

INCH-POUND

MS24192R
 27 April 2016
 SUPERSEDING
 MS24192P
 27 November 2003

MILITARY 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](#).

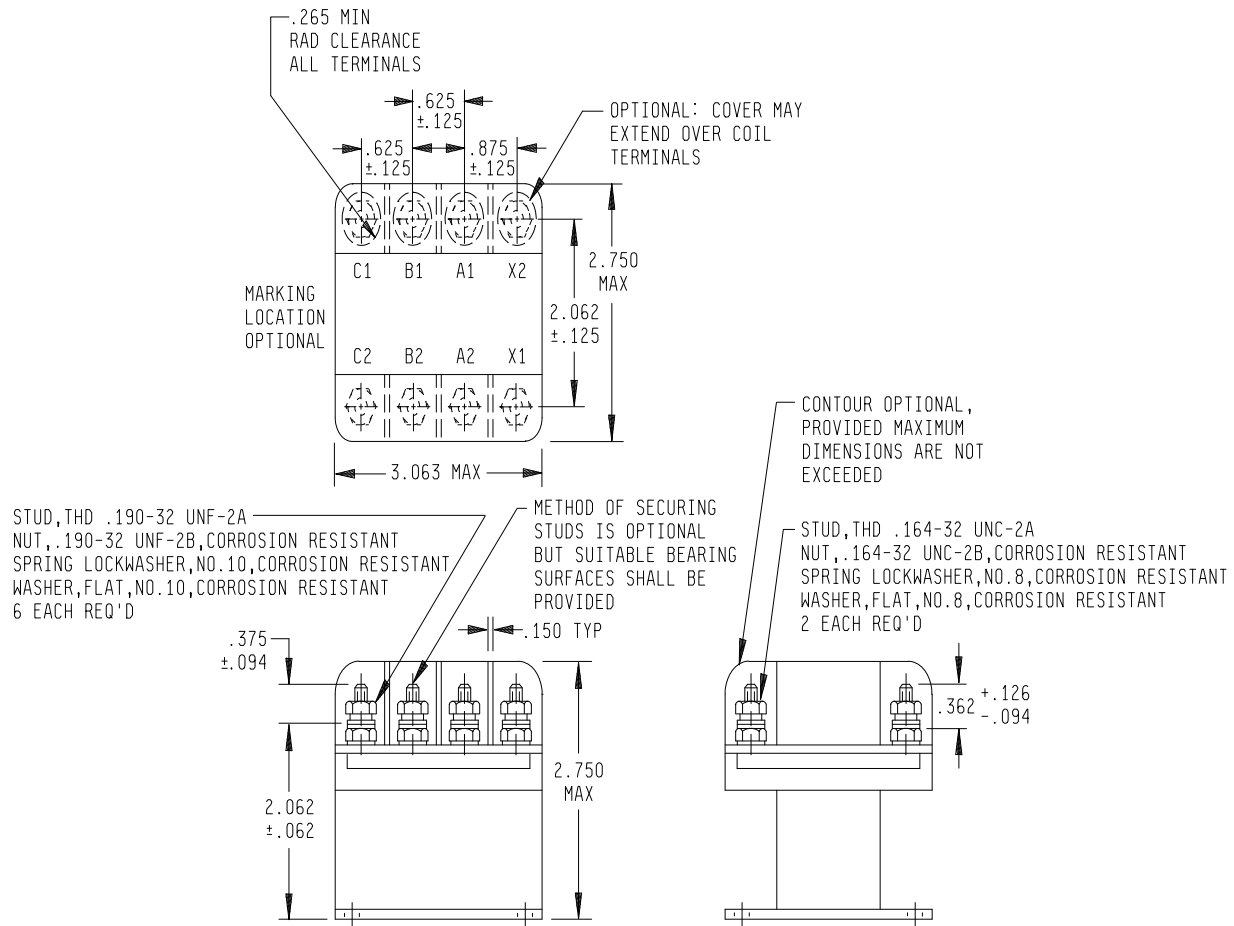
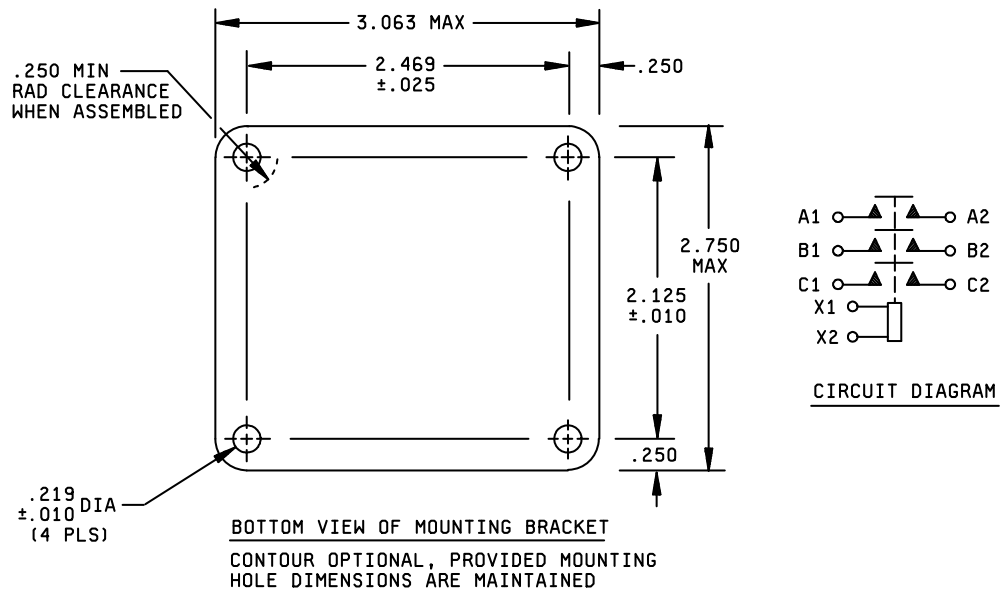


FIGURE 1. Dimensions and configurations.



MS24192R



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 Acquisition Streamlining and Standardization Information System (ASSIST) 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.

MS24192R

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](#).

MS24192R

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 ³	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase <u>1/</u>			
		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 .											

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

2/ 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 <u>2/</u>	Drop out voltage <u>2/</u>	Oper- ate <u>3/</u>	Re- lease <u>4/</u>	Bounce <u>5/</u>			
		Volts <u>1/</u>	Freq Hz	Ω Res	Volts	Amp	Nor- mal <u>2/</u>	High Temp test	Cont cur- rent test					Main		Aux	
														NO	NC	NO	NC
D1	X1, X2	28	dc	60 \pm 10	29	0.58	18	21	22.5	7.0	1.5	20	15	3.0	---	---	---

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

2/ Over the temperature range.

3/ With rated coil voltage.

4/ From rated coil voltage.

5/ Bounce time after life tests is 6 rms.

MS24192R

TABLE IV. Dielectric strength, seal level.

Dielectric strength	<u>Initial</u>		<u>After life tests</u>	
	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.

	<u>Initial</u>	
	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

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

This document references [MIL-PRF-6106](#).

Custodians:

Navy - AS

Air Force - 85

DLA - CC

Preparing activity:

DLA - CC

(Project 5945-2016--026)

Review activity:

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 the ASSIST Online database at <https://assist.dla.mil/>.