

INACTIVE FOR NEW DESIGN AFTER 29 Apr 1988

USE MIL-R-6106/51

FED. SUP CLASS
5945User activities: Army -
Navy -
Air Force -Review activities: Army -
Navy - EC
Air Force - 99

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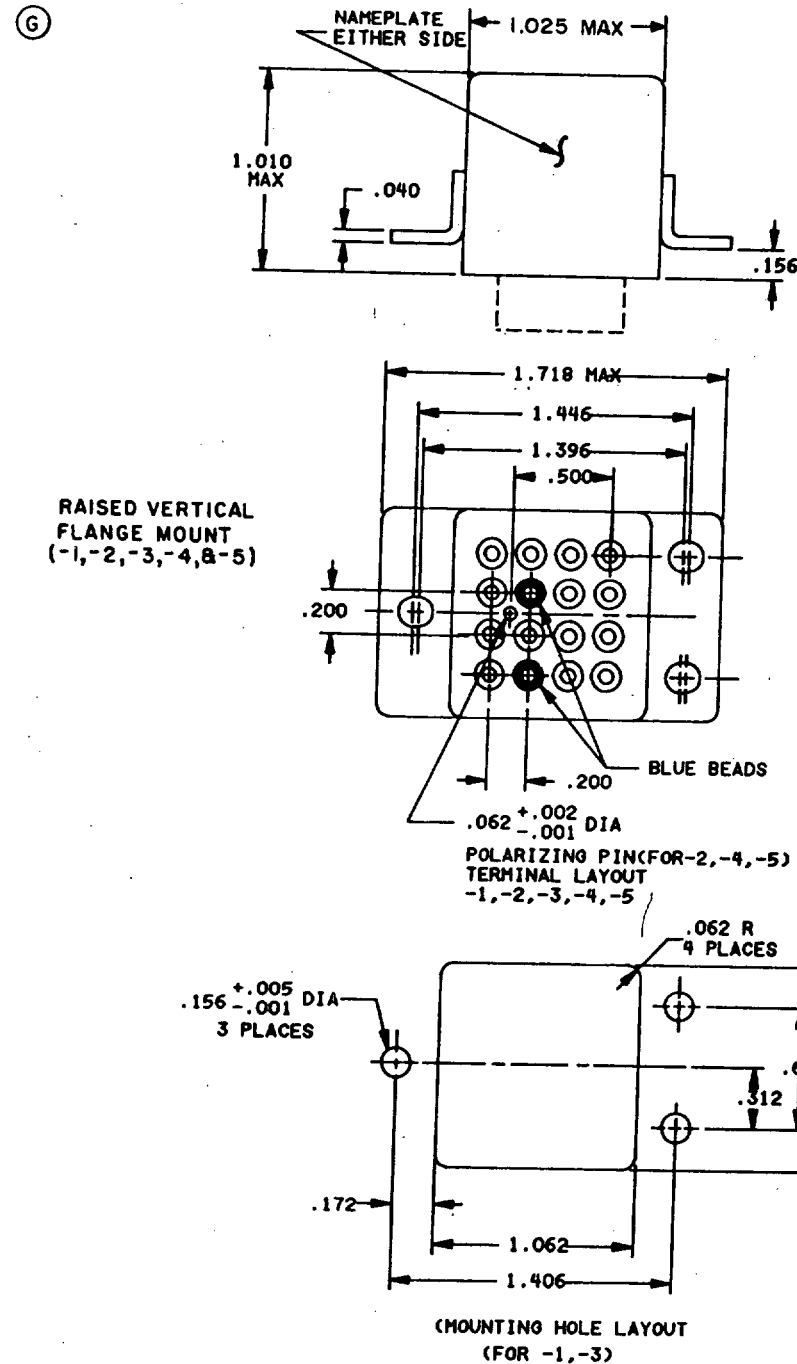


FIGURE 1. Outline drawing (for details see tables I and II).

