

INCH-POUND

MIL-R-83726/12F  
7 January 2016  
SUPERSEDING  
MIL-R-83726/12E  
7 July 2005

DETAIL SPECIFICATION SHEET

RELAYS, HYBRID, TIME DELAY (ON RELEASE), TYPE IIA,  
CLASS B, 10 AMPERES, 4PDT, HERMETICALLY SEALED,  
FIXED TIME, 0.100 TO 300 SECONDS

Inactive for new design after 10 January 1994.  
For new design use [MIL-PRF-83726/29](#).

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](#).

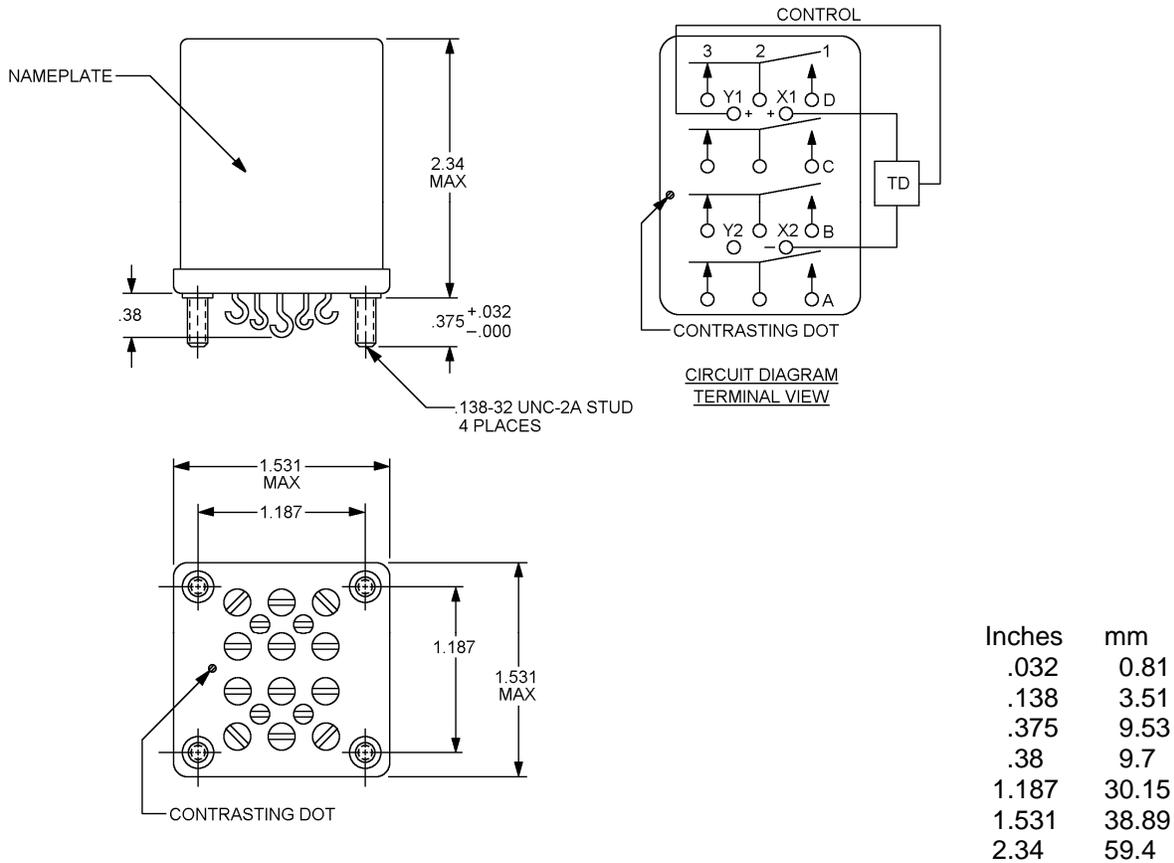


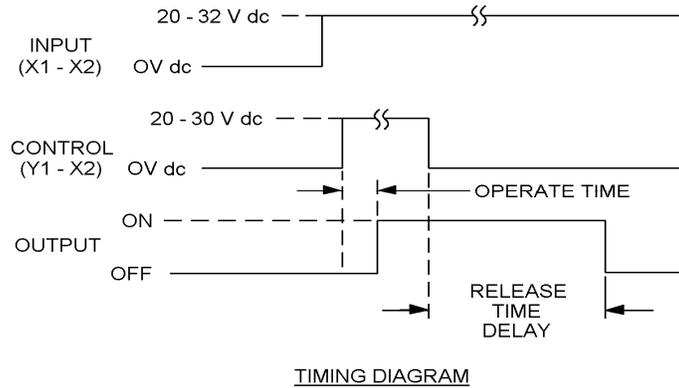
FIGURE 1. Outline dimensions and configuration of relay.

AMSC N/A

FSC 5945



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NOTES:

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

FIGURE 1. Outline dimensions and configuration of relay - Continued.

