

DETAIL SPECIFICATION SHEET

RELAYS, SOLID STATE, TIME DELAY (ON RELEASE), TRACK MOUNTED,
TYPE IIA, CLASS C, SPST, 150 MILLIAMPERES,
FIXED TIME, .050 TO 500 SECONDS

Inactive for new design after 23 June 1995.
No superseding document.

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 [MIL-PRF-83726](#).

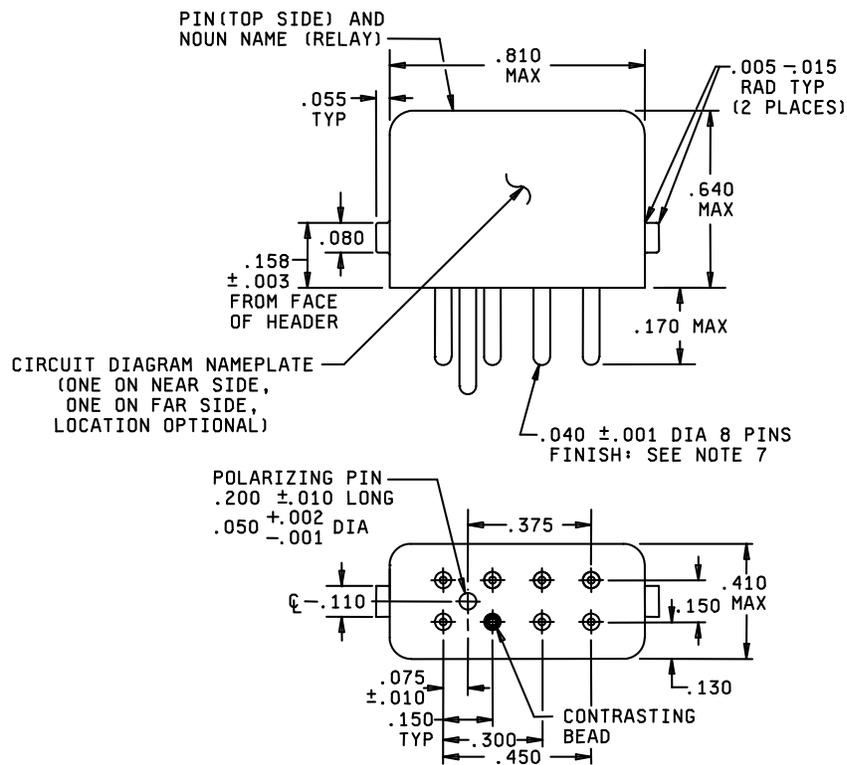
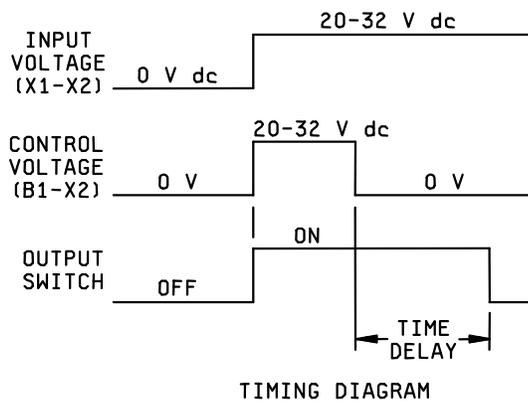
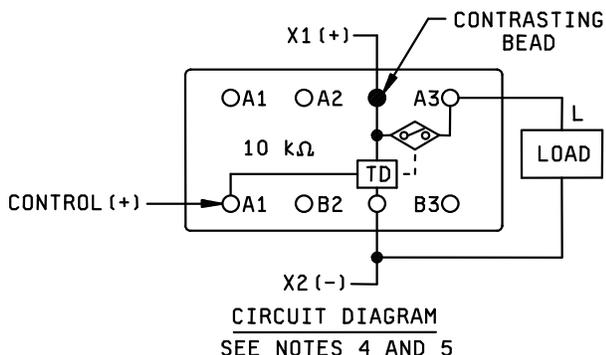


FIGURE 1. Dimensions and configuration.



