

INCH-POUND

MIL-R-83726/13K
15 December 2015
SUPERSEDING
MIL-R-83726/13J
14 June 2011

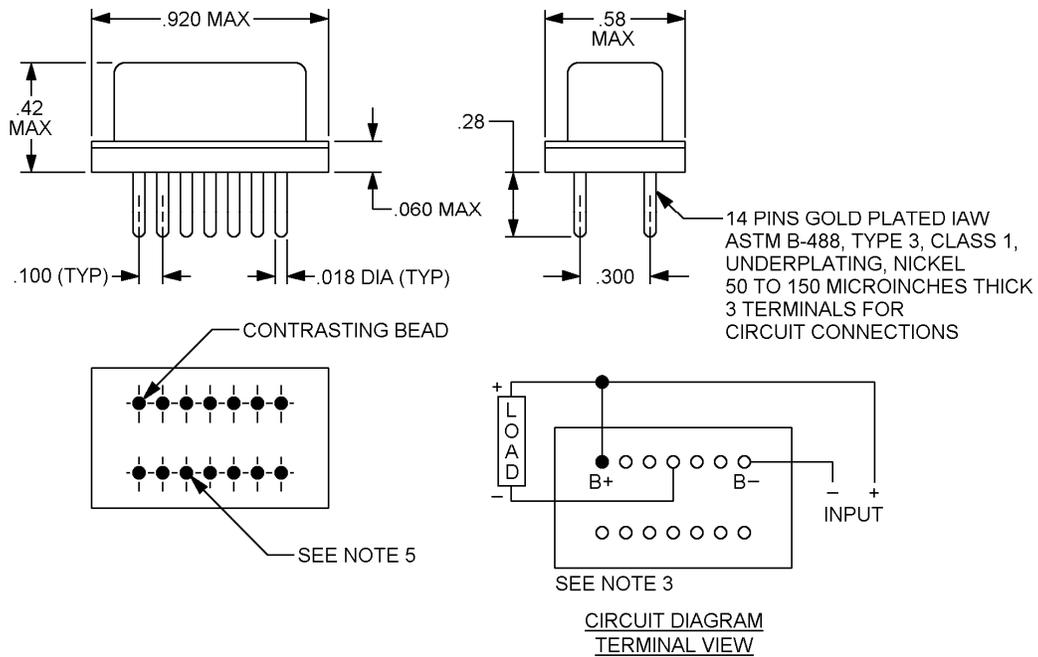
MILITARY SPECIFICATION SHEET

RELAYS, SOLID STATE, TIME DELAY, (ON OPERATE), TYPE I
CLASS C, SPST-NO, 300 MILLIAMPERES, FIXED TIME,
0.05 TO 600 SECONDS, HERMETICALLY SEALED

Inactive for new design after 15 January 1999.
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](#).



Inches	mm	Inches	mm
.018	0.46	.300	7.62
.060	1.5	.42	10.7
.100	2.54	.58	14.7
.28	7.1	.920	23.37

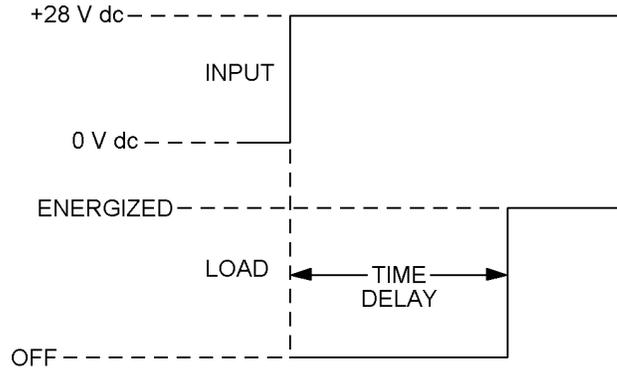
FIGURE 1. Outline dimensions and configuration of relay.

AMSC N/A

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TIMING DIAGRAM

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Load is connected between B+ and terminal designated LOAD. Delay begins upon application of power to terminals (B+) and (B-). Upon completion of delay period, circuit from load terminal to ground is completed. (B+) and (B-) are shown for reference only; they do not appear on the relay.
4. Unless otherwise specified, tolerance is ± 0.010 (0.25 mm).
5. This is an active pin. Do not connect this pin to any portion of the circuit or ground.

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

REQUIREMENTS:

Operational data:

Timing action: Delay-on-operate.

Timing delay: Fixed time, 50 milliseconds to 600 seconds. See [table I](#).

Timing accuracy: ± 10 percent of the nominal timing under all conditions of input voltage and environmental extremes.

