

INCH-POUND

MS24192P  
 27 November 2003  
 SUPERSEDING  
 MS24192N  
 26 Jan 1993

DETAIL SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 25 AMPERES, 3 PST  
 (N.O.) TYPE II, NON-HERMETICALLY SEALED

This specification is approved for use by all Departments  
 and Agencies of the Department of Defense.

The requirements for acquiring the relay described herein shall  
 consist of this specification and the latest issue of MIL-PRF-6106.

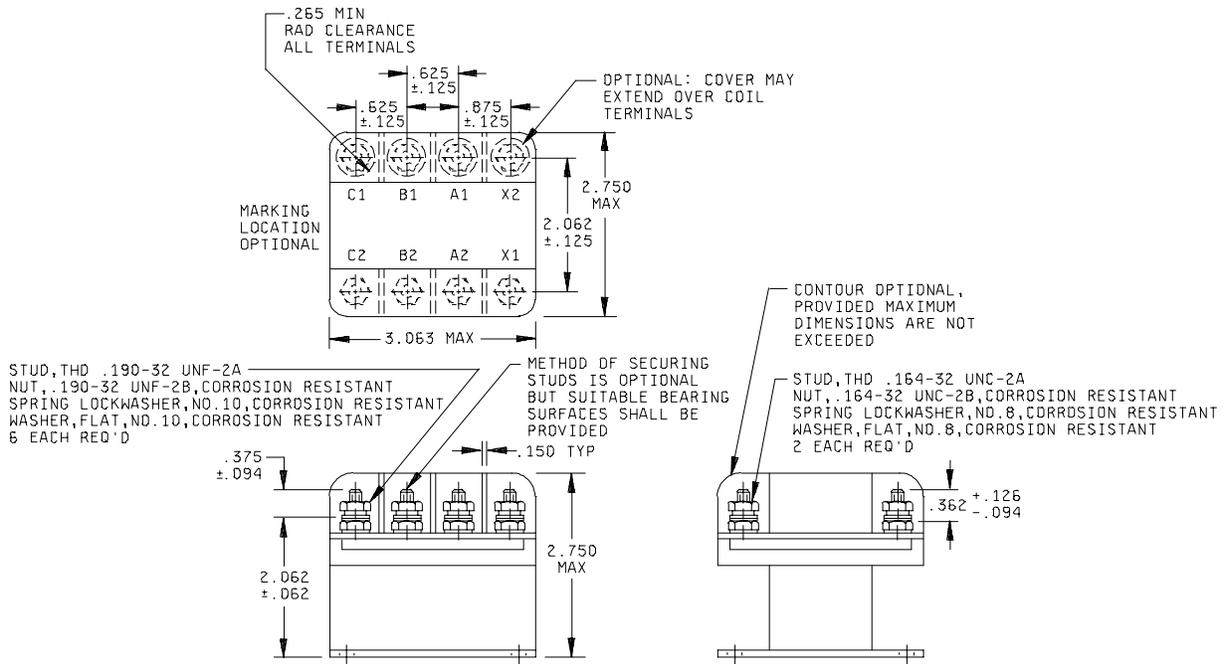
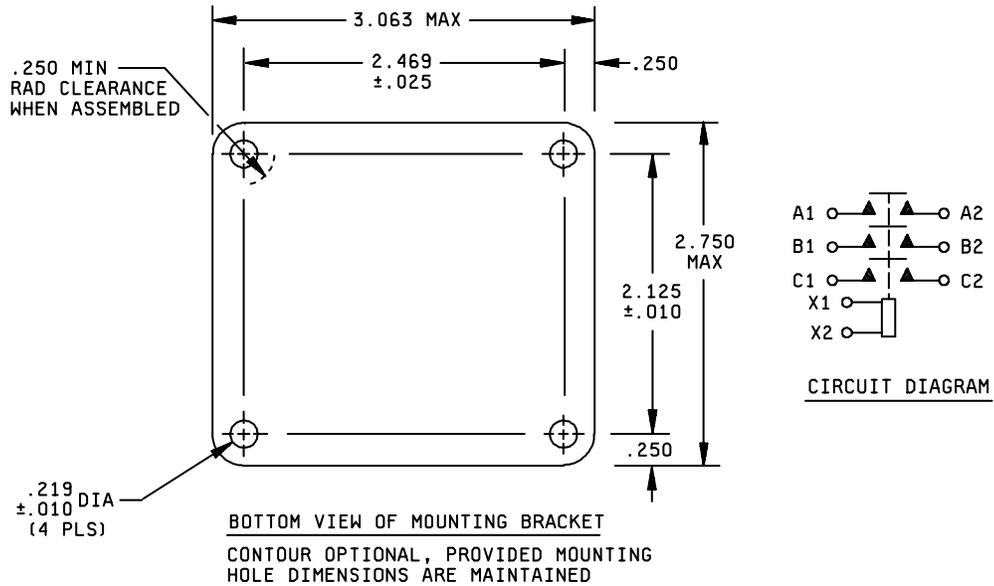


FIGURE 1. Dimensions and configurations.