MIL-R-83726/25J

Inches	mm
.001	0.03
.002	0.05
.003	0.08
.005	0.13
.010	0.25
.015	0.38
.040	1.02
.050	1.27
.055	1.40
.075	1.90
.080	2.03
.110	2.79
.130	3.30
.150	3.81
.158	4.01
.170	4.32
.200	5.08
.410	10.41
.640	16.26
.810	20.57



NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is ± 0.010 (0.25 mm).
3. Metric equivalents are given for general information only.
4. Terminals A1, A2, B1, and B2 are connected internally. Do not use for external tie points or for terminals.
5. There shall be affixed to the relay a legible circuit diagram that identifies each terminal location specified.
6. Relays are intended for use with socket mount [MIL-DTL-12883/52](#) and bracket mount [MIL-DTL-12883/53](#).
7. Terminal plating: Shall provide the operational, environmental, and interface characteristics to provide a reliable interconnect to gold plated contacts. Terminals except for the polarizing pin, shall be gold plated. One system for gold plating that may be used is [ASTM B488](#), type 3, class 1.25 with a nickel underplate of 50 to 150 microninches thick. The gold plating system shall enable the product to meet the performance requirements of this specification and shall be approved by the qualifying activity.

FIGURE 1. Dimensions and configuration - Continued.

REQUIREMENTS:

Operating data:

Timing action: Delay-on release.

Time delay: Fixed; select from .05 to 500 seconds.

Timing accuracy: ± 10 percent of the nominal value. 1/

Recycle time: 10 milliseconds. 2/

Power interrupt: The accuracy will not be affected by power interruptions up to 1 millisecond spaced at least 10 milliseconds apart.

Control voltage (B1-X2): 20 V dc to 32 V dc.

Control current: 2 milliamperes maximum.

Input data:

Input voltage: 28 V dc rated; range 20 V dc to 32 V dc.

Duty rating: Continuous.

Current drain: 10 milliamperes maximum plus load at 25°C.

Polarity protection: The timer shall be inoperative during, and undamaged by, reversal of the polarity of the operating voltage.

Output data:

Configuration: SPST; switch closure to +28 V dc.

Rating: 150 milliamperes maximum.

Suppression: Inductive suppression provided for output protection.

Voltage drop: 2 V dc maximum.

Leakage current: 1.0 microampere maximum at 28 V dc and +25°C; 10 microamperes maximum at 28 V dc and 125°C.

Endurance (life): 1,000,000 cycles minimum for test.

Qualification: 2,000 hours.

Group B: 1,000 hours or 1,000,000 cycles, whichever is less.

1/ The accuracy requirement applies to any combination of operating temperature and voltage.

2/ Recycle time is defined as the minimum time that power must be applied to the control terminal to assure that the next timing cycle will be completed within the specified timing tolerance. (Units may be recycled during timing or after time-out.)

MIL-R-83726/25J

Electrical data:

Transients: In accordance with [MIL-STD-704](#) for 28 volts dc system (figure 11).

Electromagnetic interference: In accordance with [MIL-STD-461](#), class 1D. [3/](#)

Insulation resistance: 1,000 megohms at 500 V dc between each pin and case. [4/](#)

Dielectric strength: 1,000 volts rms at 60 Hz at sea level between case and pins connected together. [4/](#)

Environmental data:

Maximum altitude rating: 80,000 feet.

Ambient temperature (operating and nonoperating): -55°C to +125°C.

Vibration (sinusoidal): 10 Hz to 55 Hz at 0.06 inch DA; 10 g's, 55 Hz to 500 Hz; 20 g's, 500 Hz to 3,000 Hz.

Vibration (random): [MIL-STD-202](#), method 214, condition 1B. Duration: 15 minutes each plane.

Shock: 1,100 g's for 0.5 millisecond, ½ sine, 3 axes.

Acceleration: 100 g's, 3 axes.

Seal: Hermetic.

Moisture resistance: [MIL-STD-202](#), method 106.

Physical data:

Dimensions and configuration: See [figure 1](#).

Terminations: See [figure 1](#).

