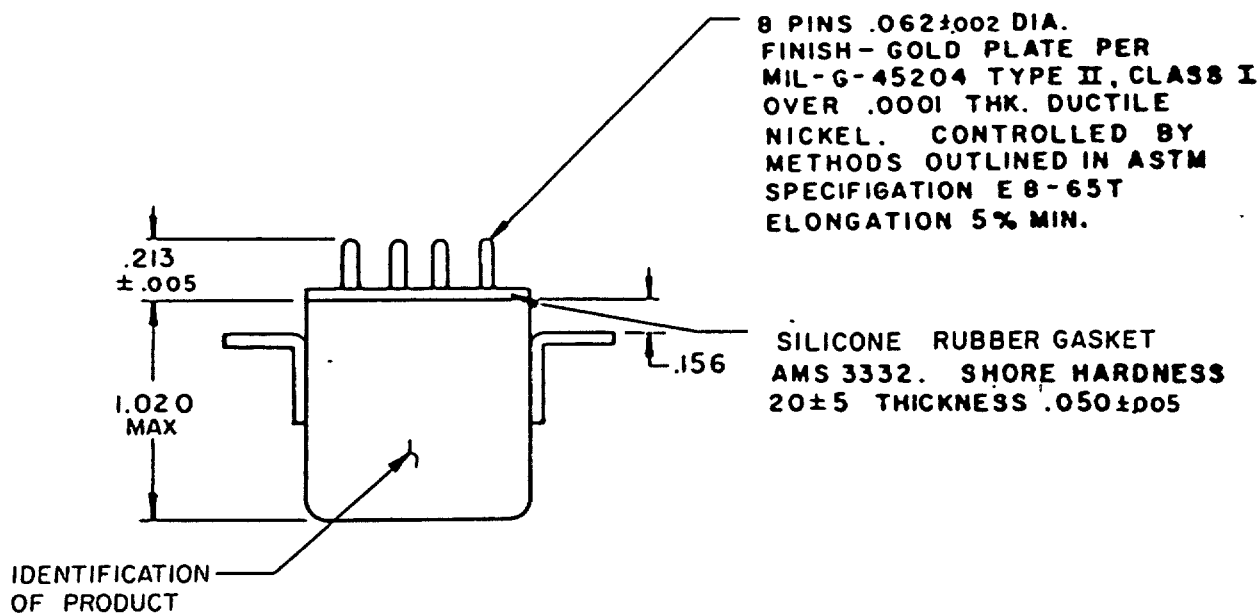
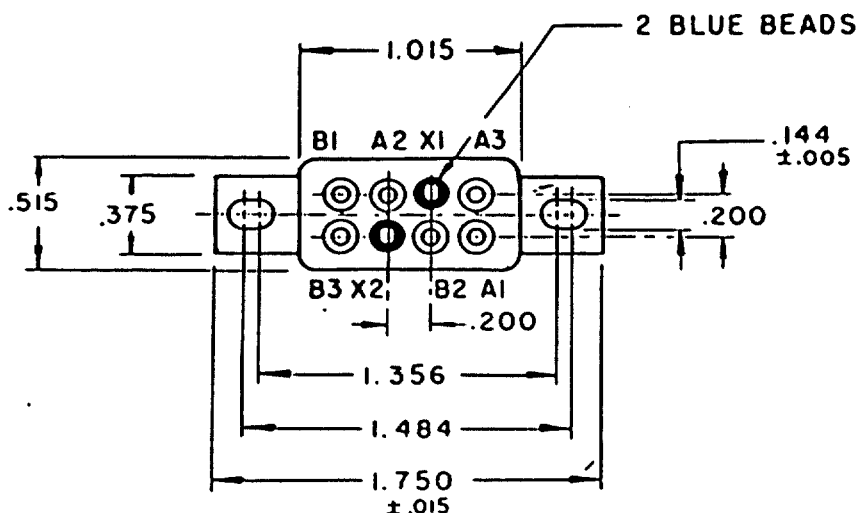
Army -  
Navy - AS  
Air Force - 11, 99

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.

**Review activities:**

Army - 10

Α.Σ.Π.Υ.



