

INCH-POUND

MIL-PRF-39016/20H  
AMENDMENT 6  
7 September 1998  
SUPERSEDING  
AMENDMENT 5  
21 September 1992

PERFORMANCE SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, ESTABLISHED RELIABILITY, DPDT,  
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-39016/20H, dated 13 May 1987, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

FIGURE 1: Delete ".335 / .275 DIA" and substitute ".370 SQ MAX".

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- \* FIGURE 3, bottom view: delete " $\pm.003$ " for the five spreader pad lead hole, center-to-center tolerances.
- \* FIGURE 3, note 4, delete and substitute: "Spreader pads shall be certified to A-A-55485, A-55485/05-003, or A-55485/05-013."

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- \* FIGURE 4, bottom view: delete " $\pm.005$ " for the four spreader pad lead hole, center-to-center tolerances.
- \* FIGURE 4, note 4, delete and substitute: "Spreader pads shall be certified to A-A-55485, A-55485/05-014".

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REQUIREMENTS, contact data, load ratings, high level (relay case grounded), resistive, delete 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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\* 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	125
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 -----	500	500	
Between coils of dual coil relays -----	NA	NA	

“

ELECTRICAL DATA, delete footnote 1/ and associated references to footnote 1/ in their entirety.

\* 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: 1µA at 50 V dc.

Maximum negative transient: 1.0 volt.

Breakdown voltage: 100 V dc minimum at 10 microamperes (µA). (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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- \* Qualification inspection, group A testing for relays supplied with spreader pads (-061 through -066, -073 through -078, and -091 through -096), shall be tested as specified below, delete and substitute:

"Perform seal test immediately, preceding the 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."

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:

DLA - CC

(Project 5945-1020-11)

Review activities:

Army - AR  
Navy - AS, MC, OS, SH  
Air Force - 99