1. GENERAL REQUIREMENTS:
   A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-97527.
   B. THIS UNIT SHALL MEET THE APPLICABLE REQUIREMENTS OF MIL-R-5757 WITH THE EXCEPTIONS AND ADDITIONS SPECIFIED HEREIN.
   C. THE SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS AS CONTAINED IN ND 1002046, CLASS 2.
   D. THIS UNIT SHALL MEET THE QUALIFICATION REQUIREMENTS OF ND 1002046 UNLESS OTHERWISE SPECIFIED HEREIN. ELECTRICAL REQUIREMENTS CONTAINED HEREIN SHALL TAKE PRECEDENCE OVER THOSE LISTED IN ND 1002046.
   E. THE CLASSIFICATION OF THIS RELAY SHALL BE LOW-LEVEL AS STATED IN THE DESIGN REQUIREMENTS SECTION OF THIS DRAWING.
   F. PREPARATION FOR DELIVERY: PACKAGING AND PACKING SHALL BE IN ACCORDANCE WITH ND 1002715, CLASS 1, CODE 1.

2. ACCEPTANCE AND INSPECTION:
   A. SAMPLING: UNLESS OTHERWISE SPECIFIED, SAMPLING FOR ALL REQUIREMENTS UNDER ACCEPTANCE AND INSPECTION SHALL BE IN ACCORDANCE WITH MIL-STD-105, LEVEL 1, AQD OF 4.0 PERCENT.
   B. MECHANICAL REQUIREMENTS:
      (1) LEAD MATERIAL: LEAD MATERIAL SHALL BE PER TABLE I. A CERTIFICATE OF CONFORMANCE WITH THIS REQUIREMENT SHALL ACCOMPANY EACH SHIPMENT. THE COMPONENT LEAD SHALL BE UNIFORM IN QUALITY AND TEMPER; CLEAN, SOUND, SHARP, AND FREE FROM DAMAGE OR IMPURITY, SUCH AS ARE, MILL, MOLD, OR OTHER DEFECTS WHICH ARE NOT IN ACCORDANCE WITH THE BEST PRACTICE. LEADS SHALL HAVE NO NOSE WITHIN 0.010 INCH.
      (2) DIMENSIONS: DIMENSIONS SHALL BE AS SPECIFIED HEREIN. LEADS SHALL BE SYMMETRICALLY POSITIONED WITH RESPECT TO C OF HEADER SEAL. TOLERANCES ON CO. "COMPUTER LABORATORY, MANNED SPACECRAFT CENTER, HOUSTON, TEXAS"
      (3) SEAL: UNITS SHALL BE HERMETICALLY SEALED. SEAL TEST II (EXCEPT 10-8 CC/SEC) PER MIL-R-5757 SHALL BE PERFORMED ON 100 PERCENT OF UNITS PROCURED. UNITS SHALL BE INSULATED WITHIN 0.010 INCH.
      (4) ELECTRICAL REQUIREMENTS:
         (A) REFRIGERATOR CURRENT: FULL-IN AND DROP-OUT IN ACCORDANCE WITH TABLE 1.
         (B) CONTACT RESISTANCE: IN ACCORDANCE WITH TABLE 1.
         (C) CONTACT RESISTANCE: SHALL BE 1.0 MMM MAXIMUM WHEN MEASURED WITH 100 MILLIAMPERES FROM A 6 VDC OPEN CIRCUIT VOLTAGE (CONTACTS SHALL NOT SWITCH THE MEASURING LOAD). 100 PERCENT OF UNITS PROCURED SHALL BE INSPECTED FOR THIS CHARACTERISTIC.

PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.

MATER
3. DESIGN REQUIREMENTS:

A. ELECTRICAL RATINGS:

1. COIL VOLTAGE (SUGGESTED SOURCE): IN ACCORDANCE WITH TABLE I.
2. COIL POWER: 2.2 WATTS MAXIMUM AT PLUS 25 DEGREES CENTIGRADE DERATED TO 1.4 WATT AT PLUS 125 DEGREES CENTIGRADE.
3. CONTACT RATING (PER POLE): 13 AMPERES AT 3 VOLTS DC OR 10 AMPERES AT 115 VOLTS M.S., 60 OR 400 CPS, WITH RESISTIVE LOAD.
4. CONTINUOUS COIL CURRENT, MAXIMUM: IN ACCORDANCE WITH TABLE I.
5. CONTACTS SHALL BE CAPABLE OF SWITCHING DRY-CIRCUIT CONDITIONS WITH THE STIPULATION THAT NO LOAD GREATER THAN 100 MILLIAMPERES HAD BEEN SWITCHED PRIOR TO DRY-CIRCUIT LOAD.
6. LEAD STRENGTH: UNITS SHALL WITHSTAND AN AXIAL PULL OF 3 POUNDS MIN.
7. COIL PULL-IN POWER (SENSITIVITY) IN ACCORDANCE WITH TABLE I.
8. DIELECTRIC STRENGTH:
   a. AT 70,000 FEET: 100 VOLTS DC MINIMUM FOR 5 SECONDS MINIMUM WITHOUT DAMAGE, ARCING, OR BREAKDOWN BETWEEN EACH SWITCHING CIRCUIT AND ALL OTHER CONNECTIONS INCLUDING THE FRAME.
B. CONSTRUCTION:

