

INCH-POUND

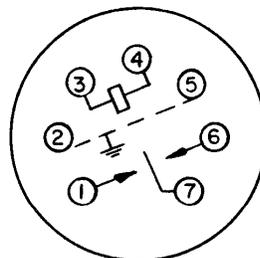
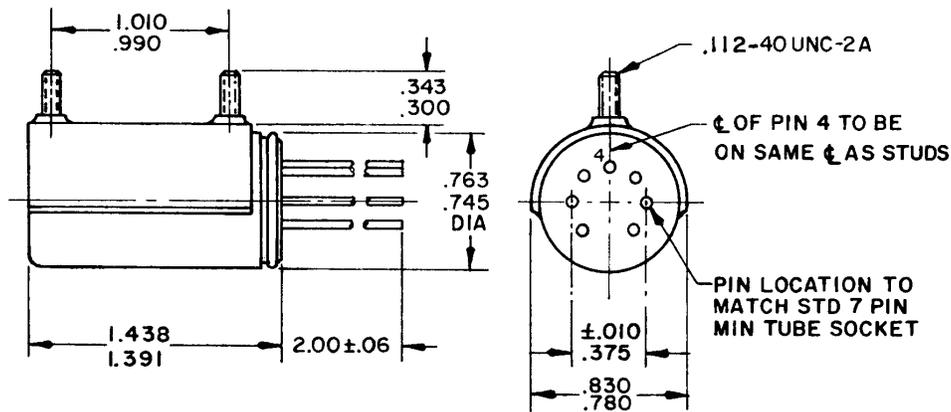
MIL-DTL-83729/4B
14 June 2002
SUPERSEDING
MIL-C-83729/4A
15 July 1983

DETAIL SPECIFICATION SHEET

CHOPPERS, ELECTROMECHANICAL, HERMETICALLY SEALED,
SINGLE POLE, DOUBLE THROW, BREAK BEFORE MAKE

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 latest issue of MIL-DTL-83729.



SCHEMATIC DIAGRAM

Inches	mm	Inches	mm
.010	.25	.780	19.81
.06	1.52	.830	21.08
.300	7.62	.990	25.15
.343	8.71	1.010	25.65
.375	9.53	1.391	35.33
.745	18.92	1.438	36.53
.763	19.38	2.00	38.10

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ± 0.005 (.13mm) for three place decimals and ± 0.02 (.51 mm) for two place decimals.
4. When the coil is de-energized the center reed may be in any of 3 positions.

FIGURE 1. Outline drawing, terminal arrangement and schematic diagram.

MIL-DTL-83729/4B

REQUIREMENTS:

Contact data:

Single pole, double throw, break before make.

Polarity: With positive voltage on pin 3 and negative voltage on pin 4, pins 6 and 7 will close.

Voltage and current: Dry circuit to 2 milliamperes @ 10.0 V dc (maximum intermittent rating).
10 Volts @ 1 milliampere continuous rating maximum.

Coil data at 25°C:

Voltage rated: 5.7 to 6.9 volts rms.

Resistance: 155 ohms $\pm 10\%$.

Impedance: 153 to 197 ohms.

Frequency range: 57 to 63 Hz.

Waveform characteristics (at 25°C):

Dwell time: $167^\circ \pm 10^\circ$

Dissymmetry : 15 degrees maximum.

Transfer time: 3 degrees minimum.

Phase angle: $20^\circ \pm 5^\circ$ electrical degrees.

Noise level: 50 microvolts rms maximum, above system noise, between each contact and ground, across 1.0 megohm with the chopper operating.

Environmental conditions:

Dielectric withstanding voltage: 145 volts rms, 60 Hz or 200 volts dc for 60 seconds.

Insulation resistance: 100 megohms minimum between contacts and ground and 10 megohms minimum for drive coil to ground.

Vibration I: 10 to 55 Hz @ 0.060 inches maximum, double amplitude, nonoperating.

Shock: 100g's per MIL-STD-202, method 213, test condition I, nonoperating.

Temperature range: -65°C to +100°C.

Life: 2,000 hours, dry circuit @ $25^\circ \pm 5^\circ\text{C}$.

Mechanical:

Weight: .094 pound, maximum.

Dimensions: See figure 1.

Enclosure: Hermetically sealed, material brass, deep drawn, grey enamel finish over zinc chromate primer.

Header: 7 pin miniature, pins 1, 3, 4, 6, and 7 to be copper, compression glass bead insulators.

Terminals: Wire leads.

Mounting position: Any.

Part number: M83729/4-001.

MIL-DTL-83729/4B

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

Review activities:
Army - AT, AV, CR4, MI
Navy - AS, MC, OS
Air Force - 19

(Project 5945-1152-04)