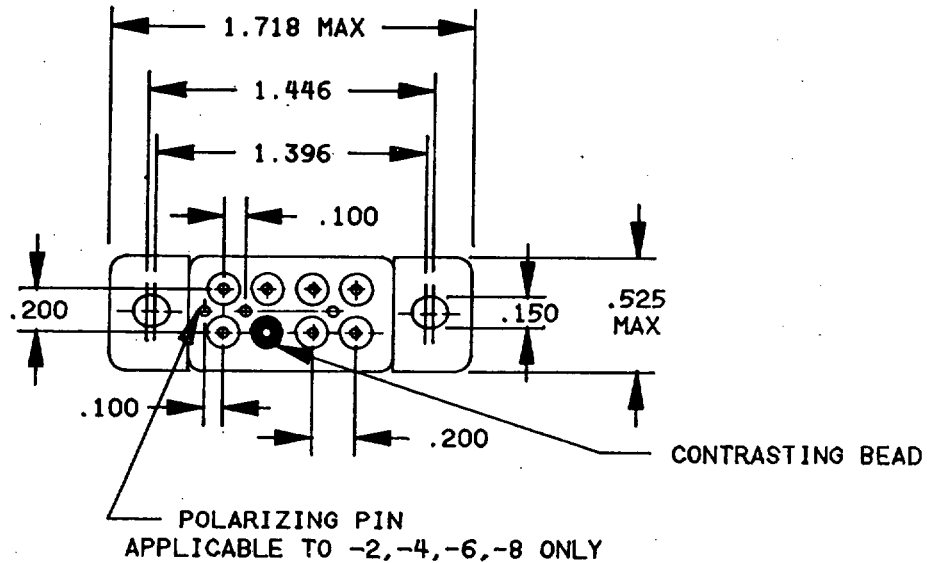
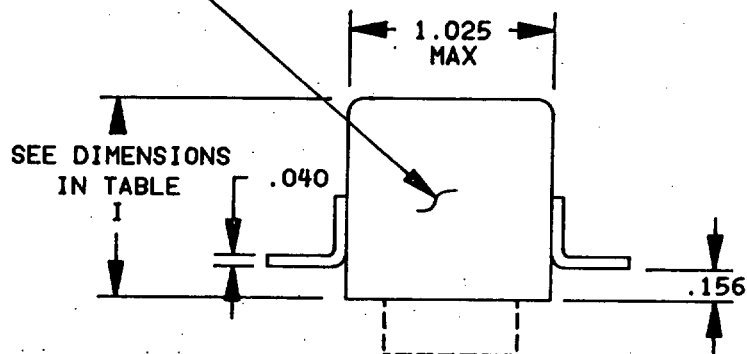


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(E)

NAMEPLATE  
EITHER SIDE



RAISED VERTICAL FLANGE MOUNT (DASH NUMBERS -1 THROUGH -8)

FIGURE 1. Outline drawing (for details see tables I and II).

(E) denotes changes

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User activities: Army -  
Navy -  
Air Force -

Review activities: Army -  
Navy - EC  
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P.A AF-85	International Interest	TITLE RELAYS, ELECTROMAGNETIC, MAGNETIC LATCH, 10 AMPERES, 2 PDT, ALL WELDED, HERMETICALLY SEALED	MILITARY STANDARD
Other Cust NAVY-AS ARMY-ER			MS27744
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 1 OF 7

