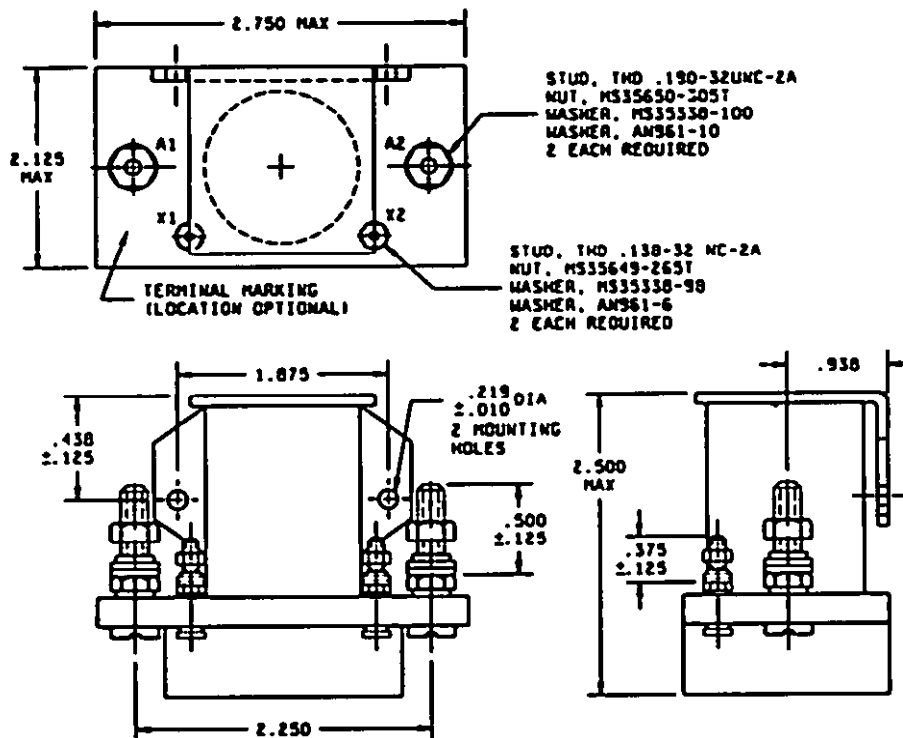


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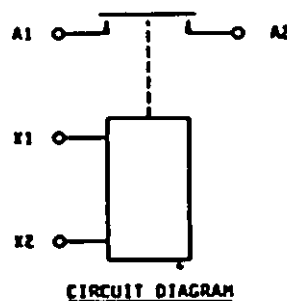


CONFIGURATION B

Inches	mm	Inches	mm
.010	0.25	.938	23.83
.062	1.57	1.000	25.40
.093	2.36	1.112	28.32
.125	3.18	1.875	47.63
.133	3.38	1.930	49.02
.219	5.56	2.125	53.98
.250	6.35	2.188	55.58
.266	6.76	2.250	57.15
.375	9.53	2.625	66.68
.438	11.13	2.750	69.85
.500	12.70		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.031 (0.79 mm).
4. An additional flat washer may be used for terminal seat.
5. Terminal temperature rise under continuous current conditions is 95°C. Intermediate current shall be conducted at 71°C.
6. In the event of a conflict between the text of this specification and the references cited herein, this specification shall take precedence.
7. 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 document to the extent specified herein.
8. Shape of relay is optional within the envelope dimensions shown.



CIRCUIT DIAGRAM

FIGURE 1. Configurations and dimensions - Continued.

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REQUIREMENTS:

Configurations and dimensions: See figure 1.

Dash numbers and general characteristics: See table I.

Contact data:

Rated contact load: See table II.

Maximum contact drop, initial: 0.150 V.

After life test: 0.175 V.

Overload current (MO): 400 amperes.

Rupture current (MO): 500 amperes.

Operating characteristics (see table III):

Duty rating: Continuous.

RFI specification: MIL-STD-461 (applicable to coil circuits of ac operated relays).

Electrical data:

Minimum insulation resistance:

Initial: 100 megohms.

After life or environmental test: 50 megohms.

Dielectric strength:

Sea level, 2-5 seconds:

	Initial		After life tests	
	28 V dc	115 V ac	28 V dc	115 V ac
Coil to case:	1,250 V rms	N/A	1,000 V rms	N/A
Aux. contacts:	1,250 V rms	N/A	1,000 V rms	N/A
All other points:	1,250 V rms	N/A	1,000 V rms	N/A

Altitude, 1 minute.

	28 V dc	115 V ac
Coil to case:	500 V rms	N/A
Aux. contacts:	500 V rms	N/A
All other points:	500 V rms	N/A

Environmental characteristics:

Temperature range: -55°C to +71°C.

Maximum altitude rating: 50,000 feet.

Shock, g-level: 25 g's.

Duration: 6-9 ms.

Maximum duration contact opening: 2 ms.

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Vibration levels, sinusoidal: See table IV.

Vibration, random: N/A.

High shock: N/A.

Acceleration: 10 g's.

Qualification by similarity: See table V.

Part or Identifying Number (PIN): MS24166- (plus applicable dash number from table I).

TABLE I. Dash numbers and general characteristics.

PIN MS24166-	Type	Coil	Terminal type	Mounting or mating socket	Maximum weight (pounds)
D1 1/	11	dc	Stud	Bracket - bottom	0.6
D2 2/	11	dc	Stud	Bracket - side	0.6

- 1/ For Government logistics support, MS24166-D1 shall be used in lieu of AN3350-2.
2/ For Government logistics support, MS24166-D2 shall be used in lieu of AN3350-1.

TABLE II. 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 appro- priate 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	50	50												
Inductive	10	50												
Motor	50	50												
Lamp	50	25												
Transfer load														2/
Mechanical life (reduced current)	100	12.5												
Intermediate current	50	5												

1/ Absence of value indicates that relay is not rated for 3 phase applications.

2/ Transfer load indicates that relay is suitable for transfer between unsynchronized ac power supplies at the rating indicated.

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(H) TABLE III. Operating characteristics.

Coil data															Time - (milliseconds maximum)				
PIN MS24166-	Coil	Rated			Max		Max pick-up voltage				Hold voltage 2/	Drop-out voltage 2/	Operate 1/	Release 1/	Source				
		Volts 1/	Freq. (Hz)	Res Ω +10% -15%	Volts	Amps	Normal 2/	High temp test	Cont current test	Main					Aux	NO	NC	NO	NC
D1	X1,X2	28	dc	94	29	.35	18	21	22.5	7.0	1.5	20	10	5.0					
D2	X1,X2	28	dc	94	29	.35	18	21	22.5	7.0	1.5	20	10	5.0					

1/ CAUTION: Use of any coil voltage less than rated coil voltage will compromise the operation of the relay.

2/ Over the temperature range.

1/ With rated coil voltage.

3/ From rated coil voltage.

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TABLE IV. Vibration levels (sinusoidal).

5-10 Hz	10-55 Hz	55-250 Hz	250-500 Hz	500-1500 Hz
0.08	.06 DA	2 g's	2 g's	N/A

TABLE V. Qualification by similarity.

PIN MS24166	Loads						Dynamics 1/			Environmental		
	Type 1			Type 1 ER								
	A	B	C	D	E	F	A	B	C	A	B	C
D1	4						2			4		
D2	4						2			4		

1/ For group C testing, each dash number shall be tested to meet vibration requirements.

CONCLUDING MATERIAL

Custodians:
Navy - AS
Air Force - 85

Review activity:
Air Force - 99

Preparing activity:
Air Force - 85

Agent:
DLA - 83

(Project 5945-0971-01)