

INCH-POUND

MIL-R-83726/23E  
30 November 2015  
SUPERSEDING  
MIL-R-83726/23D  
19 September 2005

DETAIL SPECIFICATION SHEET

RELAYS, HYBRID, TIME DELAY (ON RELEASE), TYPE IIB,  
CLASS B, 10 AMPERES, 4PDT, HERMETICALLY SEALED

Inactive for new design after 10 November 1993.  
No superseding document.

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 and [MIL-PRF-83726](#).

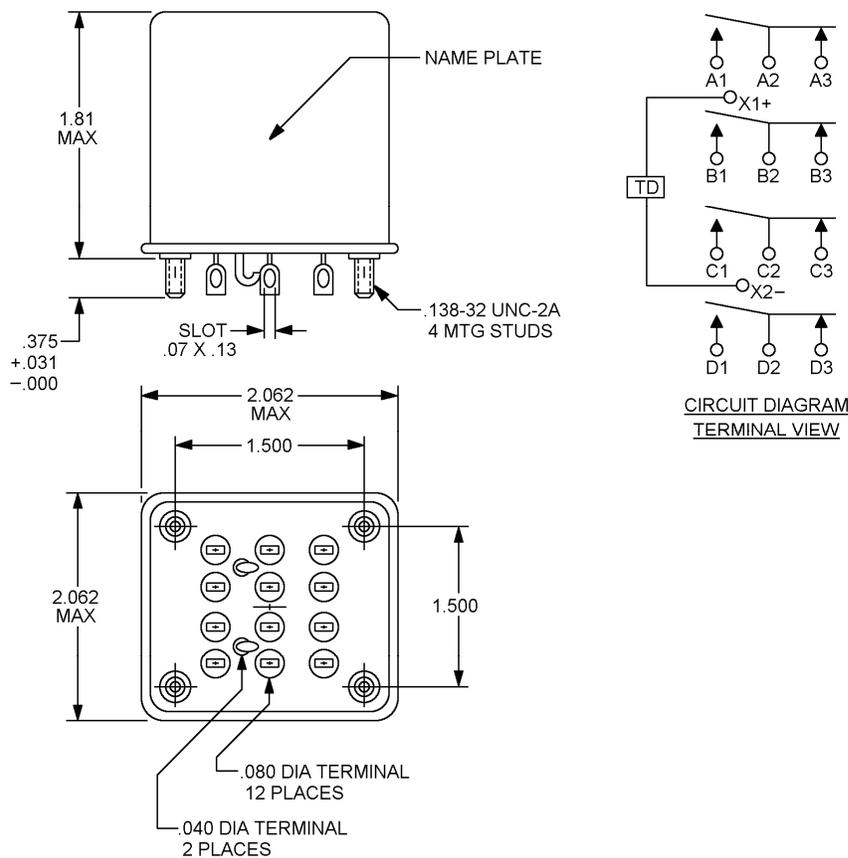
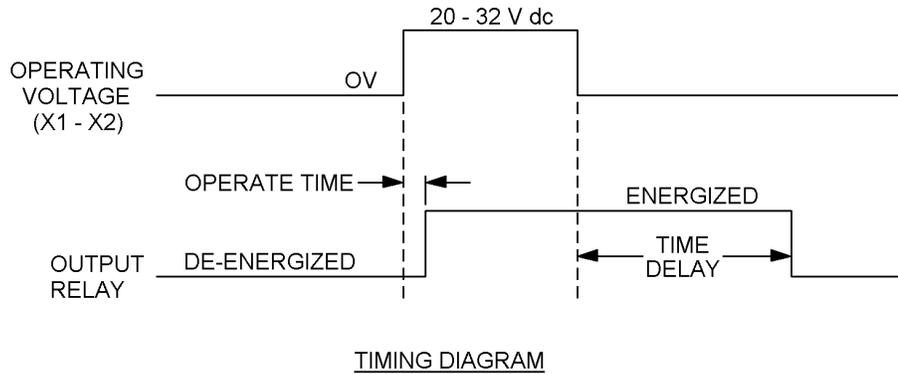


FIGURE 1. Dimensions and configurations.

AMSC N/A

FSC 5945





NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are  $\pm 0.010$  (0.25 mm) for three place decimals and  $\pm 0.03$  (0.8 mm) for two place decimals.
4. Terminal numbers shall not appear on the relay header. There shall be affixed to the relay a permanent, legible circuit diagram that identifies each terminal location specified.

FIGURE 1. Dimensions and configurations - Continued.

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TABLE I. Dash numbers and time delay characteristics. <sup>1/</sup>

Dash number	Release time delay (seconds) ±10%	Maximum operating time (ms)	Dash number <sup>2/</sup>	Release time delay (seconds) ±10%	Maximum operating time (ms)
1000	<sup>2/</sup> .100	50	1602	16	100
5000	<sup>2/</sup> .500	50	1802	18	100
7500	<sup>2/</sup> .750	50	2002	20	100
1001	1	50	2202	22	100
2001	2	50	2502	25	100
3001	3	50	3002	30	100
4001	4	50	3502	35	100
5001	5	50	4002	40	100
6001	6	50	4502	45	100
7001	7	50	5002	50	100
8001	8	50	5502	55	100
9001	9	50	6002	60	100
1002	10	50	6502	65	100
1202	12	100	7002	70	100
1402	14	100	7502	75	100

<sup>1/</sup> Additional time delay relays within the 0.1 to 75 seconds delay range are available. To establish Part or Identifying Number (PIN's) not listed in table I, see "PIN" herein. Time delay accuracy applies to all combinations of operating temperature and voltage.