1. CONTACT FORM AND SWITCHING ACTION: 2 FORM C CONTACTS (BREAK BEFORE MAKE) DOUBLE POLE, DOUBLE THROW.
2. CONTACT MATERIAL: SILVER-MAGNESIUM-NICKEL ALLOY, GOLD PLATED.
3. CASE MATERIAL: CUPRO NICKEL.
C. QUALIFICATION REQUIREMENTS:

1. LIFE: LIFE OF THIS UNIT SHALL BE 100,000 CYCLES MINIMUM WHEN TESTED PER ND 1002046. FOR THE LIFE TESTS, THE CLASSIFICATION OF THIS RELAY MAY BE GENERAL PURPOSE OR LOW-LEVEL WITH THE STIPULATION AS STATED UNDER CONTACT RATING.
D. ENVIRONMENTAL REQUIREMENTS:

1. HUMIDITY (MOISTURE RESISTANCE): UNITS SHALL BE CAPABLE OF WITHSTANDING RELATIVE HUMIDITY UP TO 100 PERCENT.
2. OPERATING TEMPERATURE RANGE: UNITS SHALL BE CAPABLE OF OPERATING WITHIN THE ELECTRICAL REQUIREMENTS OF THIS SPECIFICATION WHEN EXPOSED TO AMBIENT TEMPERATURES FROM MINUS 65 DEGREES CENTIGRADE TO PLUS 125 DEGREES CENTIGRADE.
3. THERMAL SHOCK: UNITS SHALL BE CAPABLE OF WITHSTANDING THERMAL SHOCK FROM MINUS 65 DEGREES CENTIGRADE TO PLUS 125 DEGREES CENTIGRADE.
4. THE SALT SPRAY TEST PER MIL-R-5757 IS NOT APPLICABLE.
E. SPECIAL CONDITIONING:

1. THE MANUFACTURER SHALL SUBJECT EACH RELAY TO THE MISS TEST AS FOLLOWS:
   a. LOAD SHALL BE 20 MICROAMPERES MAXIMUM (RESISTIVE) AT 20 MILLIVOLTS MAXIMUM OPEN CIRCUIT VOLTAGE.
   b. TEST SPEED SHALL BE 5 CYCLES, OR LESS, PER SECOND.
   c. EACH RELAY SHALL OPERATE FOR 5,000 CYCLES.
   d. EACH RELAY SHALL BE MONITORED FOR OPENS, SHORTS AND CONTACT RESISTANCE WHICH SHALL NOT EXCEED 1000 OHMS.
   e. OCCURRENCE OF ANY OF THESE EVENTS SHALL CONSTITUTE A MISS AND SHALL BE CAUSE FOR REJECTION OF RELAY.

TABLE I

<table>
<thead>
<tr>
<th>DASH NO.</th>
<th>COIL RESISTANCE (Ω) @ 25°C</th>
<th>COIL PULL-IN CURRENT (MA)</th>
<th>CONTINUOUS CURRENT (MA) @ 125°C</th>
<th>SUGGESTED SOURCE VOLTAGE (V)</th>
<th>OPERATE SENSITIVITY (MA)</th>
<th>DROP-OUT CURRENT (MA)</th>
<th>LEAD MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>-001</td>
<td>45 ± 10</td>
<td>10.0</td>
<td>7.0</td>
<td>12.0</td>
<td>500</td>
<td>6.0</td>
<td>Wire</td>
</tr>
<tr>
<td>-002</td>
<td>62 ± 12</td>
<td>8.0</td>
<td>17.0</td>
<td>12.0</td>
<td>500</td>
<td>6.0</td>
<td>Wire</td>
</tr>
</tbody>
</table>

-002 LEAD CONFIGURATION

4. SPECIAL CONDITIONING:

A. THE MANUFACTURER SHALL SUBJECT EACH RELAY TO THE MISS TEST AS FOLLOWS:

1. LOAD SHALL BE 20 MICROAMPERES MAXIMUM (RESISTIVE) AT 20 MILLIVOLTS MAXIMUM OPEN CIRCUIT VOLTAGE.
2. TEST SPEED SHALL BE 5 CYCLES, OR LESS, PER SECOND.
3. EACH RELAY SHALL OPERATE FOR 5,000 CYCLES.
4. EACH RELAY SHALL BE MONITORED FOR OPENS, SHORTS AND CONTACT RESISTANCE WHICH SHALL NOT EXCEED 1000 OHMS.
5. OCCURRENCE OF ANY OF THESE EVENTS SHALL CONSTITUTE A MISS AND SHALL BE CAUSE FOR REJECTION OF RELAY.