

INCH-POUND

MIL-PRF-6106/26E  
10 November 2000  
SUPERSEDING  
MIL-PRF-6106/26D(USAF)  
29 April 1985

PERFORMANCE SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 50 AMPERES SPST, NO,  
WITH 5 AMPERE SPDT AUXILLARY 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

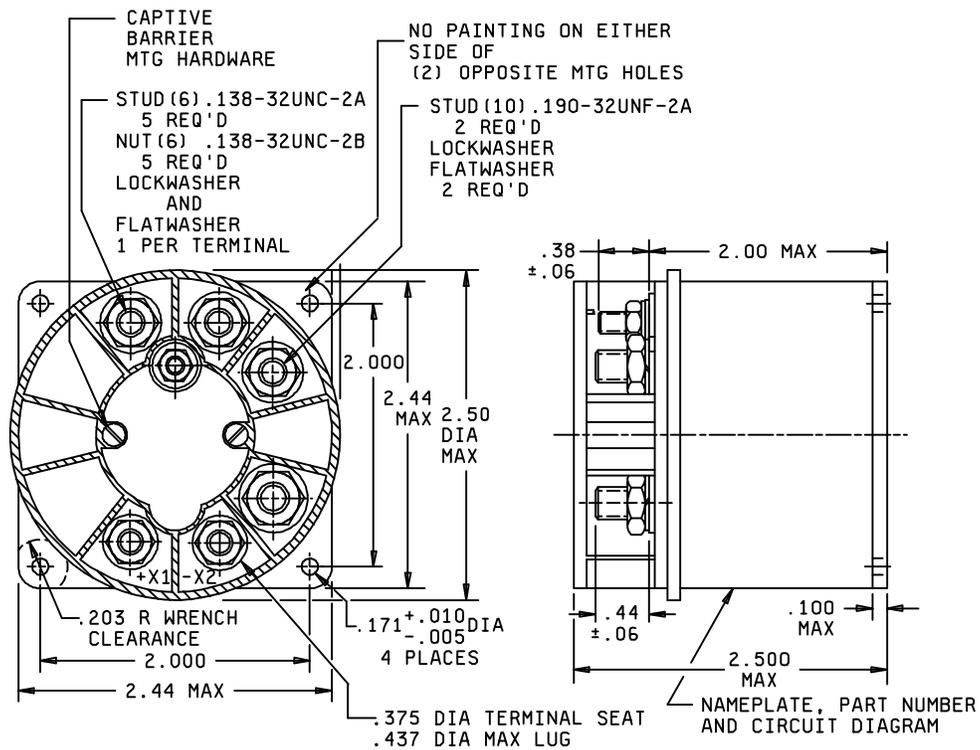
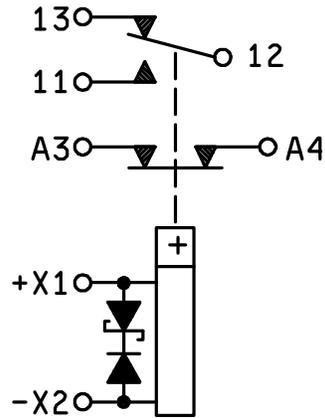


FIGURE 1. Relay, outline drawing.



CIRCUIT DIAGRAM  
(OBSERVE POLARITY)

Inches	mm	Inches	mm
.005	0.13	.375	9.52
.010	0.25	.38	9.7
.06	1.5	.437	11.10
.100	2.54	.44	11.2
.11	2.8	1.91	48.5
.171	4.34	2.000	50.80
.203	5.16	2.44	62.0
.31	7.9	2.50	63.5

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are  $\pm 0.010$  (0.25mm) for three place decimals and  $\pm 0.03$  (0.8 mm) for two place decimals.
4. Terminal numbers need not appear on the relay header providing there is affixed to the relay a suitable legible circuit diagram that identifies each terminal location specified.
5. Suppression level - the maximum induced transient voltage (back EMF) shall be 50 volts, referenced to zero volts.
6. Terminal studs shall be rated at 171°C.

FIGURE 1. Relay, outline drawing - Continued.

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

Type of load	Life operating cycles X 10 <sup>3</sup>	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase			
		Main		Aux		Main		Aux		Main		Aux	
		NO	NC	NO	NC	400	50/60	400	50/60	400	50/60	400	50/60
Resistive	50	50	50	5	5	65	---	5	---	---	---	---	---
Inductive	50	---	---	3	3	65	---	3	---	---	---	---	---
Inductive	20	50	50	---	---	---	---	---	---	---	---	---	---
Motor	---	---	---	---	---	---	---	---	---	---	---	---	---
Lamp	---	---	---	---	---	---	---	---	---	---	---	---	---
Transfer, load	---	---	---	---	---	---	---	---	---	---	---	---	---
Mechanical life	---	---	---	---	---	---	---	---	---	---	---	---	---
Reduced current	---	---	---	---	---	---	---	---	---	---	---	---	---
Intermediate current		APPLICABLE PER SPECIFICATION											

REQUIREMENTS:

COIL DATA:

Nominal operating voltage: 28 V dc.

Maximum operating voltage: 29 V dc.

Pickup voltage: 15 V dc, maximum, @ 25°C.

Dropout voltage: 1.5 @ 25°C.

Hold voltage: 7 V dc @ 25°C.

Duty: continuous.

Coil current: 0.280 ampere, maximum, @ 28 V dc, 25°C.

OPERATIONAL DATA:

Operate time: 35 milliseconds maximum with nominal coil voltage.

Dropout time: 25 milliseconds maximum from nominal coil voltage.

Contact load: See table I.

Contact bounce time: 5 milliseconds, maximum.

Contact drop: 150 millivolts, maximum, initially  
175 millivolts, maximum, after life test.

Overload current: 400 amperes ac, 125 amperes dc.

Rupture current: 500 amperes ac, 150 amperes dc.

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PHYSICAL DATA:

Weight: 12.5 ounces, maximum.

Strength of terminals and mounting studs: Applicable.

Finish: Instrument black.

Seal: Hermetic.

Terminal barriers:

Base cover: Nonconductive. One type of insulator for meeting this requirement is MIL-I-24768/1. The insulator shall enable the product to meet the performance requirements of this specification.

Barrier: Nonconductive. One type of insulator for meeting this requirement is PA110 G43 A99900 KB207 UB090 PA176 E12 per ASTM D 4066-82. The insulator shall enable the product to meet the performance requirements of this specification.

ENVIRONMENTAL DATA:

Temperature range: -55°C to +71°C.

Altitude: 60,000 feet.

Dielectric withstanding voltage (sea level):

	Initial	After life tests
Coil to case	1,000 V rms	1,000 V rms
Aux contacts	1,000 V rms	1,000 V rms
All other points	1,500 V rms	1,150 V rms

Dielectric withstanding voltage (altitude):

	60,000 feet	
Coil to case	500 V rms	500 V rms
Aux contacts	500 V rms	500 V rms
All other points	700 V rms	700 V rms

Insulation resistance: 100 megohms, minimum @ 500 volts.

Vibration (sinusoidal): .06 D.A., 10 Hz to 55 Hz, 10 g's 55 Hz to 1,500 Hz, 15 g's, 55 Hz to 1,000 Hz.

Shock: 25 g's for 11 milliseconds.

Acceleration: 10 g's.

Part number: M6106/26-001

Qualification by similarity: See MIL-PRF-6106.

Custodian:  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

Review activities:  
Air Force - 99

(Project 5945-1113-10)