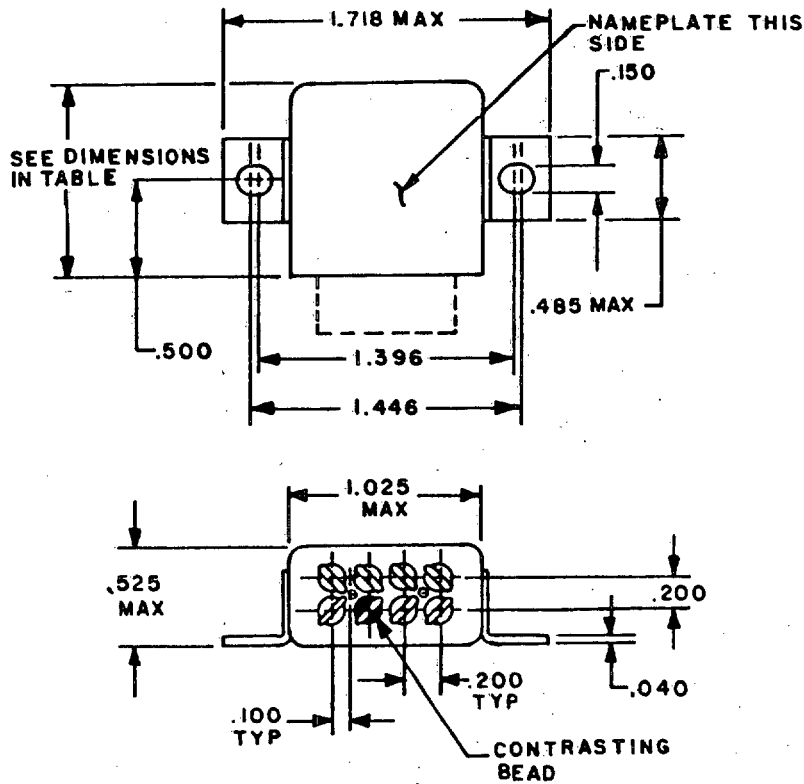
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HORIZONTAL FLANGE MOUNT (DASH NUMBERS -9 AND -10)

FIGURE 1. Outline drawing (for details see tables I and II) - Continued.

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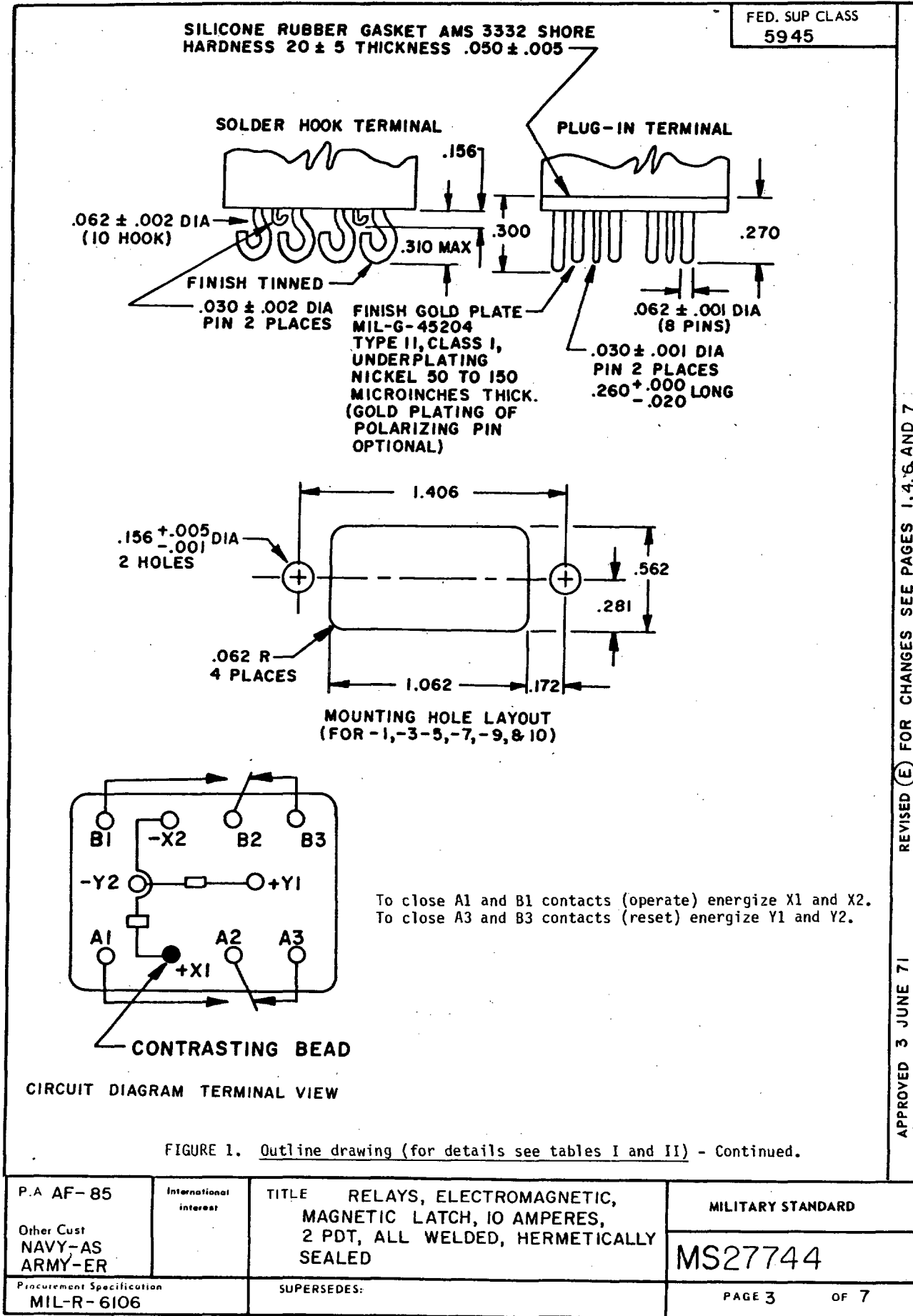
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INCHES	MM	INCHES	MM
.001	0.03	.260	6.60
.002	0.05	.270	6.86
.003	0.08	.281	7.14
.005	0.13	.300	7.62
.020	0.51	.310	7.87
.030	0.76	.485	12.32
.040	1.02	.500	12.70
.050	1.27	.525	13.34
.062	1.57	.562	14.27
.100	2.54	1.025	26.04
.150	3.81	1.062	26.97
.156	3.96	1.396	35.46
.172	4.37	1.406	35.71
.200	5.08	1.446	36.73
		1.718	43.64

