

INCH-POUND

MS27706G(USAF)
 8 September 1995
 SUPERSEDING
 MS27706F
 16 March 1990

MILITARY SPECIFICATION SHEET

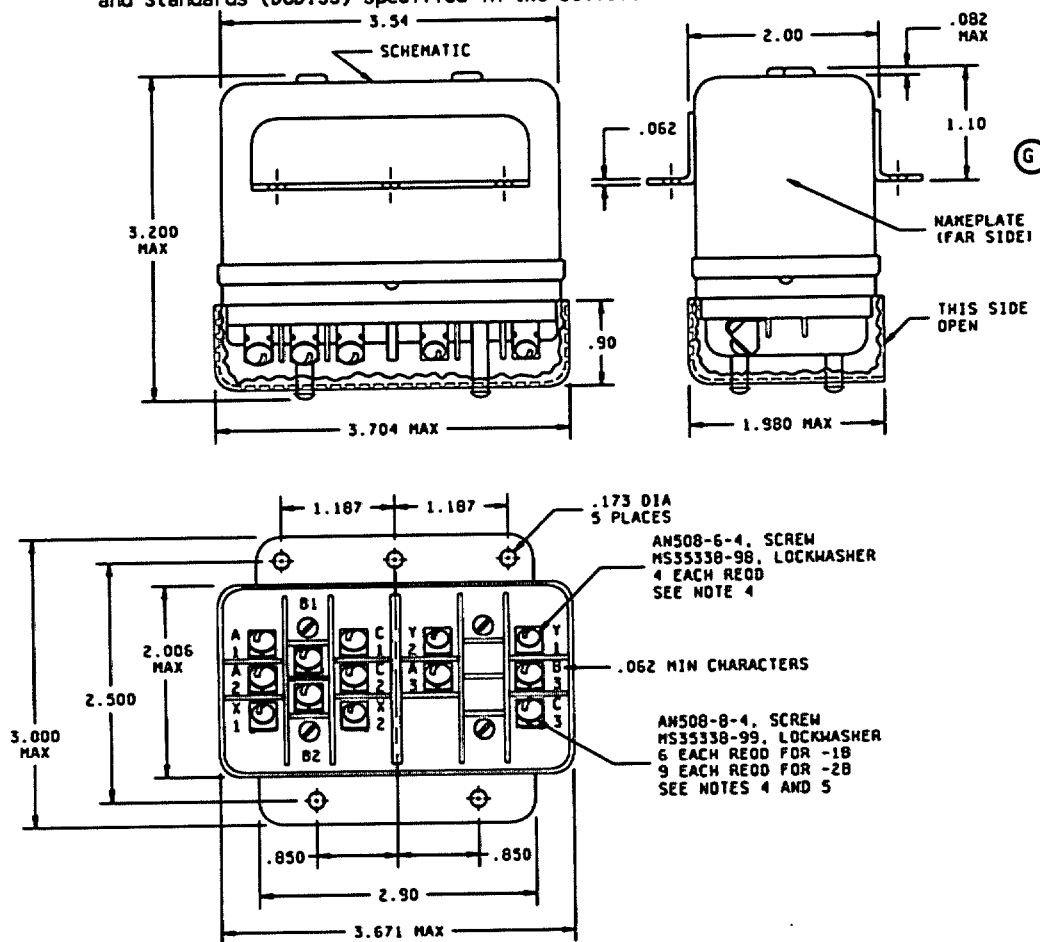
RELAYS, ELECTROMAGNETIC, 20 AMPERES, 3 PST,
 MECHANICAL INTERLOCK, (CENTER OFF) LOAD
 TRANSFER, TYPE I, HERMETICALLY SEALED

G

INACTIVE FOR NEW
 DESIGN AFTER 8 SEP 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 sheet and the issue of the following specification
 listed in that issue of the Department of Defense Index of Specifications
 and Standards (DODISS) specified in the solicitation: MIL-R-6106.