① denotes changes

P.A AF-85	International Interest	TITLE RELAYS, ELECTROMAGNETIC, MAGNETIC LATCH, 10 AMPERES, 4 PDT, ALL WELDED, HERMETICALLY SEALED.	MILITARY STANDARD
Other Cust NAVY-AS ARMY-ER			MS27745
Procurement Specification MIL-R-6106		SUPERSEDES:	PAGE 1 OF 7

AMSC N/A

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5945-0762-2

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APPROVED 3 JUNE 71 REVISED F 28 MAY 85 ① 29 APR 88

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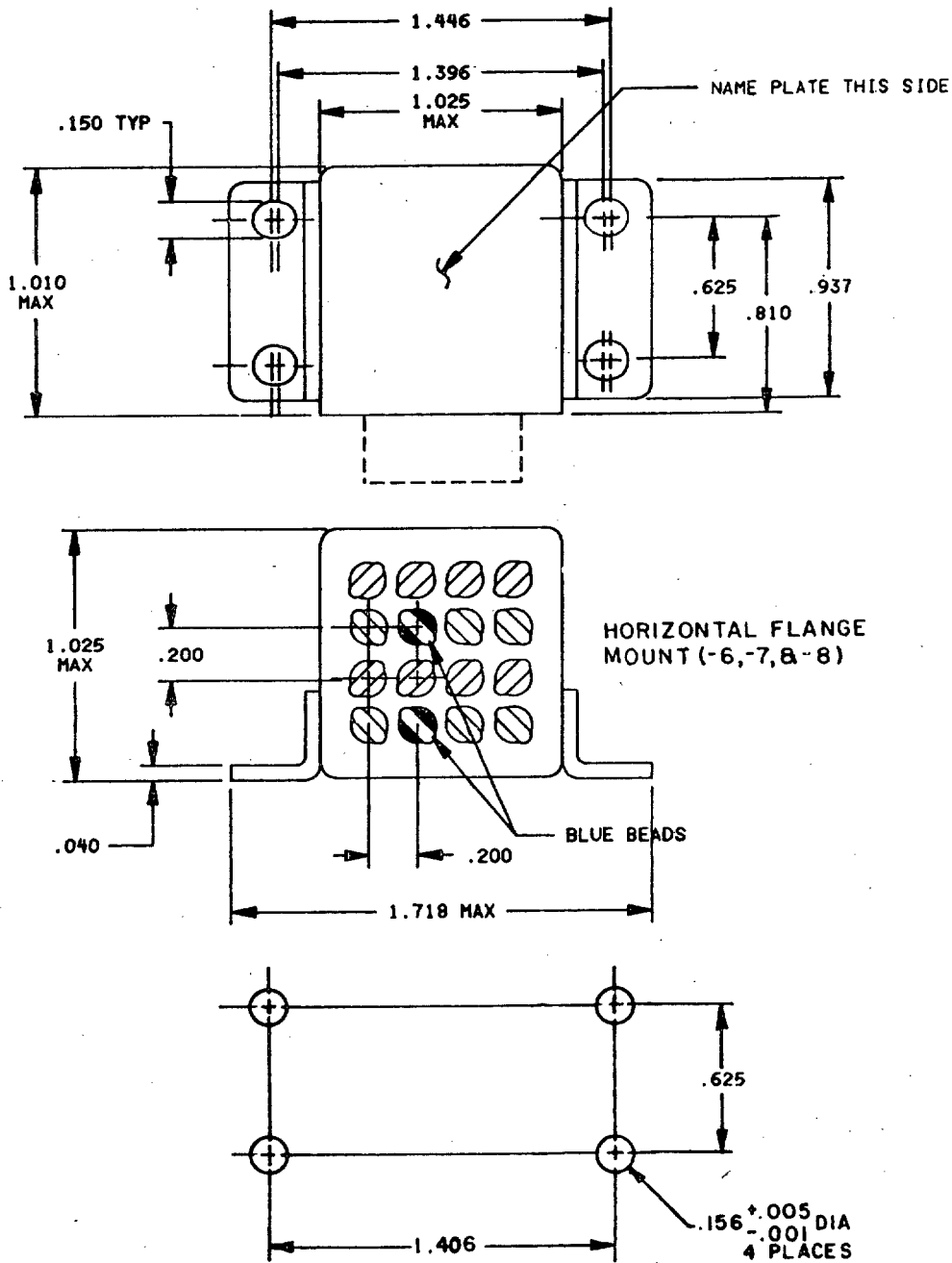
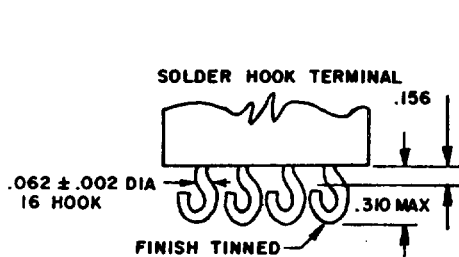


