<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
<th>DATE</th>
<th>APPROVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>Released</td>
<td>7/21/92</td>
<td>SAN</td>
</tr>
<tr>
<td>A</td>
<td>Revised per RN A-154 to add additional part numbers, mechanical notes and expanded electrical characteristics.</td>
<td>12/23/08</td>
<td>JS</td>
</tr>
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</table>

**ORIGINAL SIGNATURES ON FILE**

**SHEET REVISION STATUS**

| SH | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| REV| A | A | A | A |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |

**ORIGINATOR:**
T. Perry/Paramax

**DATE:**
6/23/92

**FSC:**
5945

**APPROVED:**
S. Archer-Davies/Paramax

**DATE:**
6/23/92

**Code 311 Approval:**
P. Jones/GSFC

**DATE:**
6/30/92

**Code 311 Supervisory Approval:**
G. P. Kramer, Jr./GSFC

**DATE:**
7/20/92

**ADDITIONAL APPROVAL:**

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**

**GODDARD SPACE FLIGHT CENTER**

**GREENBELT, MARYLAND 20771**

**CAGE CODE:**
25306

**Page 1 of 4**
GSFC DETAIL SPECIFICATION

RELAYS, ELECTROMAGNETIC, HERMETICALLY SEALED, 2PDT (2C), LOW LEVEL TO 1 AMPERE, INTERNAL DIODE FOR COIL TRANSIENTS, (TO-5 ENCLOSURE)

The requirements for procuring the relays described herein shall consist of this specification and the current revision of GSFC S-311-P-754.

Figure 1. Dimensions and configuration.
NOTES:
1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is ± .010 inches.
3. Relays shall have a plus (+) sign placed on the circuit diagram as shown.
5. Circuit diagram shown on part is the terminal view.
6. The grounding pin show is a noninsulated case ground applicable to -089 through -093 (see Table 1)

Table 1. Dash numbers and characteristics. 1/

<table>
<thead>
<tr>
<th>Dash Number G311P754/04-</th>
<th>Coil Voltage (V dc) 2/</th>
<th>At 25 °C</th>
<th>Over Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rated</td>
<td>Max</td>
<td>Coil Resistance Ohms ± 10%</td>
</tr>
<tr>
<td>.187 leads +.040</td>
<td>035</td>
<td>001</td>
<td>089</td>
</tr>
<tr>
<td>.010</td>
<td>036</td>
<td>002</td>
<td>090</td>
</tr>
<tr>
<td></td>
<td>037</td>
<td>003</td>
<td>091</td>
</tr>
<tr>
<td></td>
<td>038</td>
<td>004</td>
<td>092</td>
</tr>
<tr>
<td></td>
<td>039</td>
<td>005</td>
<td>093</td>
</tr>
</tbody>
</table>

1/ Each relay possesses high-level and low-level capabilities. However, relays previously tested or used above 10 mA resistive at 6 V dc maximum or peak ac open circuits not recommended for subsequent use in low-level applications.

2/ CAUTION: The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.

Table 2. GSFC and MIL dash number similarities. 1/

<table>
<thead>
<tr>
<th>GSFC Dash Number G311P754/04-</th>
<th>MIL Dash Number M39016/15-</th>
</tr>
</thead>
<tbody>
<tr>
<td>035</td>
<td>035</td>
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<tr>
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<td>038</td>
<td>038</td>
</tr>
<tr>
<td>039</td>
<td>039</td>
</tr>
</tbody>
</table>

1/ Procurement is to the GSFC S-311-P-754/04 dash numbers ONLY. MIL dash numbers are for reference only and do not comply with all of the requirements in the GSFC S-311-P-754 and GSFC S-311-P-754/04 specifications.
REQUIREMENTS:

Operating Temperature Range: -65 °C to +125 °C

Other: All requirements (contact ratings, life test requirements, environmental data, etc.) shall be as specified in MIL-PRF-39016/15 except as detailed or modified herein.

Electrical Measurements

- Insulation resistance: 5,000 Mohm min. @ 100 Vdc
- Dielectric strength: 500 Vrms, 60 Hz
- Coil resistance: See Table 1
- Pickup voltage: See Table 1
- Dropout voltage: See Table 1
- Contact resistance: 100 milliohms max.
- Operate time: 2 ms max.
- Release time: 4 ms max.
- Bounce time: 2 ms max.
- Coil transient suppression: Applicable
- Neutral screen: Not applicable

Vibration

- Sinusoidal: 20 g (55 – 3,000 Hz)
- Random: Not applicable

High-temperature soak: Applicable
High-temperature run-in: Not applicable
Low-temperature run-in: Applicable
Room-temperature run-in: Applicable

Seal

- Fine leak test: 1 x 10⁻⁸ cc/sec max.
- Gross leak test: Applicable