<sup>2/</sup> Add ±10 milliseconds to ±10 percent tolerances.

## REQUIREMENTS:

Contact data:

Configuration: 4PDT.

Life/load ratings (relay case grounded) (See [table II](#)).

TABLE II. Life/load ratings.

Type of load	Life (cycles)	Amperes	
		28 V dc	115/200 V rms 1 and 3 phase, 400 Hz
Resistive	100,000	10	10
Inductive	20,000	8	8
Motor	100,000	4	4
Lamp	100,000	2	2
Reduced current resistive	400,000	2.5	2.5

Contact voltage drop:

Initial: 0.150 volt.

After life tests: 0.175 volt.

Minimum current: Applicable in accordance with [MIL-PRF-6106](#).

Contact bounce: 1 millisecond (maximum).

Overload:

DC: 40 amperes.

AC: 60 amperes.

Rupture:

DC: 50 amperes.

AC: 80 amperes.

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Input data:

Duty rating: Continuous.

Maximum voltage: 32 V dc.

Rated voltage (over temperature range): 28 V dc.

Minimum voltage: 20 V dc.

Minimum voltage (high-temperature test): 20 V dc.

Minimum voltage (continuous current test): 20 V dc.

Peak current (-55°C to +100°C): 2.5 amperes for 100 milliseconds (maximum).

Steady-state dc current: 0.060 ampere (maximum).

Release time delay: See [table I](#).

Recycle time: [1/](#)

Maximum operate time: See [table I](#).

Electrical data:

Insulation resistance at 500 V dc: [2/](#)

Initial: 1,000 megohms (minimum).

After life or environmental tests: 500 megohms (minimum).

Dielectric withstanding voltage (sea level):

Input (X1 - X2) [2/](#)

All other points.

Initial	After life tests
1,000 V rms	1,000 V rms
1,250 V rms	1,000 V rms

Dielectric withstanding voltage (altitude) (80,000 feet): [2/](#)

Input (X1 - X2): 350 V rms. [2/](#)

All other points: 350 V rms.

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

[1/](#) Recycle time is the same as operate time in [table I](#). It is defined as the minimum time that operate voltage must be applied to the input terminals to assure that a new release timing cycle can be completed within the specified timing tolerance.

[2/](#) Input terminals X1 and X2 shall be connected together during this test.

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Environmental data:

Temperature range (operating): -55°C to +100°C.

Maximum altitude rating: 80,000 feet.

Shock g-level: 50 g's, 1/2 sine, 3 axes.

Duration: 11 ±1 milliseconds.

Maximum duration contact opening: 10 microseconds.

Vibration (sinusoidal):

G-level: 20 g's

Frequency range: 10 Hz to 3,000 Hz.

Vibration (random): Applicable in accordance with [MIL-STD-202](#), method 214, test condition IG.

Power spectral density: 0.4 g<sup>2</sup>/Hz.

Frequency range: 50 Hz to 2,000 Hz.

Duration: 15 minutes each plane.

Acceleration: 20 g's in any axis.

Seal: [MIL-STD-202](#), method 112, condition B.

Humidity: 95 percent relative humidity.

Physical data:

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

Terminations: Solder hook.

Terminal strength: 3 ±0.5 pounds pull.

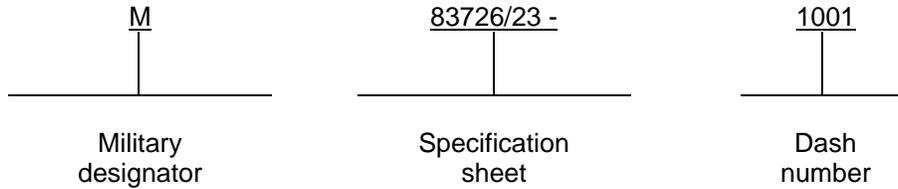
Weight: 0.75 pound (maximum).

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

Electrostatic discharge (ESD) control program: Applicable (see [MIL-PRF-83726](#)).

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Part or Identifying Number (PIN): Consists of the prefix M83726/23-, a four-digit dash number (expressed in milliseconds) as follows:



Examples

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

M83726/23 - 1000 - 0.100 second time delay.

M83726/23 - 6001 - 6 seconds time delay.

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-STD-202](#)

[MIL-STD-704](#)

[MIL-STD-1285](#)

[MIL-PRF-6106](#)

Changes from previous issue. The margins of this specification are marked 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 contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

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

Preparing activity:  
DLA - CC

(Project 5945-2016-001)

Review activities:  
Air Force - 99

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