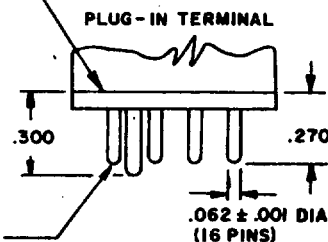
FIGURE 1. Outline drawing (for details see tables I and II) - Continued.

APPROVED 3 JUNE 71 REVISED (G) FOR CHANGES SEE PAGES 1, 6, AND 7

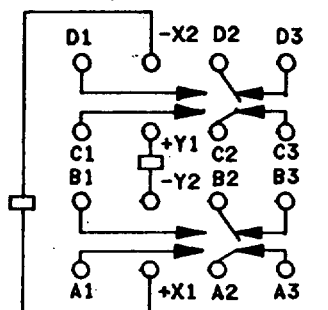
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Procurement Specification MIL-R-6106		SUPSEDES:	PAGE 2 OF 7

FED. SUP CLASS
5945

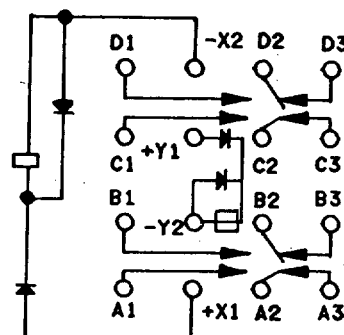
SILICONE RUBBER GASKET
 AMS 3332 SHORE HARDNESS
 20 ± 5 THICKNESS $.050 \pm .005$



FINISH GOLD PLATE
 MIL-G-45204, TYPE II,
 CLASS I, UNDERPLATING,
 NICKEL 50 TO 150
 MICROINCHES THICK
 (GOLD PLATING OF
 POLARIZING PIN OPTIONAL)



TO CLOSE NO. 1 CONTACTS (OPERATE)
 ENERGIZE X1 AND X2.
 TO CLOSE NO. 3 CONTACTS (RESET)
 ENERGIZE Y1 AND Y2.



WHEN ENERGIZED WITH POLARITY INDICATED CONTACTS
 WILL TRANSFER.

INCHES	MM	INCHES	MM
.001	0.03	.310	7.87
.002	0.05	.312	7.92
.005	0.13	.500	12.70
.040	1.02	.625	15.88
.050	1.27	.810	20.57
.062	1.57	.937	23.80
.150	3.81	1.010	25.65
.156	3.96	1.025	26.04
.172	4.37	1.062	26.97
.200	5.08	1.396	35.46
.218	5.54	1.406	35.71
.270	6.86	1.446	36.73
.300	7.62	1.718	43.64

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

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Other Cust NAVY-AS ARMY-ER			MS27745
Procurement Specification MIL-R-6106	SUPERSEDES:		PAGE 3 OF 7

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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 ± 0.010 (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.
8. Suppression level - the maximum induced transient voltage (back EMF) shall be 5 volts.