DASH NUMBERS 1, 2, AND 3

(K) denotes changes

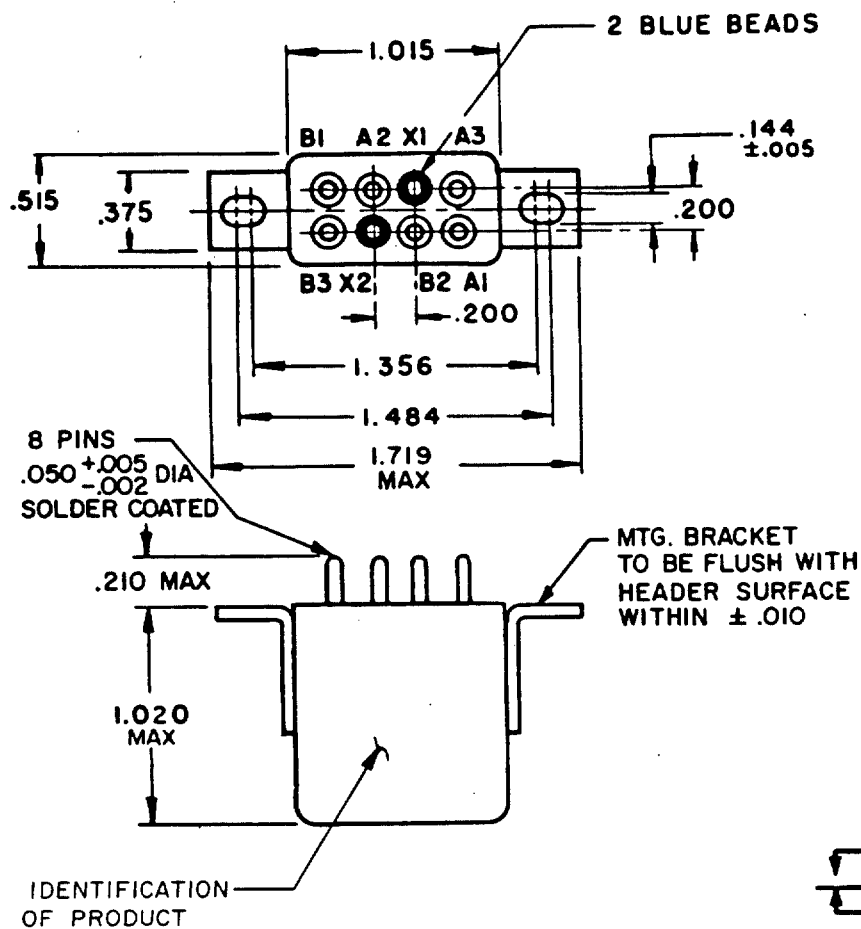
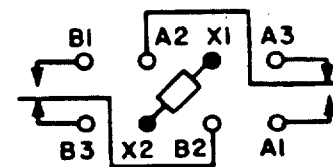
P.A USAF - 85 Other Cust Navy - EC	International Interest	TITLE RELAYS, ELECTROMAGNETIC, 10 AMPERES, 2PDT, TYPE I, HERMETICALLY SEALED	MILITARY STANDARD
Procurement Specification MIL-R-6106	SUPERSEDES:	MS27247 PAGE 1 OF 6	

APPROVED	10 Aug 1964	REVISED	5 JUN 87	10 FEB 89
			(J)	(K)

FED. SUP CLASS  
5945User activities:  
Army -  
Navy -  
Air Force -Review activities:  
Army - AS  
Navy -  
Air Force -

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11, 99

DASH NUMBERS 4 AND 5CIRCUIT DIAGRAM

For changes see pages 4 and 6

REVISED

10 Aug 1964

APPROVED

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DD FORM  
1 MAY 73

672

(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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

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Inches	mm	Inches	mm
.0001	0.025	.210	5.33
.002	0.05	.213	5.41
.005	0.13	.375	9.52
.010	0.25	.515	13.08
.015	0.38	1.000	25.40
.050	1.27	1.015	25.78
.062	1.57	1.356	34.44
.144	3.66	1.484	37.69
.156	3.96	1.719	43.66
.200	5.08	1.750	44.45

## 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 identifies each terminal location specified.
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 1. Dash numbers and characteristics.

Dash number MS27247-	Type	Coil	Terminal type	115/200 V ac 3 phase contact rating	Mounting or mating socket	Max weight in pounds
1	I	dc	Plug-in	N/A	N/A	.08
2	I	dc	Plug-in	Applicable	N/A	.08
3	IER	dc	Plug-in	Applicable	N/A	.08
4	I	dc	Printed wire (PW)	N/A	N/A	.08
5	I	dc	Printed wire (PW)	Applicable	N/A	.08

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(K) TABLE II. Operating characteristics.

IMS part no.	Coil data										Time (milliseconds-maximum)					
	Coil	Nominal			Max		Max pick-up voltage			Hold voltage 2/ 2/	Drop- out voltage 2/ 2/	Operate 3/ 3/	Release 4/ 4/	Contact bounce		
		Volts 1/ 1/	Freq. Hz	Res Ω ±10%	Volts	Amperes	Normal 2/ 2/	High temp test	Cont current test					Main	Aux	
MS27247-1	dc	28	dc	300	29	.120	18	18	19.8	7	1	10	10	2	5	
MS27247-2	dc	28	dc	300	29	.120	18	18	19.8	7	1	10	10	2	5	
MS27247-3	dc	28	dc	300	29	.120	18	18	19.8	7	1	10	10	2	5	
MS27247-4	dc	28	dc	300	29	.120	18	18	19.8	7	1	10	10	2	5	
MS27247-5	dc	28	dc	300	29	.120	18	18	19.8	7	1	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.

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interest

TITLE

RELAYS, ELECTROMAGNETIC, 10 AMPERES,  
2PDT, TYPE I, HERMETICALLY SEALED

MILITARY STANDARD

MS27247

Procurement Specification  
MIL-R-6106

SUPERSEDES:

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1 MAY 73

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TABLE III. Rated contact load (amperes per pole) (case grounded).

Type of load	Life operating cycles X 10 <sup>3</sup> 2/	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase 2/				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				10				
Inductive	100	4	4			4				4				
Inductive 1/ (-5 only)														
Motor	100	3	3			3				3				
Lamp	100	2	2			2				2				
Transfer load														3/
Mechanical life reduced current	400	2.5	2.5											
Intmd current														4/

1/ Addition rating for -5 only: 2 ampere inductive at 460 V ac, 400 Hz.

2/ 115/200 V ac for 60 Hz ratings, absence of value indicates relay is not rated for 3 phase applications.

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

4/ Minimum current ratings 0.1 ampere resistive, 0.3 ampere inductive, and 0.5 ampere resistive are applicable in accordance with acquisition specification except monitored to 3 ohm contact resistance.

P.A.

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

### 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 0.150 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

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.

(K)

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.

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