Recycle characteristics:

Before time out: A power interruption occurring after the start but before completion of the timing cycle shall be for a duration of 0.5 percent of the nominal time delay or 10 ms, whichever is greater, to ensure a loss in timing no greater than 10 percent.

After time out: A power interruption of 0.5 percent of nominal time delay or 10 ms, whichever is greater, will initiate a new timing cycle with a loss in timing no greater than 5 percent.

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 TABLE I. Available time delay relays. [1/](#)

Dash number	Time delay in seconds ±10%	Dash number	Time delay in seconds ±10%
-0500	.05	-1602	16
-1000	.10	-1802	18
-2000	.20	-2002	20
-3000	.30	-2202	22
-5000	.50	-2502	25
-7500	.75	-3002	30
-1001	1.0	-3502	35
-2001	2.0	-4002	40
-3001	3.0	-4502	45
-4001	4.0	-5002	50
-5001	5.0	-5502	55
-6001	6.0	-6002	60
-7001	7.0	-1003	100
-8001	8.0	-2003	200
-9001	9.0	-3003	300
-1002	10	-4003	400
-1202	12	-5003	500
-1402	14	-6003	600

[1/](#) Additional time delay relays within the 0.05 to 600 second delay range are available. To establish Part or Identifying Numbers (PINs) not listed in [table I](#) (see "PIN" herein).

Input data:

Input voltage: 28 V dc nominal; range 18 V dc to 31 V dc.

Duty rating: Continuous.

Current drain: 10 milliamperes maximum, plus load current.

Reverse polarity protection: The timer will not be damaged or operate when input voltage polarity is reversed.

Output data:

Configuration: SPST-NO, solid state switch closure to ground.

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Load ratings:

Resistive: 300 milliamperes at 25°C, derated to 100 milliamperes at +125°C. Minimum load current of 10 milliamperes is required.

Inductive: Three MIL-PRF-39016/6 relays or equivalent with 26.5 V dc coil voltage.

Lamp load: Two M6363/8-5 lamps in accordance with MIL-DTL-6363 or equivalent.

Motor load, dc: Not applicable.

Inductive load, ac: Three MIL-PRF-39016/6 relays or equivalent.

Resistive load, ac: Not applicable.

Motor load, ac: Not applicable.

Load suppression: Suppression for inductive loads for output protection is provided within the unit.

Voltage drop: 2.5 volts maximum at -55°C and +25°C, 2.0 volts maximum at +125°C.

Leakage current: 1 microampere maximum at 25°C, 10 microamperes maximum at +125°C.

Continuous current: Not applicable.

Overload: Not applicable.

Electrical data:

Insulation resistance: 1,000 megohms minimum at 500 V dc. 1/

Dielectric withstanding voltage: 500 V rms, 60 Hz, (sea level). 1/

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

1/ Measured between all terminals tied together to the case.

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Environmental data:

Temperature range: -55°C to +125°C.

Altitude: 80,000 feet.

Shock: 150 g's for 11 ±1 ms half-sine wave.

Vibration (sinusoidal): 10 Hz to 80 Hz at .06 inch DA. 80 Hz to 3,000 Hz at 20 g's.

Vibration scan: Not applicable.

Acceleration: Not applicable.

Seal: Method 112 of [MIL-STD-202](#), condition C.

Solderability: Not applicable.

Physical data:

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

Terminal strength: Bend test not applicable.

Weight: 12 grams maximum.

Verification:

Qualification: Group B and Group C are not applicable.

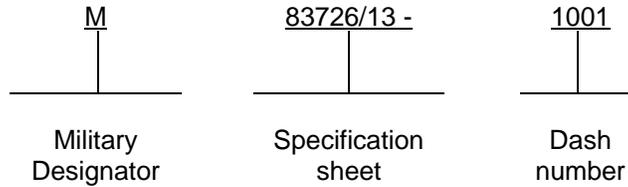
Conformance: Group A to [MIL-PRF-83726](#) only.

Marking: See [MIL-PRF-83726](#). In addition, relays shall be marked with the Electrostatic Discharge Sensitive (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 M83726/13-, 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.

- M83726/13 - 0500 - 50 millisecond time delay
- M83726/13 - 1001 - 1 second time delay
- M83726/13 - 6003 - 600 second 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-DTL-6363](#)
- [MIL-PRF-39016/6](#)
- [MIL-STD-1285](#)
- [MIL-STD-704](#)
- [MIL-STD-202](#)
- [ASTM-B488](#)

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from 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.

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Custodians:
Army - AT
DLA - CC

Preparing activity:
DLA - CC

(Project 5945-2016-004)

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>.