

INCH-POUND

MIL-R-83726/7C
22 July 1992
 SUPERSEDING
 MIL-R-83726/7B
 16 August 1985

MILITARY SPECIFICATION SHEET

RELAYS, HYBRID, TIME DELAY, ON PICKUP, TYPE I,
 CLASS A, 2 AMPERES, 2PDT, FIXED TIME,
 0.06 TO 300 SECONDS

Ⓒ Inactive for new design after 22 July 1992
 For new design use MIL-R-83726/28

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 sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-R-83726.

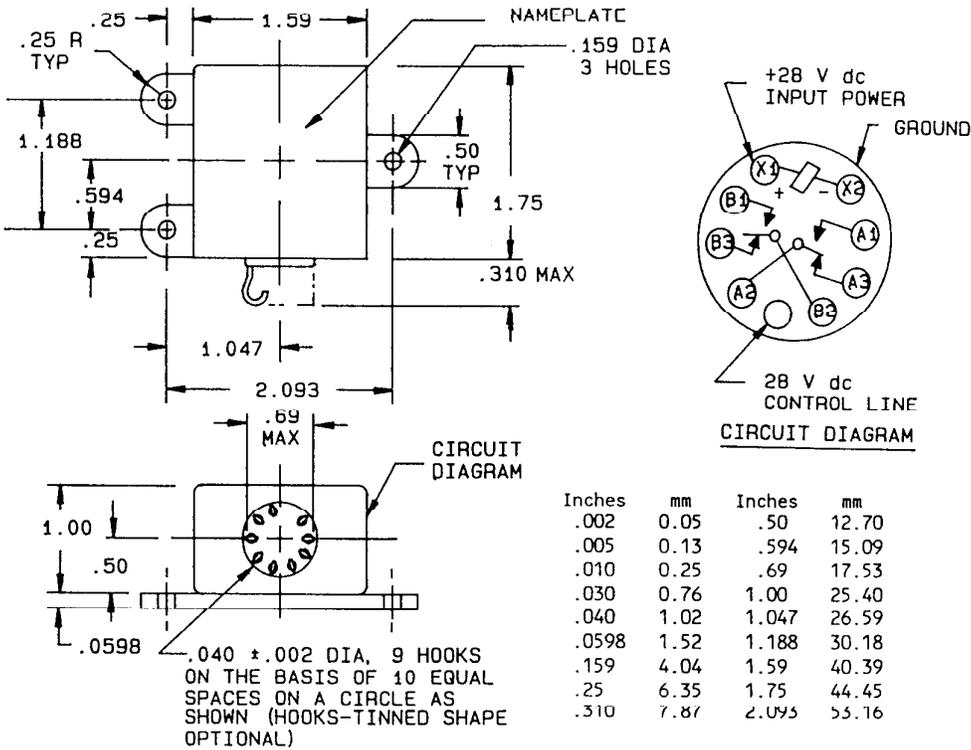
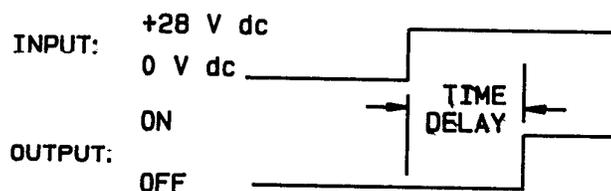


FIGURE 1. Outline dimensions and configuration of relay.

Ⓒ denotes changes

TIMING DIAGRAM

NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerances are ± 0.010 (0.25 mm) for three place decimals and ± 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 and 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. Available time delay relays. 1/ 2/

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 $\pm 10\%$
-0600	.060	-1202	12	-6502	65	-1703	170
-1000	.100	-1402	14	-7002	70	-1803	180
-5000	3/ .500	-1602	16	-7502	75	-1903	190
-7500	.750	-1802	18	-8002	80	-2003	200
-1001	1	-2002	20	-8502	85	-2103	210
-2001	2	-2202	22	-9002	90	-2203	220
-3001	3	-2502	25	-9502	95	-2303	230
-4001	4	-3002	30	-1003	100	-2403	240
-5001	5	-3502	35	-1103	110	-2503	250
-6001	6	-4002	40	-1203	120	-2603	260
-7001	7	-4502	45	-1303	130	-2703	270
-8001	8	-5002	50	-1403	140	-2803	280
-9001	9	-5502	55	-1503	150	-2903	290
-1002	10	-6002	60	-1603	160	-3003	300

- 1/ Additional time delay relays within the .060- to 300-second delay range are available. To establish part numbers not listed in table I, refer to page 5.
- 2/ The suffix letter W, X, or Y to designate quality level shall be added to the part number. To establish part numbers not listed in table I, refer to page 5.
- 3/ Add ± 10 milliseconds to ± 10 percent tolerance.

REQUIREMENTS:

CONTACT DATA:

Configuration: 2PDT; 2 form C.

