

INCH-POUND

MS27714F

7 June 2011

SUPERSEDING

MS27714E(USAF)

8 October 1998

## DETAIL SPECIFICATION SHEET

RELAYS, 75 AMPERE, 3PST, N.O. TYPE I,  
COIL AND CONTACTS INDIVIDUALLY SEALED

Inactive for new design after 27 March 1995.  
No superseding standard.

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

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

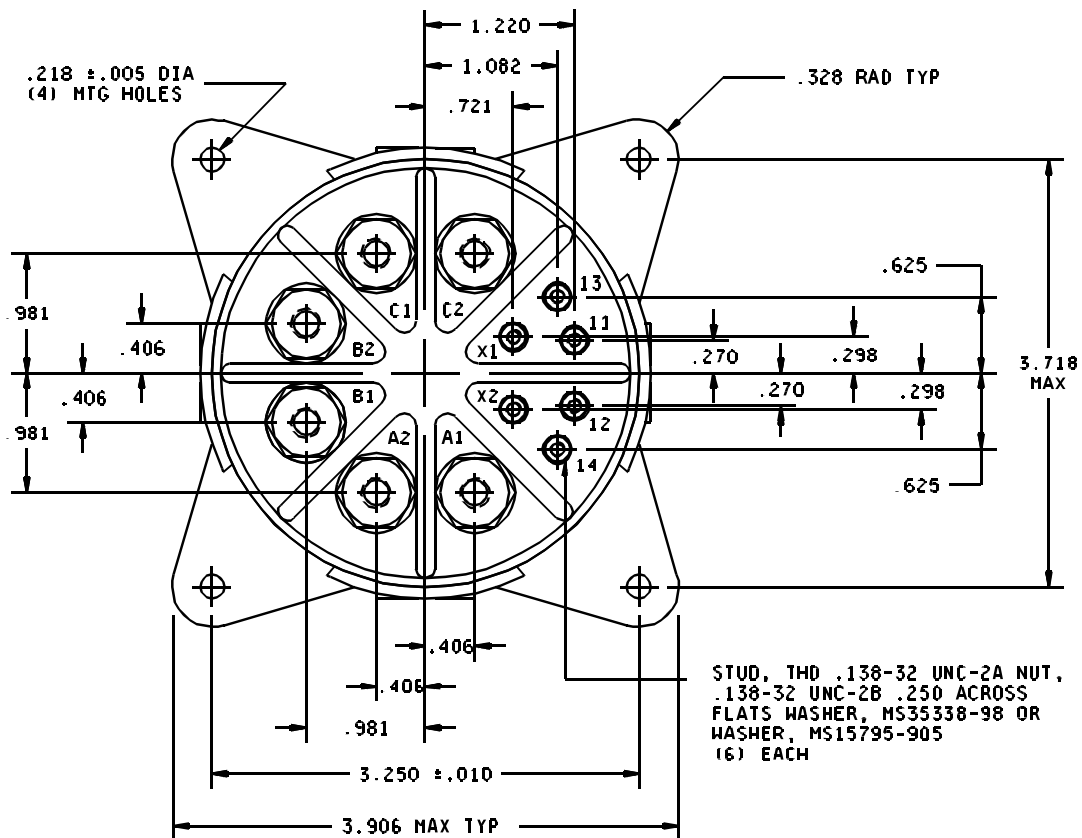
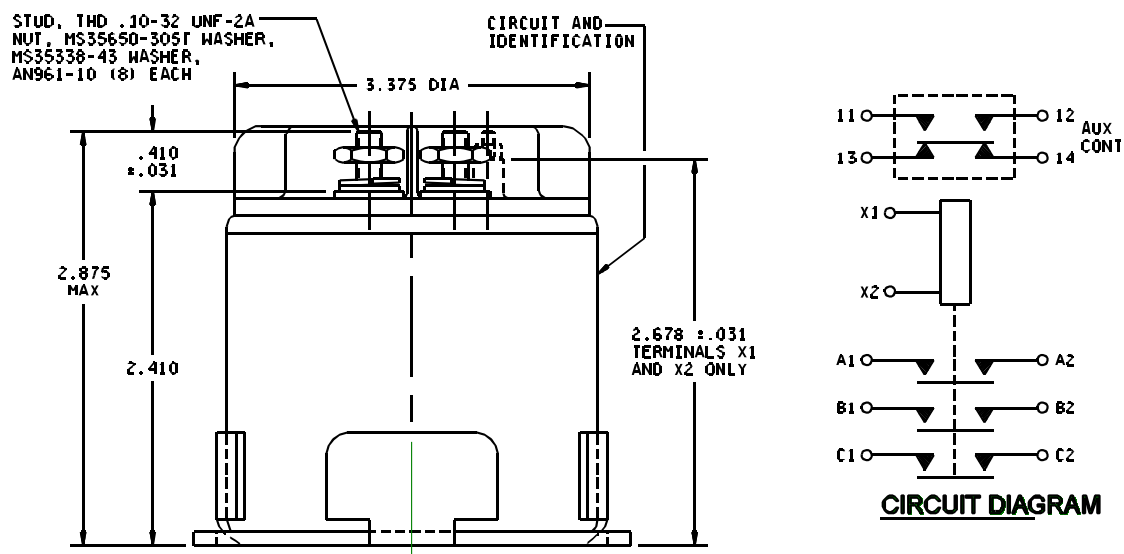


FIGURE 1. Dimensions and configurations.

