

INCH-POUND

MS27714E(USAF)

8 October 1998

SUPERSEDING

MS27714D(USAF)

27 March 1995

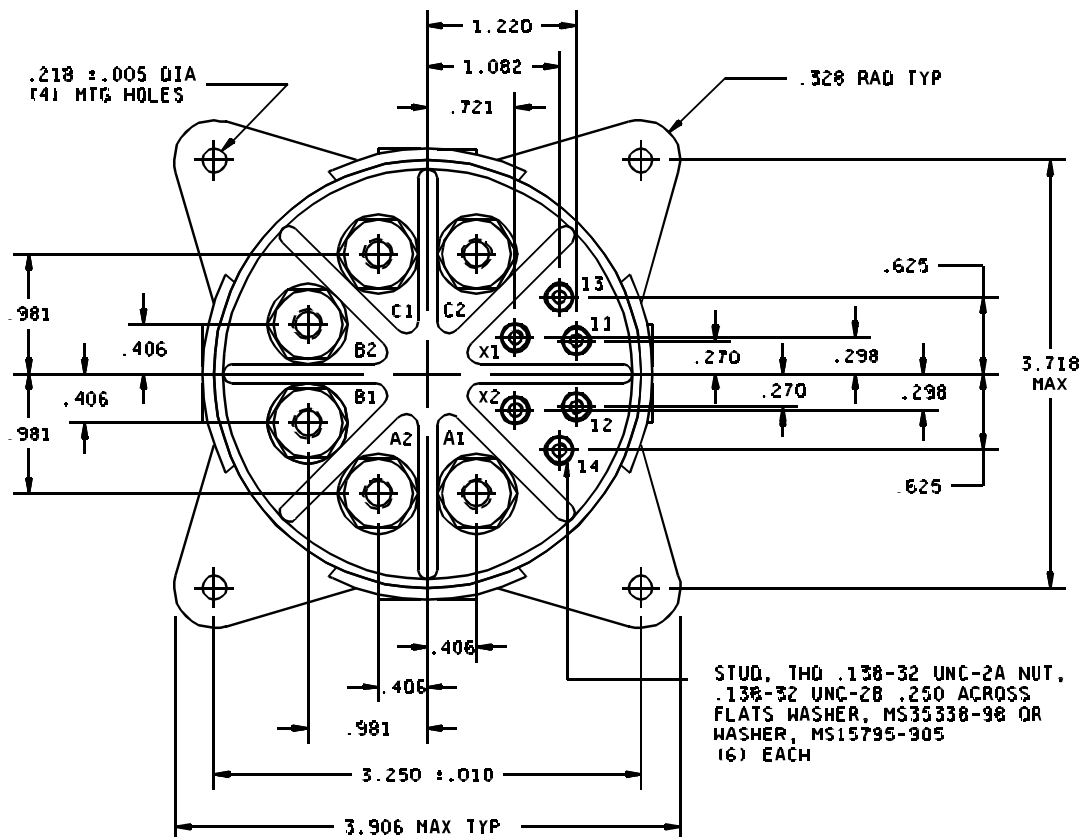
## MILITARY SPECIFICATION SHEET

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.

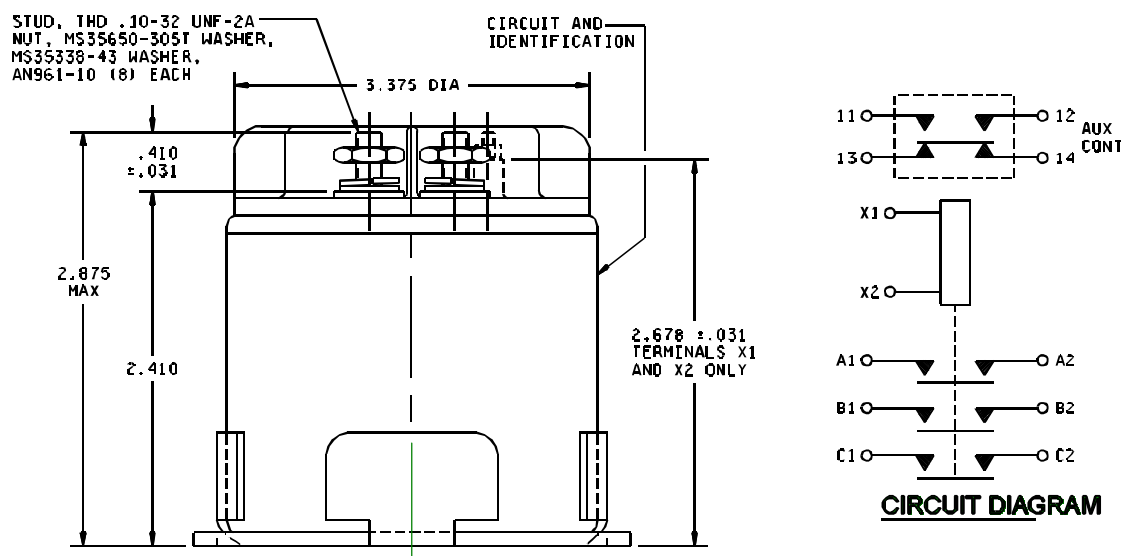
FIGURE 1. Dimensions and configurations

AMSC N/A

FSC 5945

DISTRIBUTION STATEMENT A Approved for public release; distribution is unlimited.

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Inches	mm	Inches	mm	Inches	mm
.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.

## Coil data: See table III.

Duty rating: Continuous.

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

## 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	

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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								
Intermediate current	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.

TABLE III. Dash numbers and characteristics

Part or Identifying Number MS27714-	Coil data										Time-milliseconds-max 2/			
	Rated			Max		Max pick-up voltage 1/					Operate 3/	Release 4/	Bounce	
	Volts	Freq (Hz)	Res (Ω)	Volts	Amperes at 25°C	Normal 2/	High temp. test	Cont current 2/	Hold voltage 2/	Dropout voltage 2/			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.

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### 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.

### 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).

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.

Custodian:  
Air Force - 85

Preparing activity:  
Air Force - 85

Agent:  
DLA - CC

(Project 5945-F795)