## NOTES:

1. Terminal numbers do not appear on the relay header, there shall be affixed to the relay a suitable legible circuit diagram that identifies each terminal location specified.
2. Dimensions are in inches.
3. Unless otherwise specified, tolerance is  $\pm .010$  (0.25 mm) for three place decimals.
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.
6. Relay is magnetically latched in both positions.
7. Caution note to observe polarity must appear on relays with dc coils.

FIGURE 1. Outline drawing (for details see tables I and II) - Continued.

TABLE I. Relay characteristics.

MS part number	Type	Coil type	Terminal type	Mounting or mating socket	Dim max	Max weight in pounds
MS27744-						
1	I	dc	Solder hook	N/A	1.010	0.09
2	I	dc	Plug-in	M12883/41-05,-10,-15,-20	1.010	0.09
3	I	ac	Solder hook	N/A	1.125	0.10
4	I	ac	Plug-in	M12883/41-05,-10,-15,-20	1.125	0.10
5	I	ac	Solder hook	N/A	1.010	0.09
6	I	dc	Plug-in	M12883/41-05,-10,-15,-20	1.010	0.09
7	I	dc	Solder hook	N/A	1.125	0.10
8	I	ac	Plug-in	M12883/41-05,-10,-15,-20	1.125	0.10
9	I	dc	Solder hook	N/A	1.010	0.09
10	I	ac	Solder hook	N/A	1.125	0.10

(E) 1/ High shock and vibration.

P.A AF-85	International interest	TITLE RELAYS, ELECTROMAGNETIC, MAGNETIC LATCH, 10 AMPERES, 2 PDT, ALL WELDED, HERMETICALLY SEALED	MILITARY STANDARD
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Review activities: Army - EC  
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User activities: Army -  
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TABLE II. Operating characteristics.

