

INCH-POUND

MIL-PRF-83726C  
 AMENDMENT 3  
 1 November 2002  
 SUPERSEDING  
 AMENDMENT 2  
 15 July 2002

## PERFORMANCE SPECIFICATION

RELAYS, HYBRID AND SOLID STATE, TIME DELAY,  
 GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-PRF-83726C, dated 15 June 1999, and is approved for use by all Departments and Agencies of the Department of Defense.

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3.5.4, Add a subparagraph "d. Adjunct sealant shall only be applied to relays that have initially passed the gross leak seal requirement of this specification."

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4.7.2.3, delete

4.7.2.4, delete "method 5008 of MIL-STD-883" and substitute "device screening (paragraph C.5.8) of MIL-PRF-83534".

4.7.2.5 a., add "minimum" after "160 hours".

4.7.2.5 b. delete and substitute: "b. Test condition B".

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\* 4.7.6, delete and substitute: "4.7.6 Static contact resistance, contact voltage drop, and output voltage drop (see 3.11). The static contact resistance or static contact voltage drop shall be required for each pair of contacts for class A and class B type relays. If both contact voltage drop and static contact resistance are specified in the documents the manufacturer has the choice of which to run for the contacts. However, each contact must be tested. Output voltage drop shall be performed on class C type relays.

4.7.6.1 Static contact resistance (see 3.11). Relays shall be tested in accordance with method 307 of MIL-STD-202. The following details and exception shall apply:

- a. Method of connection: The point of measurement shall be on leads external to the case. Suitable jigs and fixtures shall be used.
- b. Test load: Test current shall be 100 mA at a voltage equal to or below rated voltage, except those rated for low level. See 6.1.1 for low level voltage rating. For low level, the current shall be 10 mA maximum. (dc or peak ac).
- c. Post test current: Load current and voltage shall be 100 mA maximum at a voltage equal to or below rated voltage, unless life tests are specified in the grouping. When life tests are specified in the grouping, the same current at a maximum of rated voltage as the life test, or 100mA maximum at 28vdc maximum, shall be used.

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d. Points of measurements:

- (1) Between all normally closed mated contacts.
- (2) Between all normally open mated contacts, with the coil energized with rated coil voltage (or current) for non-latch type relays, or in the latch/reset position for magnetic latch type relays, with or without coil energized.

e. Number of activations prior to measurement: During static resistance tests, the number of activation prior to measurement is none.

f. Number of test activations: Maximum of three activations in each closed contact position for qualification Q1. For all remaining groups in the Qualification table, group A, group B, and group C, one to three activations in each closed contact position.

g. Number of measurements per activation: One in each closed contact position. The readings shall be taken after the circuit has stabilized and within a maximum time of 2 seconds after activation.

4.7.6.2 Contact voltage drop (see 3.11). Relays shall be tested in accordance with method 307 of MIL-STD-202. The following details and exception shall apply:

- a. Method of connection: The point of measurement shall be on leads external to the case. Suitable jigs and fixtures shall be used.
- b. Test load: Test current shall be rated resistive current at rated voltage or less. See 6.1.1 for low level voltage rating. If a lower test current is used, the millivolt drop shall be adjusted according to Ohm's law.
- c. Post test loads for intermediate current and life: When intermediate current is specified in the grouping, the same current as intermediate current, or 100 mA, at a voltage equal to or below rated voltage shall be used. When life tests are specified in the grouping, the same current as the high level life test, or 100 mA, at a voltage equal to or below rated voltage shall be used. If a lower test current is used, the millivolt drop shall be adjusted according to Ohm's law.

d. Points of measurements:

- (1) Between all normally closed mated contacts.
- (2) Between all normally open mated contacts, with the coil energized with rated coil voltage (or current) for non-latch type relays, or in the latch/reset position for magnetic latch type relays, with or without coil energized.

e. Number of activations prior to measurement: During contact voltage drop tests, the number of activation prior to measurement is none.

f. Number of test activations: Maximum of three activations in each closed contact position for qualification Q1. For all remaining groups in the Qualification table, group A, group B, and group C, one to three activations in each closed contact position.

g. Number of measurements per activation: One in each closed contact position. The readings shall be taken after the circuit has stabilized and within a maximum time of 2 seconds after activation."

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The margins of this amendment are marked with asterisks to indicate where changes from the previous amendment 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 last previous amendment.

Custodians:  
Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5945-1200)

Review activities:  
Navy - TD  
Air Force - 99