MS24192P



Inches	mm	Inches	mm
.010	0.25	.265	6.73
.093	2.62	.375	9.53
.094	2.39	.625	15.86
.125	3.18	.875	22.23
.126	3.20	2.062	52.37
.150	3.81	2.125	53.98
.164	4.17	2.469	62.71
.190	4.83	2.750	69.85
.219	5.56	3.062	77.77
.250	6.35		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .032$  inch (0.81 mm).
4. Additional flat washer may be used for terminal seat.
5. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification sheet 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 forms a part of this standard to the extent specified herein.
7. Terminal numbers shall not appear on relay header. There shall be affixed to the relay a legible circuit diagram that identifies each terminal location.
8. Terminal covers and barriers required at power terminals.
9. Weights do not include covers and barriers.
10. For detail information, see tables I through III.

FIGURE 1. Dimensions and configuration - Continued.

MS24192P

REQUIREMENTS:

Dimensions and configuration: See figure 1.

General characteristics: See table I.

Contact data:

Load ratings: See table II.

Maximum contact drop:

Initial: 0.150 V.

After life test: 0.175 V.

Overload current (NO): 200 amperes.

Rupture current (NO): 250 amperes.

Coil data: See table III.

Duty rating: Continuous.

Electrical data:

Minimum insulation resistance:

Initial: 100 megohms.

After life or environmental test: 50 megohms.

Dielectric strength (sea level): 2 - 5 seconds (see table IV).

Dielectric strength (altitude): 1 minute (see table V).

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.

Vibration - sinusoidal: See table VI.

Vibration - random: Not applicable.

Acceleration: 10 g's.

Part or Identifying Number (PIN): MS24192-D1.

Qualification by similarity: See MIL-PRF-6106.

## MS24192P

TABLE I. General characteristics.

Part or identifying number	Type	Coil	Terminal type	Mounting	Maximum weight in pounds
MS24192-D1	II	dc	Stud	Plate	1.2

TABLE II. 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 <sup>1/</sup>			
		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	25				25				25			
Inductive	10	25				25				25			
Inductive													
Motor	50	25				25				25			
Lamp													
Transfer load													
Mechanical life reduced current	100	6.3				6.3				6.3			
Mixed loads		Applicable in accordance with MIL-PRF-6106.											

<sup>1/</sup> Absence of value indicates relay is not rated for 3 phase application.

<sup>2/</sup> Transfer load indicates relay is suitable for transfer between unsynchronized ac power supplies at rating indicated.

TABLE III. Operating characteristics.

PIN MS 24192-	Coil data										Time - milliseconds maximum						
	Coil	Rated			Max		Max pick-up voltage			Hold voltage <sup>2/</sup>	Drop out voltage <sup>2/</sup>	Oper-ate <sup>3/</sup>	Rel-ease <sup>4/</sup>	Bounce <sup>5/</sup>			
		Volts <sup>1/</sup>	Freq Hz	Ω Res	Volts	Amp	Nor-mal <sup>2/</sup>	High temp test	Cont current test					Main		Aux	
														NO	NC	NO	NC
D1	X1,X2	28	dc	60 ±10	29	0.58	18	21	22.5	7.0	1.5	20	15	3.0	---	---	---

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

<sup>2/</sup> Over the temperature range.

<sup>3/</sup> With rated coil voltage.

<sup>4/</sup> From rated coil voltage.

<sup>5/</sup> Bounce time after life tests is 6 rms.

## MS24192P

TABLE IV. Dielectric strength, seal level.

Dielectric strength	Initial		After life tests	
	28 V dc	115 V ac	28 V	115 V
Coil to case	1,250 V	N/A	1,000 V	N/A
Aux contacts	N/A	N/A	N/A	N/A
All other points	1,250 V	1,500 V	1,000 V	1,125 V

TABLE V. Dielectric strength, altitude.

	Initial	
	28 V dc	115 V ac
Coil to case	500 V	N/A
Aux contacts	N/A	N/A
All other points	700 V	700 V

TABLE VI. Vibration level (sinusoidal).

PIN	5-10 Hz	10-55 Hz	55-250 Hz	250-500 Hz
MS24192-D1	.08 DA	.06 DA	2 g's	2 g's

Custodians:  
 NAVY - AS  
 Air Force - 11  
 DLA - CC

Preparing activity:  
 DLA - CC

(Project 5945-1221-03)

Review activities:  
 Navy - EC

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at [www.dodssp.daps.mil](http://www.dodssp.daps.mil).