

INCH-POUND

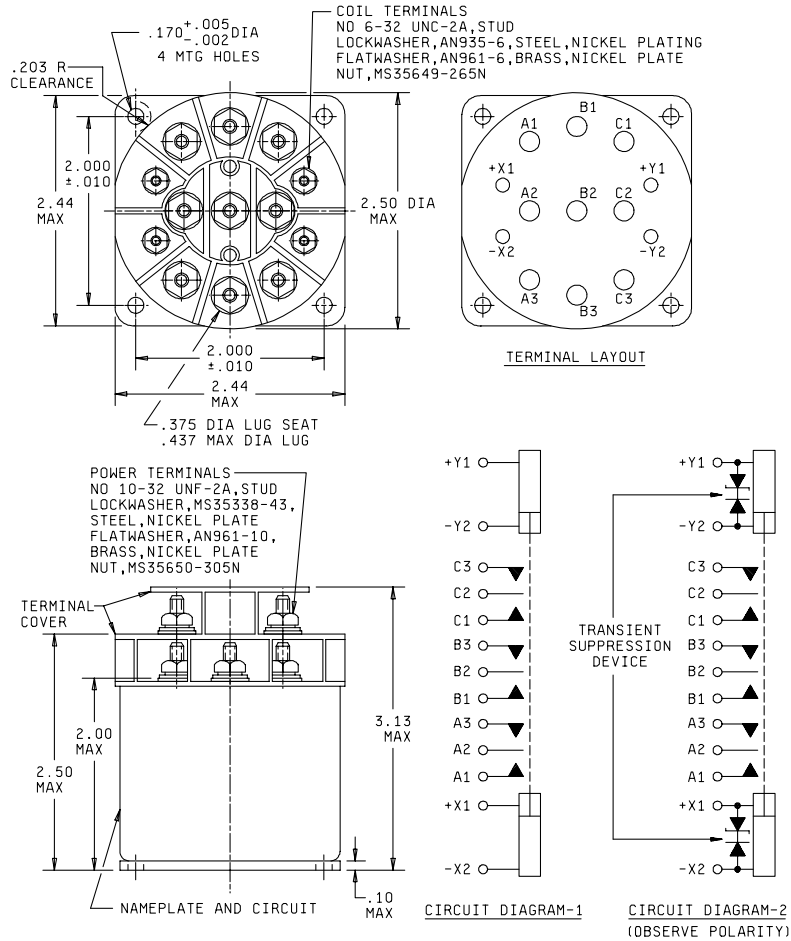
MS27750G
 15 December 2001
 SUPERSEDING
 MS27750F
 4 March 1986

DETAIL SPECIFICATION SHEET

RELAY, ELECTROMAGNETIC, 50 AMPERES, 3 PDT - N.O.,
 CENTER OFF, 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.



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Inches	mm	Inches	mm
.002	0.05	.437	11.10
.005	0.13	2.000	50.80
.010	0.25	2.44	62.0
.170	4.32	2.50	63.5
.203	5.16	3.13	79.5
.375	9.52		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .031$ (0.79 mm).
4. Weight includes terminal barriers.
5. Suppression level - the maximum induced transient voltage (back EMF) shall be 42 volts.

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

MS PART NUMBER	TYPE	COIL	TERMINAL TYPE	MOUNTING	MAX WEIGHT IN POUNDS
MS 27750-1	I	DC	STUD	PLATE	.969
MS27750-2	I	DC	STUD	PLATE	.969

TABLE I. Operating characteristics.

MS PART NO. MS27750	COIL	COIL DATA										TIME-MILLISECONDS-MAX					
		Nominal			Max		Max Pick-up Voltage			Drop Out voltage 1/	Hold voltage 1/	Operate 2/	Release 3/	Bounce			
		Volts	Freq Hz	Res Ω Min	Volts	Amp @ 25°C	Nominal 1/	High Temp Test	Cont Current Test					Main	Aux		
-1	X1,X2	28	DC	150	29	.190	18	20	21	1.5	7.0	35	25	3			
-2	X1,X2	28	DC	150	29	.190	18	20	21	1.5	7.0	35	25	3			

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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 4/				See Appropriate Notes
		Main		Aux		Main		Aux		Main		Aux		
		NO	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO	NC	
Resistive	50	25				50				50				
Inductive	20	15												
Inductive	50					50				50				
Motor	40	15				30				30				
Lamp	50	10				15				15				
Transfer, Load	10					12.5				12.5				5/
Mechanical Life Reduced Current	200	7				14				14				
Mixed loads	50	1				5				5				

1/ Over the temperature range.

2/ With nominal coil voltage.

3/ From nominal coil voltage.

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

5/ Transfer load indicates relay suitable for transfer between unsynchronized ac power supplies at rating indicated.

Electrical requirements:

Insulation resistance (minimum):

Initial: 100 megohms.

After life or environmental test: 50 megohms.

Contact drop:

Initial: 150 volts, maximum.

After life test: 175 volts, maximum.

Overload current: 100 A dc; 115/200 V ac, 400 Hz, 400 A.

Rupture current: 125 A dc; 115/200 V ac, 400 Hz, 400 A

Duty rating: Continuous.

Dielectric strength:

	Sea level (V rms)		Altitude 50,000 feet (V rms)	
	Initial	After life	Initial	After life
Coil to case:	1,000	1,000	500	
All of the points:	1,000	1,150	700	

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Environmental requirements:

Temperature range: -55°C to +71°C.

Altitude rating: 50, 000 feet, maximum.

Shock level: 50 G.

Duration: 6 ms

Maximum duration contact opening: 10µs.

Vibration sinusoidal:

G-level: 10 G.

Frequency range: 70-2,000 Hz.

Acceleration: 15 G.

Qualification by similarity: See MIL-PRF-6106.

Part or identifying number: (PIN): MS27750-1 and MS27750-2 (see Figure 1 for circuit diagram).

Custodian:
Navy - AS
Air Force - 11
DLA – CC

Preparing activity:
DLA - CC

(Project 5945-1128-05)