Terminal strength: 3 pounds pull.

Weight: 0.56 ounce (15.7 grams) maximum.

Marking: See [MIL-PRF-83726](#). In addition, relays shall be marked with the ESDS identifier as specified in [MIL-STD-1285](#).

[3/](#) EMI test limits shall not be exceeded during the timing interval or when continuously energized under steady-state conditions in accordance with the radio interference requirements of [MIL-PRF-83726](#).

[4/](#) Terminals X1, X2, and B1, and A3, must be connected together during this test. Dielectric withstanding voltage and insulation resistance are measured between all mutually insulated terminals and case.

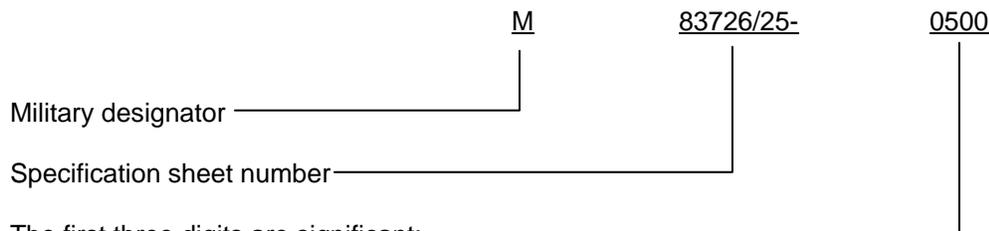
MIL-R-83726/25J

ESDS protection program: The manufacturer shall establish and maintain an ESD control program in accordance with [MIL-STD-1686](#) for mission critical equipment. Evidence of such compliance shall be verified by the qualifying activity of this specification as a prerequisite for qualification and continued qualification. This program shall be documented by an ESD control plan that must be under document control. As a minimum, this plan must address the identification of ESDS sub-components and end items, facilities, training, design protection, handling procedures, marking, cleaning, preservation, packaging, and quality assurance. A model ESD control program is available from the qualifying activity and may be used as a guideline. Further guidance for ESD control is available from the EQS/ESD Association and the Electronics Industry Association (EIA). This requirement is applicable to all manufacturers who handle ESDS component parts and materials in the relay manufacturing or testing process. This requirement is not limited to manufacturers qualifying ESDS end items.

ESDS verification: As a part of qualification or qualification after redesign, ESD testing shall be done in accordance with method 3015 of [MIL-STD-883](#) modified to test at 16,000 volts. Testing at lower voltage levels is not required. This testing shall be accomplished as part of the group III for qualification inspection and as part of the group C inspection.

ESDS preservation and packaging: Relays shall be preserved and packaged in such a manner as to ensure that the integrity of ESD sensitive relays is not diminished. ESD sensitive relays shall be preserved and packaged in accordance with the requirements of [MIL-STD-1686](#).

Part or Identifying Number (PIN): consists of the prefix M83726/25-, a four-digit dash number (expressed in milliseconds):



The first three digits are significant; the fourth digit is the number of zeros to follow the first three digits. The time is expressed in milliseconds and converted to seconds. (See examples.)

Examples: M83726/25-0500 - 50 millisecond time delay. [5/](#)
M83726/25-2503 - 250 second time delay.

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.

[5/](#) Any relays numbered prior to the date of this specification with a quality level indicator (W, X, Y) shall be considered interchangeable (store and issue).

MIL-R-83726/25J

NOTE: As of 15 June 1999, [MIL-PRF-83726](#) no longer specifies Quality Levels, but existing order configurations may still include them. Relays with a “W” quality level indicator at the end are interchangeable with relays without a quality level letter.

Referenced documents. In addition to [MIL-PRF-83726](#), this document references the following:

MIL-DTL-12883/52	MIL-DTL-12883/53	MIL-STD-202-106	MIL-STD-202-214
MIL-STD-461	MIL-STD-704	MIL-STD-883	MIL-STD-1285
MIL-STD-1686	ASTM B488		

Changes from previous issue: The margins of this specification are mark with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and on contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

Review activity:
Air Force – 99

(Project 5945-2016-008)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.