

INCH-POUND

MIL-R-5757/8F
30 June 2003
SUPERSEDING
MIL-R-5757/8E
18 February 1986

MILITARY SPECIFICATION SHEET

RELAYS, ELECTRICAL, HERMETICALLY SEALED, DPDT, 2 AMPERES

INACTIVE FOR NEW DESIGN AFTER 18 FEBRUARY 1986.

This specification sheet is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the product described herein shall consist of this specification sheet and the latest issue of MIL-R-5757.

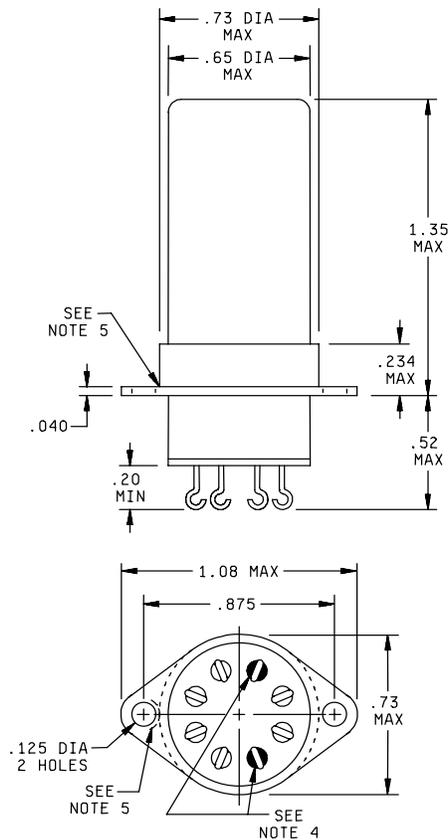
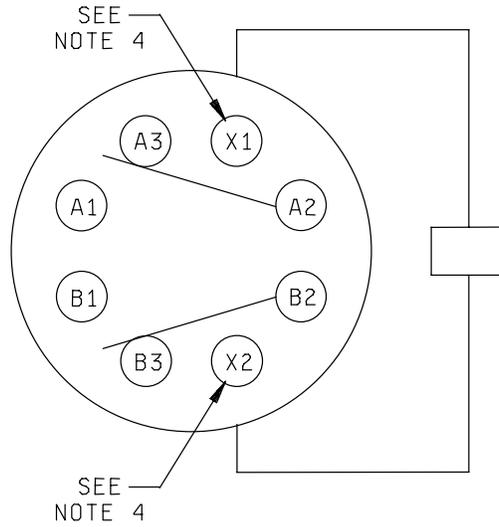


FIGURE 1. Dimensions and configuration.

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CIRCUIT DIAGRAM
UNENERGIZED POSITION
TERMINAL VIEW

Inches	mm
.040	1.02
.125	3.18
.20	5.1
.234	5.94
.52	13.2
.65	16.5
.73	18.5
.875	22.22
1.08	27.4
1.35	34.3

NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is ± 0.005 (0.13 mm).
3. Metric equivalents are given for general information only.
4. Indicated terminals shall be identified with contrasting beads.
5. Mounting screw head clearance shall be provided so that the relay may be mounted using a round head machine screw having .202 (5.13 mm) nominal head diameter. The mounting surface shall be flat with a minimum .218 (5.54 mm) diameter, and concentric with the mounting hole.
6. Circuit diagram shown on relay is terminal view.

FIGURE 1. Dimensions and configuration - Continued.

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REQUIREMENTS:

Contact data:

High-level characteristics: (CAUTION: High level relays are not designed or intended for use in low level applications).

Configuration: DPDT (Double pole - double throw).

Arrangement: 2 form C.

Load ratings: (Relay case grounded).

Resistive: 2 amperes at 28 V dc.

Minimum current: Resistive loads only, 2 amperes at 28 V dc, 0.100 ampere at 28 V dc, 0.500 ampere at 28 V dc.

Contact resistance or voltage drop:

Rated life:

Before: 0.05 ohm.

During: 10 percent of open circuit voltage maximum.

After: 0.10 ohm.

Minimum current:

Before: 0.05 ohm maximum.

During: 3 ohms maximum.

After: 1 ohm maximum.

Contact bounce: 1 millisecond (ms) maximum.

Overload:

Resistive: 2 times rated current.

Coil data:

Duty rating: Continuous.

Maximum voltage: 32 V dc.

Nominal voltage: 26.5 V dc.

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Pickup voltage: 18 V dc maximum over temperature range.

Dropout voltage: 14 V dc maximum over temperature range.

Coil resistance: 400 ohms $\pm 10\%$ at 25°C.

Operate time: 10 ms maximum.

Release time: 10 ms maximum.

Electrical data:

Insulation resistance: 1,000 megohms minimum, except the resistance between coil and case at high temperature shall be 500 megohms or greater.

Dielectric withstanding voltage:

	Sea level V rms (60 Hz)	Altitude V rms (60 Hz)
Between case, frame or enclosure, and all contacts in the energized and deenergized positions: -----	1,000	350 All terminals to case
Between case, frame or enclosure, and coil: -----	1,000	
Between all contacts and coil: -----	1,000	
Between open contacts in the energized and deenergized positions: -----	500	
Between contact poles: -----	1,000	

Environmental data:

Temperature range: -65°C to +125°C.

Vibration: Symbol 3 (15 g's, 10 to 2,000 Hz).

Acceleration: Applicable.

Shock: Symbol 3 (100 g's).

Physical:

Terminal strength: 5 (± 0.5) pounds pull.

Sealed by welding: See table I.

Dimensions and configuration: See figure 1.

Termination: Solder lug.

Weight: 0.09 pound maximum.

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Life test requirements:

High level: 100,000 cycles at rated load.

Minimum current: Level II, 50,000 cycles.

Verification:

Periodic inspection: Groups B and C inspections are not applicable.

Group A.

1. Subgroup 1: This subgroup may be waived at the discretion of the qualifying activity if fully tested MIL-PRF-39016/6 relays are used internally.
2. Subgroup 2: 100 percent.
3. Dielectric withstanding voltage:
 - (a) Tests to be conducted at sea level rating only.
 - (b) Duration of application: 5-10 seconds at a 10 percent increase in the dielectric strength voltage.

Qualification inspection. Single submission only is applicable. The qualification sample size shall be 17 units including one open unit. The sample units shall be subjected to all specified tests of the qualification inspection table.

Part number: M5757/8-002.

TABLE I. Part number and characteristics.

Part number M5757/8	Coil chamber	Sealing means
002	Sealed	Weld

Supersession data: See table II.

TABLE II. Supersession data.

Superseded type designation	Superseding part number M5757/8-
RY4LA3B3L01 RY4LA1A3L01 RY4LA1B3L01 RY4LA2A3L01 RY4LA2B3L01 RY4LA3A3L01	002

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Custodians:

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

Preparing activity:

DLA - CC

Review activities:

Army - AR, AT, MI
Navy - SH
Air Force - 99

(Project 5945-1191-02)