

INCH-POUND

MIL-PRF-39016/24E
AMENDMENT 6
25 November 1998
SUPERSEDING
AMENDMENT 5
23 June 1993

PERFORMANCE SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, ESTABLISHED RELIABILITY, SPDT, LOW LEVEL
TO 1.0 AMPERE WITH INTERNAL DIODES FOR COIL TRANSIENT
SUPPRESSION AND POLARITY REVERSAL PROTECTION

This amendment forms a part of MIL-PRF-39016/24E, dated 20 July 1988, and is approved for use by all Departments and Agencies of the Department of Defense.

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- * FIGURE 2, bottom view: delete "±.003" for the five spreader pad lead hole, center-to-center tolerances.
- * FIGURE 2, note 4, delete and substitute: "Spreader pads shall comply with the requirements of A-A-55485, A-55485/05-004.

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Requirements, contact data, load ratings, high level (relay case grounded), resistive, delete in its entirety and substitute:

"Resistive:

- 1.0 ampere at 28 V dc.
- 250 milliamperes at 115 V ac 60 and 400 Hz case not grounded.
- 100 milliamperes at 115 V ac 60 and 400 Hz case grounded."

Requirements, contact data, overload (high level only), delete and substitute:

"Overload (high level only): Two times rated current. Not applicable to ac load ratings."

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Delete footnote 1/ and all associated references to footnote 1/ in their entirety.

- * ELECTRICAL DATA, dielectric withstanding voltage, delete and substitute:

| | Sea level V rms (60 Hz) | Post intermediate current life test Sea level V rms (60 Hz) | Altitude V rms (60 Hz) |
|--|----------------------------|--|---------------------------|
| Between case, frame or enclosure and all contacts in the energized and deenergized positions ----- | 500 | 500 | |
| Between case, frame or enclosure and coils ----- | 500 | 500 | 300 |
| Between all contacts and coils ----- | 500 | 500 | All terminals |
| Between open contacts in the energized and deenergized positions | 500 | 375 | to case |
| Between contact poles ----- | NA | NA | |
| Between coils of dual coil relays ----- | NA | NA | |

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- * DIODE CHARACTERISTICS, delete and substitute:

“Coil transient suppression: Applicable.

Diode block integrity (perform this test after coil transient suppression test in all inspection tables of MIL-PRF-39016): With applicable voltage applied to the relay coil circuit in the reverse direction, monitor leakage current with dc microammeter, oscilloscope, or qualifying activity approved test equipment. Leakage current shall not exceed the specified value.

Block integrity maximum leakage current: 1 μ A at 50 V dc.

Maximum negative transient: 1.0 volt.

Breakdown voltage: 100 V dc minimum at 10 microamperes (μ A). (This test may be performed in-process or as final assembly).

Semiconductor in-process screening: Applicable, visual inspection of semiconductors shall be in accordance with MIL-STD-750, methods 2073 or 2074.”

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- * TABLE I, add the following new footnote 7 :

“7 Delete “Coil resistance” and substitute “Coil current” test in all inspection tables of MIL-PRF-39016.”

TABLE I, add footnote 7 to the coil circuit current column.

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- * TABLE II, footnote 1, delete and substitute:

“1 For retention of qualification or extension of qualification to lower failure rate levels, all life test data accumulated on MIL-PRF-39016/20, /21, and /26 may be used in addition to MIL-PRF-39016/24 data. Prior to performance of retention of qualification testing, the relay manufacturer shall preselect the sampling plan.”

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- * Group A testing for relays supplied with spreader pads (-031 through -036), shall be tested as specified below, delete both paragraphs and substitute:

“Perform seal test immediately, preceding the subgroup A2 electrical tests. Relay leads shall be formed and the mounting pad removed before the seal test. After the seal test, the mounting pad shall be rigidly attached to the relay and the remaining group A tests performed.”

- * Qualification inspection (reduced testing), delete paragraph and substitute:

“ If the relays produced for MIL-PRF-39016/24 are similar in construction and design except for the diodes, coil assembly, and headers, as applicable, to the relays produced for MIL-PRF-39016/20, /21, and /26, then reduced testing for qualification of MIL-PRF-39016/24 relays may be performed concurrent with or subsequent to successful qualification of MIL-PRF-39016/20, /21, and /26. For reduced testing, see table III.”

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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 - 85

Preparing activity:

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