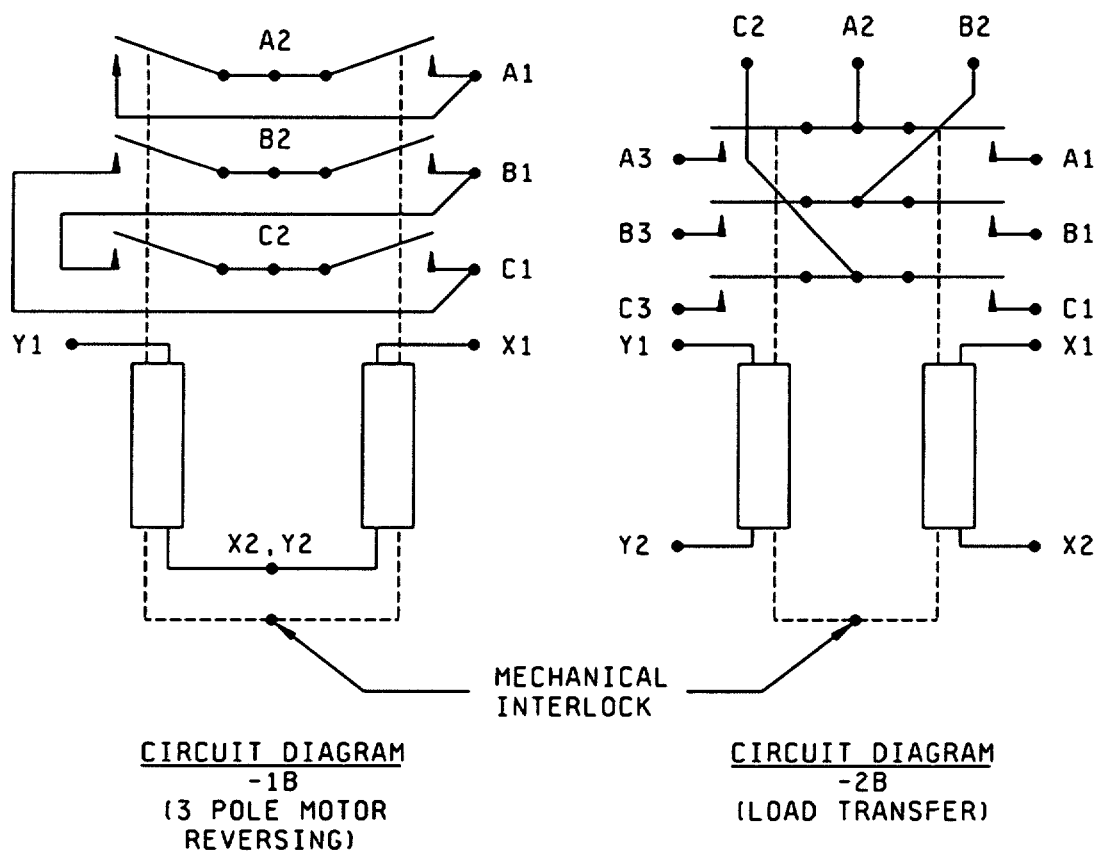


DUST COVER IS OMITTED FROM BOTTOM VIEW FOR CLARITY

FIGURE 1. Dimensions and configuration.

G denotes changes

MS27706G(USAF)



Inches	mm	Inches	mm
.062	1.57	2.006	50.95
.082	2.08	2.500	63.50
.173	4.39	2.90	73.7
.850	21.59	3.000	76.20
.90	22.9	3.200	81.28
1.10	27.9	3.54	89.9
1.187	30.15	3.671	93.24
1.980	50.29	3.704	94.08
2.00	50.8		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Tolerances are ± 0.03 (0.8 mm) for two place decimals and ± 0.010 (0.25 mm) for three place decimals.
4. Power terminals are capable of accepting MS25036-53 lugs. Coil terminals are capable of accepting MS25036-7 lugs.
5. A3, B3, and C3 are omitted on -1B.

FIGURE 1. Dimensions and configuration - Continued.

MS27706G(USAF)**REQUIREMENTS:**

Dimensions and configuration: See figure 1.

Dash numbers and 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: 80 amperes dc; 120 amperes ac.

Rupture current: 100 amperes dc; 150 amperes ac.

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:

	Initial	After life tests
Coil to case	1250 V rms	1050 V rms
Auxiliary contacts	N/A	N/A
All other points	1500 V rms	1125 V rms

Altitude, 1 minute (80,000 feet):

Coil to case	500 V rms
Auxiliary contacts	N/A
All other points	500 V rms

MS27706G(USAF)

Environmental characteristics:

Temperature range: -70°C to +125°C.

Maximum altitude rating: 80,000 feet.

Shock, g-level: 25 g's.

Duration: 11 ms.

Maximum duration contact opening: 2 ms.

Vibration, sinusoidal:

G-level: 10 g's.

Frequency range: 10-1500 Hz.

Nonoperate:

G-level: 15 g's.

Frequency range curve: 20 to 2,000 Hz.

Acceleration: 15 g's.

Terminal strength (high temperature pull and torque test): Not applicable.

Part or Identifying Number (PIN): MS27706- (plus applicable dash number from table I).

- Ⓔ Quality assurance provisions: Group B and group C testing are not required. The manufacturer shall notify the qualifying activity in the event of any design or construction changes, 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.

Ⓔ TABLE I. Dash numbers and general characteristics.

PIN MS27706 1/	Type	Coil		Terminal type	Mounting method	Max weight (pounds)	Circuit type 1/
		X	Y				
-1B	I	dc	dc	Screw	Bracket	1.4	3-pole motor reversing
-2B							Load transfer

1/ See circuit diagrams.

MS27706G(USAF)

G TABLE II. Rated contact load (amperes per pole) case grounded.

Type of load	Life operating cycles x 10 ³	28 V dc 1/				115 V ac, phase						115/200 V ac, 3 phase 1/						See notes
		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	400 Hz	60 Hz			
Resistive	100	20				20	15			20	15							
Inductive	20	15																
Inductive	100					20	20			20	20							
Motor	100	20				20	12			20	12							
Lamp	100	5				5	5			5	5							
Transfer load	10					20				20						2/		
Mechanical life (reduced current)	400	5				5	5			5	5					2/		
Interme- diate current						Applicable per MIL-R-6106												

1/ Absence of value indicates relay is not rated for three phase applications.

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

G TABLE III. Operating characteristics.

PIN MS27706 -1B, -2B	Coil data										Time-milliseconds-maximum						
	Coil	Rated			Max		Max pick-up voltage 2/				Drop-out voltage 2/	Operate 3/	Release 4/	Bounce			
		Volts 1/	Freq (Hz)	Res (Ω)	Volts	A	Nor-mal	High temp test	Cont current test	Hold voltage 2/				Main		Aux	
														NO	NC	NO	NC
X-Y	28	DC		29	0.25	18	19.5	22.5	7.0	1.5	20	10	5				

1/ CAUTION: The use of any coil voltage less than the 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.

MS27706G(USAF)

CONCLUDING MATERIAL

Review activity:
Air Force - 99

Preparing activity:
Air Force - 85

Agent:
DLA - ES

(Project 5945-F779)