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	Max weight in pounds
MS27745-					
1	I	dc	solder	N/A	0.17
2	I	dc	plug-in	M12883/40-06,-12,-18,-24	0.17
3	I	ac	solder	N/A	0.17
4	I	ac	plug-in	M12883/40-06,-12,-18,-24	0.17
5	I	dc	plug-in	M12883/40-06,-12,-18,-24	0.17
6	I	dc	solder	N/A	0.17
7	I	ac	solder	N/A	0.17
8	I	dc	solder	N/A	0.17

P.A AF-85

International
interestOther Cust
NAVY-AS
ARMY-ERTITLE RELAYS, ELECTROMAGNETIC,
MAGNETIC LATCH, 10 AMPERES,
4 PDT, ALL WELDED, HERMETICALLY
SEALED.

MILITARY STANDARD

MS27745

Procurement Specification

MIL-R-6106

SUPERSEDES:

PAGE 4 OF 7

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TABLE II. Operating characteristics.

MS part no.	Coil data										Time-milliseconds-max						
	Nominal				Max		Max pick-up voltage				Bounce						
	Coil	Volts	Freq Hz	Res Ω	Volts	Amp	Normal 1/	High temp test	Cont current test	Drop out voltage 1/	Operate	Release		Main	Aux		
												NO	NC		NO	NC	
MS27745	-1,-2,-6	X1, X2	28			29	.075	18	19.8	22.5		15		1.0	1.0	-	-
		Y1, Y2	28		-	29	.075	18	19.8	22.5	-	15		1.0	1.0	-	-
		X1, X2	115	400	-	122	.04	90	95.4	103.5	-	20		1.0	1.0	-	-
	-3,-4,-7	Y1, Y2	115	400	-	122	.04	90	95.4	103.5	-	20		1.0	1.0	-	-
		X1, X2	28		-	29	.075	18	19.8	22.5	-	15		1.0	1.0	-	-
		Y1, Y2	28		-	29	.075	18	19.8	22.5	-	15		1.0	1.0	-	-
	-5,-8	X1, X2	28		-	29	.075	18	19.8	22.5	-	15		1.0	1.0	-	-
		Y1, Y2	28		-	29	.075	18	19.8	22.5	-	15		1.0	1.0	-	-
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ENVIRONMENTAL CHARACTERISTICS	-1, -2, -3, -4, and -5	-6, -7, and -8
Temperature range	-70°C to +125°C	-70°C to +125°C
Max altitude rating	300,000 ft	300,000 ft
Shock G-level	200 g's	100 g's
Duration	6 ms	6 ms
Max duration contact opening	10 μ s	
Vibration-sinusoidal		
G-level	30 g's	20 g's
Frequency range	10 through 3000 Hz	10 through 3000 Hz
Vibration-random		
Applicable spec	MIL-STD-810	MIL-STD-810
Power spectral density	0.4 g ² /Hz	0.2 g ² /Hz
Acceleration	15 g's	15 g's

ELECTRICAL CHARACTERISTICS

Insulation resistance, initial 100 megohms
 After life or environmental tests 50 megohms
 Dielectric strength (sea level)

	Initial	After life tests
Coil to coil		
and coil to case	1000 V rms	1000 V rms
Aux contacts		
All other points	1250 V rms	1000 V rms
Dielectric strength (altitude) 1/		
	80,000 ft	300,000 ft
Coil to coil		
and coil to case	350 V rms	500 V rms
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)		

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

- Ⓒ Supersession data: See table IV.

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

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⑥ Table IV. Supersession data. 1/

Superseded part number MS27745-	Superseding part number M6106/51-
1	001
2	002
3	007
4	008
5	005
6	003
7	009
8	006

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

APPROVED 3 JUNE 71 REVISED ⑥ FOR CHANGES SEE SHEETS 1, 6, AND 7

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1 MAY 73