Life/load ratings (relay case grounded):

Type of load	Life (cycles)	28 V dc	Amperes
			115 V ac - 1 phase 60 and 400 Hz
Resistive	100,000	2.0	0.3
Inductive	100,000	1.0	0.3
Lamp	100,000	0.1	0.1

Contact voltage drop:

Initial: 0.150 volt maximum.

After life tests: 0.200 volt maximum.

Intermediate current: Applicable in accordance with MIL-R-5757.

Contact bounce: 2 milliseconds maximum, to be measured on each contact set using an oscilloscope, contacts shall be loaded with rated current and voltage.

Overload:

Resistive: 200 percent rated current.

Inductive: 200 percent rated current.

INPUT DATA:

Duty rating: Continuous.

Range of voltage: 18 to 31 V dc.

Minimum voltage - high temperature: 18 V dc.

Maximum current at 25°C and 28 V dc: 80 milliamperes.

Time delay: Fixed time 0.06 to 300 seconds (see table I).

Time delay tolerance: ±10 percent except as noted in table I, under all combinations of input voltage and all environmental conditions.

Recycle characteristics:

Before time out: Power must be removed for 50 milliseconds or 5 percent of the nominal time delay, whichever is greater, to insure a loss in timing no greater than 10 percent.

After time out: Power must be applied for 10 milliseconds or 1 percent of the nominal time delay, whichever is greater, after which an interruption of 10 milliseconds will insure a loss in timing no greater than 10 percent.

Polarity protection: The unit will be inoperative during, and undamaged by, reversal of the input polarity.

ELECTRICAL DATA:

Insulation resistance at 500 V dc ^{1/}:

Initial: 1,000 megohms minimum.

After life or at high temperature: 500 megohms minimum.

Dielectric withstanding voltage:

	Sea level (V rms 60 Hz)	Altitude (V rms 60 Hz)
Between case and all contacts - - - - -	1,000	
Between case and inputs 1 and 9 ^{1/} - - - - -	500	350 ^{2/}
Between all contacts and inputs 1 and 9 - - -	1,000	
Between open contacts in the energized and unenergized positions - - - - -	500	
Between contact poles - - - - -	1,000	

Transients: MIL-STD-704A, figure 9, limit 1 for category B equipment.

ENVIRONMENTAL DATA:

Temperature range: -65°C to +125°C.

Altitude: 80,000 feet.

Shock: 50 G's for 11 ±1 milliseconds, MIL-STD-202, method 213, condition A.

Contact opening: 10 microseconds maximum duration. Monitor in accordance with method 310 of MIL-STD-202.

Vibration (sinusoidal): 10-80 Hz at 0.06 inch peak double amplitude, 80-3,000 Hz at 20 G's.

Acceleration: 50 G's steady state, no opening of closed contacts.

Sealing: Not applicable.

PHYSICAL DATA:

Dimensions and configuration: see figure 1.

Weight: 0.25 pound maximum.

Terminal strength: 3 ±0.5 pounds pull maximum.

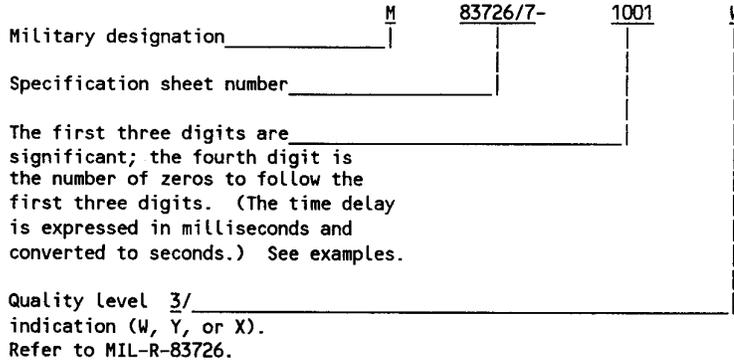
Finish: Bright nickel in accordance with QQ-N-290, class 1, type IV.

^{1/} Input terminals 1 and 9 must be connected together during this test.

^{2/} All pins to case for this test.

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Part or Identifying Number (PIN): Consists of the prefix M83726/7-, a four-digit dash number expressed in milliseconds, and a quality level indication as follows:



- EXAMPLES: M83726/7-0600W - 60-millisecond time delay, W Level
M83726/7-1001X - 1-second time delay, X Level
M83726/7-3003Y - 300-second time delay, Y Level

Ⓒ QUALITY CONFORMANCE INSPECTION:

Performance of groups B and C tests are not applicable.

3/ Any relays numbered prior to the date of this specification without a quality level indication shall be considered interchangeable (store and issue) with the "W" quality level.

CONCLUDING MATERIAL

Custodians:
Navy - EC
Air Force - 85

Review activities:
Navy - EC
Air Force - 99
DLA - ES

Preparing activity:
Air Force - 85

Agent:
DLA - ES

(Project 5945-0859)