DETAIL SPECIFICATION SHEET

SWITCHES, RADIO-FREQUENCY TRANSMISSION LINE
(COAXIAL) (ELECTRICALLY OPERATED) CLASS 4, TR

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

Requirements for acquiring the switch described herein
shall consist of this specification and MIL-DTL-3928.

FIGURE 1. PIN M3928/21-01.
## Dimensions

<table>
<thead>
<tr>
<th>Letter</th>
<th>Inches</th>
<th>Millimeters</th>
<th>Letters</th>
<th>Inches</th>
<th>Millimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max</td>
<td>Min</td>
<td></td>
<td>Max</td>
<td>Min</td>
</tr>
<tr>
<td>A</td>
<td>2.19</td>
<td>2.13</td>
<td>L</td>
<td>.22</td>
<td>.16</td>
</tr>
<tr>
<td>B</td>
<td>.646</td>
<td>.626</td>
<td>M</td>
<td>.720</td>
<td>---</td>
</tr>
<tr>
<td>C</td>
<td>.066</td>
<td>.060</td>
<td>N</td>
<td>2.15</td>
<td>---</td>
</tr>
<tr>
<td>D</td>
<td>1.37</td>
<td>---</td>
<td>P</td>
<td>.553</td>
<td>.537</td>
</tr>
<tr>
<td>E</td>
<td>.646</td>
<td>.626</td>
<td>Q</td>
<td>1.790</td>
<td>1.770</td>
</tr>
<tr>
<td>F</td>
<td>1.30</td>
<td>---</td>
<td>R</td>
<td>.300</td>
<td>---</td>
</tr>
<tr>
<td>G</td>
<td>---</td>
<td>.38</td>
<td>S</td>
<td>.159 dia</td>
<td>.139 dia</td>
</tr>
<tr>
<td>H</td>
<td>1.098</td>
<td>1.082</td>
<td>T</td>
<td>.35</td>
<td>.29</td>
</tr>
<tr>
<td>J</td>
<td>.53</td>
<td>.47</td>
<td>U</td>
<td>.65</td>
<td>.59</td>
</tr>
<tr>
<td>K</td>
<td>.28</td>
<td>.22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.
NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ±.010 (±.025 mm) for three place decimals and ±.03 (±.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 2. PIN M3928/21-02.
MIL-DTL-3928/21E
w/AMENDMENT 1

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only (1.00 inch = 25.4 mm).
3. Unless otherwise specified, tolerances are ± .010 (± 0.25 mm) for three place decimals and
   ± .03 (± 0.8 mm) for two place decimals.
4. Round corners of case may be squared.

FIGURE 3. PIN M3928/21-03.
# Electrical and performance characteristics

<table>
<thead>
<tr>
<th>PIN M3928/21-01N, S</th>
<th>Fig. No.</th>
<th>Housing</th>
<th>Frequency range dc to GHz</th>
<th>VSWR</th>
<th>Insertion loss (dB)</th>
<th>Isolation (dB)</th>
<th>Switching time (ms)</th>
<th>Position indication circuit and rating</th>
<th>Life cycles x 1000</th>
<th>Fail-safe or latching</th>
<th>Operating current (A)</th>
<th>Holding current (A)</th>
<th>Nominal operating voltage</th>
<th>Pickup voltage (less than)</th>
<th>Dropout voltage (less than)</th>
<th>Power and indicator connector</th>
<th>Weight (oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01N, S 2/</td>
<td>1</td>
<td>I</td>
<td>11</td>
<td>Max</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
<td>Yes</td>
<td>100</td>
<td>L</td>
<td>2.6</td>
<td>0</td>
<td>28 V dc</td>
<td>20 V dc</td>
<td>---</td>
<td>Solder terminals</td>
<td>Max 6</td>
</tr>
<tr>
<td>02N, S</td>
<td>2</td>
<td>E</td>
<td>12.4</td>
<td>1.5:1</td>
<td>1.5:1</td>
<td>0.5</td>
<td>60</td>
<td>25</td>
<td>2A at 28 V dc</td>
<td>100</td>
<td>F</td>
<td>0.5</td>
<td>0.2</td>
<td>28 V dc</td>
<td>20 V dc</td>
<td>5 V dc</td>
<td>Solder terminals</td>
</tr>
<tr>
<td>03N, S</td>
<td>3</td>
<td>I</td>
<td>12.4</td>
<td>1.5:1</td>
<td>1.5:1</td>
<td>0.5</td>
<td>60</td>
<td>20</td>
<td>30</td>
<td>0.1 A at 28 V dc</td>
<td>F</td>
<td>0.65</td>
<td>---</td>
<td>28 V dc</td>
<td>20 V dc</td>
<td>---</td>
<td>Solder terminals</td>
</tr>
</tbody>
</table>

1/ At 28 V dc and 20 deg C.

2/ Transient interference (RFI).

3/ RF power handling capacity: 80 watts minimum at sea level and 10⁻⁵ through 10⁻⁰ torr.
MIL-DTL-3928/21E
w/AMENDMENT 1

REQUIREMENTS:

Dimensions and configurations: See figures 1, 2, and 3.

RF connectors: Female connectors (4 places) shall meet the requirements of MIL-PRF-39012 and shall mate with TNC type male connectors in accordance with MIL-PRF-39012/26.

Electrical and performance characteristics: See table I.

RF power handling capability (average): 50 watts (minimum).

Nominal impedance: 50 ohms.

Termination: Open.

Vibration: Method I.

Operating temperature: -55 ° C to +85° C.

Part or Identifying Number (PIN): M3928/21- (and dash number from table I).

Referenced documents. In addition to MIL-DTL-3928, this specification sheet references MIL-PRF-39012 and MIL-PRF-39012/26.

The margins of this specification sheet are marked with vertical lines to indicate modifications generated by this amendment. 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.

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