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<u>Inches</u>	<u>mm</u>	<u>Inches</u>	<u>mm</u>	<u>Inches</u>	<u>mm</u>
.218	5.54	.721	18.31	2.687	68.25
.270	6.86	.981	24.92	2.875	73.03
.298	7.57	1.082	27.48	3.250	82.55
.406	10.31	1.220	30.99	3.375	85.73
.566	14.38	2.410	61.21	3.718	94.44
.625	15.88	2.678	68.02	3.906	99.21

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .015$  inch (0.38 mm).

FIGURE 1. Dimensions and configurations - Continued.

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## REQUIREMENTS:

Dash numbers and general characteristics: See table I.

TABLE I. Dash numbers and general characteristics.

Part or Identifying Number	Coil type	Terminal type	Auxiliary contacts	Maximum weight (pounds)
MS27714-1	dc	Lug	Yes	2.5
MS27714-2	ac	Lug	Yes	2.5

Contact data:

Load ratings: See table II.

Initial contact voltage drop: 0.150 volt maximum.

After life: 0.175 volt.

Overload current (NO): 800 amperes.

Rupture current (NO): 1,000 amperes.

TABLE II. Rated contact load and cycles (amperes per pole).

Type of load	Life operating cycles X 10 <sup>3</sup>	28 V dc				115 V ac, 1 phase				1/ 115,200 V ac, 3		1/ 240/416 V ac, 3	
		Main		Aux		Main		Aux		Main		Main	
		NC	NC	NC	NC	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz
Resistive	50	75		10	10	75	50	10	10	75	50		
Inductive	50												
Inductive	10	75		10	10	75		10		75			
Motor	50	75		5	5	75		5		75			
Lamp				1	1			1					
Transfer load 2/													
Mechanical life, reduced load	200	18.75		2.5	2.5								
Mixed loads	50	5		0.1	0.1	5		0.1		5		5	

1/ 115/200 V ac and 240/416 V ac for 400 Hz ratings: absence of values indicates that the relay may not be suitable for 3 phase applications.

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

Coil data: See table III.

Duty rating: Continuous.

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

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TABLE III. Dash numbers and characteristics.

Part or Identifying Number MS27714-	Coil data										Time-milliseconds-max <u>2/</u>					
	Rated			Max		Max pick-up voltage <u>1/</u>			Hold voltage <u>2/</u>	Dropout voltage <u>2/</u>	Operate <u>3/</u>	Release <u>4/</u>	Bounce			
	Volts <u>1/</u>	Freq (Hz)	Res (Ω)	Volts	Amperes at 25°C	Normal <u>2/</u>	High temp. test	Cont current <u>2/</u>					Main		Aux	
1	28	DC		29	.5	18	21	22.5	1.5	7.0	.025	.01	.002		.002	.002
2	115	400		124	.2	90	100	104	5.0	30	.025	.05	.002		.002	.002

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

2/ Over the temperature.

3/ With rated coil voltage.

4/ From rated coil voltage.

## Electrical data:

Insulation resistance:

Initial: 100 megohms.

After life or environmental tests: 50 megohms.

Dielectric withstanding voltage:

Sea level:	Coil	Contacts (main)	Contacts (auxiliary)
Initial:	1240	2000	1500
After life	1000	1500	1125
Altitude:			
At 80,000 ft:	500	700	

## Environmental characteristics:

Temperature range: -70°C to +125°C.

Maximum altitude rating: 80,000 feet.

Shock G-level: 50 g's.

Duration: 6-9 ms.

Maximum duration contact opening: 2 ms.

Vibration (sinusoidal): 10 g's.

Frequency range: 5-1500 Hz.

Acceleration: 15 g's.

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### Physical data:

Dimensions and configurations: See figure 1.

Weight: 2.5 pounds (1.13 kilograms) maximum.

Part or Identifying Number (PIN): MS27714- (plus a dash number from table II).

Qualification by similarity: See MIL-PRF-6106.

Quality assurance provisions: Group B and group C testing are not required. In the event of a change in the design or construction of the part, the manufacturer shall notify the qualifying activity and shall impose additional testing requirements as necessary.

The Qualified Products List (QPL) associated with this inactive for new design specification will be maintained until acquisition of the product is no longer required, whereupon the specification and the QPL will be canceled.

### Referenced documents:

MIL-PRF-6106    MIL-STD-461

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodian:  
Air Force - 85  
DLA – CC

Preparing activity:  
DLA - CC

(Project 5945-2011-014)

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.daps.dla.mil/>.