TABLE I. Dash numbers and time delay characteristics. [1/](#)

Dash number	Time delay (seconds) $\pm 10\%$	Dash number	Time delay (seconds) $\pm 10\%$	Dash number	Time delay (seconds) $\pm 10\%$	Dash number	Time delay (seconds) $\pm 10\%$
-1000	<a href="#">2/</a> .100	-1202	12	-6502	65	-1703	170
-5000	<a href="#">2/</a> .500	-1402	14	-7002	70	-1803	180
-7500	<a href="#">2/</a> .750	-1602	16	-7502	75	-1903	190
-1001	1	-1802	18	-8002	80	-2003	200
-2001	2	-2002	20	-8502	85	-2103	210
-3001	3	-2202	22	-9002	90	-2203	220
-4001	4	-2502	25	-9502	95	-2303	230
-5001	5	-3002	30	-1003	100	-2403	240
-6001	6	-3502	35	-1103	110	-2503	250
-7001	7	-4002	40	-1203	120	-2603	260
-8001	8	-4502	45	-1303	130	-2703	270
-9001	9	-5002	50	-1403	140	-2803	280
-1002	10	-5502	55	-1503	150	-2903	290
		-6002	60	-1603	160	-3003	300

[1/](#) Additional time delay relays within the .100 to 300 second delay range are available. To establish Part or Identifying Numbers (PIN's) not listed in table I (see "PIN" herein).

[2/](#) Add  $\pm 10$  milliseconds to  $\pm 10$  percent tolerance.

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REQUIREMENTS:

Contact data:

Configuration: 4PDT.

Life/load ratings (relay case grounded):

Type of load	Life (cycles)	28 V dc	Amperes 115/200 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.

Intermediate current: Applicable in accordance with [MIL-PRF-83536](#).

Contact bounce: 1 millisecond maximum.

Overload:

DC: 40 amperes.

AC: 60 amperes.

Rupture:

DC: 50 amperes.

AC: 80 amperes.

Input data:

Duty rating: Continuous.

Maximum voltage: 30 V dc.

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

Minimum voltage: 20 V dc.

Minimum voltage high temperature test: 21 V dc.

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Minimum voltage continuous current test: 23.5 V dc.

Maximum current at 25°C: 0.150 ampere.

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

Control current: 20 milliamperes maximum.

Control pulse duration: 50 milliseconds minimum.

Operate time: 50 milliseconds maximum.

Electrical data:

Insulation resistance at 500 V dc: [1/](#)

Initial: 1,000 megohms minimum.

After life or environmental tests: 500 megohms minimum.

Dielectric strength (sea level):

	Initial	After life tests
Input (X1 - X2 - Y1) <a href="#">1/</a>	1,000 V rms	1,000 V rms
All other points	1,250 V rms	1,000 V rms

Dielectric strength (altitude): 80,000 feet. [1/](#)

Input (X1 - X2 - Y1): 350 V rms. [1/](#)

All other points: 350 V rms.

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

[1/](#) Input terminals X1, X2, and Y1 shall be connected together during this test.

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Environmental data:

Temperature range (operating): -55°C to +85°C.

Maximum altitude rating: 80,000 feet.

Shock g-level: 100 g's, 1/2 sine, 3 axes.

Duration: 6 ±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 1B.

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: Not applicable.

Humidity: 95 percent relative humidity.

Physical data:

Configuration and dimensions: See [figure 1](#).

Terminations: Solder hook.

Terminal strength: 3 ±0.5 pounds pull.

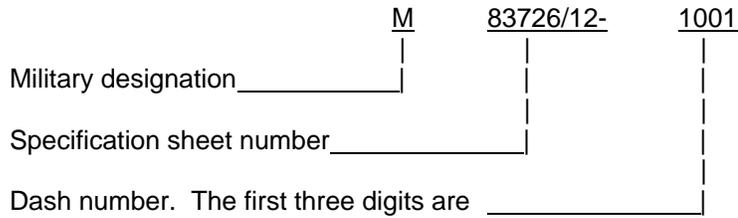
Weight: 10 ounces (280 grams) maximum.

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

Electrostatic Discharge Sensitive (ESDS) control program: Applicable (see [MIL-PRF-83726](#)).

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Part or Identifying Number (PIN): Consists of the prefix M83726/12-, and a four-digit dash number (expressed in milliseconds) as follows:



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. (See examples below).

Examples: M83726/12-1000 - 100 millisecond time delay.  
M83726/12-1001 - 1 second time delay.

CONFORMANCE INSPECTION:

Performance of groups B and C tests are not applicable.

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 this specification and the QPL will be canceled.

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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-PRF-83726/29](#)      [MIL-PRF-83536](#)      [MIL-STD-202-214](#)      [MIL-STD-704](#)  
[MIL-STD-1285](#)

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 5945-2016-010)

Review activity:  
Air Force - 99

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>.