MS part no.	Coil data										Time - milliseconds - max				
	Coil	Nominal			Max	Max pick-up voltage 1/				Drop out	Operate	Release	Aux		
		Volts	Freq Hz	Res Ω		Volts	Amp	Normal 1/	High temp test					Cont current test	1/
-1,-2,-5,-6,-9	X1, X2	28			29	.05		18	19.8	22.5		10	1	1	-
-3,-4,-7,-8,-10,	Y1, Y2	28			29	.05		18	19.8	22.5		10	1	1	-
	X1, X2	115			122	.04		90	95.4	103.5		20	1	1	-
	Y1, Y2	115			122	.04		90	95.4	103.5		20	1	1	-

1/ Over temperature range.

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				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 Inductive Inductive Motor Lamp	100	10	10	-	-	-	-	-	-	10	-	-	-	1/ -
	100	-	-	-	-	-	-	-	-	8	-	-	-	
	20	8	8	-	-	8	-	-	-	8	-	-	-	2/ -
	100	4	4	-	-	4	-	-	-	4	-	-	-	
	100	2	2	-	-	2	-	-	-	2	-	-	-	
Transfer, load														
Mechanical life reduced current	400	2.5	2.5	-	-	2.5	-	-	-	2.5	-	-	-	
Min current	Applicable per specification													

1/ Resistive rating 12 amperes for MS part no. -5, -6, -7, and -8.  
2/ Transfer load indicates relay suitable for transfer between unsynchronized ac power supplied at rating indicated.

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NAVY-AS  
ARMY-ERProcurement Specification  
MIL-R-6106International  
interestTITLE RELAYS, ELECTROMAGNETIC,  
MAGNETIC LATCH, 10 AMPERES,  
2 PDT, ALL WELDED, HERMETICALLY  
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## ENVIRONMENTAL CHARACTERISTICS MS part no.

	-1, -2, -3, -4, -9, -10, -5, -6, -7, -8
Temperature range	-70°C to +125°C
Max altitude rating	300,000 ft
Shock G-level	200 g's   500 g's
Duration	6 ms   1 ms
Max duration contact opening	10 $\mu$ s
Vibration-sinusoidal	
G-level	30 g's   50 g's
Frequency range	10 through 3,000 Hz
Vibration-random	
Applicable spec	MIL-STD-810
Power spectral density	0.4 g <sup>2</sup> /Hz   0.65 g <sup>2</sup> /Hz
Frequency range	50 through 2,000 Hz
Acceleration	15 g's

## (E) ELECTRICAL CHARACTERISTICS MS part no.

Insulation resistance, initial  
After life or environmental tests  
Dielectric strength (sea level)

	Initial	After life test
Coil to coil	1000 V rms	1000 V rms
and coil to case	—	—
Aux contacts	—	—
All other points	1250 V rms	1000 V rms

Dielectric strength (altitude)<sup>1/</sup>

	80,000 ft	300,000 ft
Coil to coil	250 V rms	500 V rms
and coil to case	—	—
Aux contacts	—	—
All other points	350 V rms	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  
(Applicable to coil circuits of ac operated relays)

- (E) Quality conformance inspection:  
Performance of groups B and C inspection are not applicable.

- (E) Supersession data: See table IV.

<sup>1/</sup> Dielectric may be improved by suitable insulation of terminals and wiring after installation.

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International  
interestOther Cust  
NAVY-AS  
ARMY-ERProcurement Specification  
MIL-R-6106

TITLE RELAYS, ELECTROMAGNETIC,  
MAGNETIC LATCH, 10 AMPERES,  
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User activities:  
Army -  
Navy -  
Air Force -Review activities:  
Army -  
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(E) Table IV. Supersession data. 1/

Superseded part number MS27744 -	Superseding part number M6106/50-
1	001
2	002
3	007
4	008
5	No superseding dash number
6	"
7	"
8	"
9	003
10	009

1/ This table will also be used for logistic support.

P.A AF-85	International Interest	TITLE RELAYS, ELECTROMAGNETIC, MAGNETIC LATCH, 10 AMPERES 2 PDT, ALL WELDED, HERMETICALLY SEALED.	MILITARY STANDARD
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