Ultraminiature Rocker & Lever Switches
0.4 VA @ 20V ac or dc

Specifications:
Contact Rating: 0.4VA maximum at 20V AC or DC maximum.
Mechanical Life: 50,000 make-and-break cycles.
Contact Resistance: Below 100mΩ typical (initial) at 2 to 4V dc, 100mA.
Minimum Insulation Resistance: 500MΩ at 500V dc.
Dielectric Strength: 500VRMS at sea level.
Operating Temperature: -30°C to 85°C.

Materials:
Case and Bushing: Glass filled nylon 6/6, heat stabilized
Actuator: Nylon, black std. Internal o-ring seal standard with all actuators.
Switch Support: Brass or steel, tin plated.
Contacts/Terminals: Silver or gold plated copper alloy.

Pole Option
M2RN

Single Pole

Double Pole

Dimensions: (Millimetres) Inches
Ultraminiature Rocker&Lever Switches

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Pole Option

M6RN

Single Pole

Dimensions: (Millimetres) Inches

M6RN

Double Pole

Dimensions: (Millimetres) Inches

M7RN

Single Pole

Dimensions: (Millimetres) Inches
Ultraminiature Rocker & Lever Switches
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M7RN

Double Pole

Dimensions: (Millimetres) Inches

Soldering Process:
Manual soldering: Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder.
Wave soldering:
Recommended soldering temperature: 260 ±5°C.
Duration of solder immersion: 5 ±1 seconds (PCB is 1.6mm in thickness).

Soldering: Vapour phase.

Temperature Profile

<table>
<thead>
<tr>
<th>Zone</th>
<th>Room Temperature (°C)</th>
<th>Time (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-heat (A)</td>
<td>150°C</td>
<td>Minimum 120</td>
</tr>
<tr>
<td>Soak (B)</td>
<td>180°C to 200°C</td>
<td>Minimum 150</td>
</tr>
<tr>
<td>Peak (C)</td>
<td>200°C to 235°C</td>
<td>Minimum 30</td>
</tr>
<tr>
<td>Peak (D)</td>
<td>235°C to 260°C</td>
<td>Minimum 40</td>
</tr>
<tr>
<td>Peak (E)</td>
<td>260°C</td>
<td>Maximum 10</td>
</tr>
</tbody>
</table>

Temperature Profile Graph:

- Peak: 260°C
- A: Pre-heat (A)
- B: Soak (B)
- C: Peak (C)
- D: Peak (D)
- E: Peak (E)
# Ultraminiature Rocker & Lever Switches

0.4 VA @ 20V ac or dc

## Specifications

<table>
<thead>
<tr>
<th>Number of Poles</th>
<th>Switch Function</th>
<th>Connected Terminals/Schematic</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>On None On</td>
<td>5 - 6, 5 - 6, 4 - 5, 5 - 6</td>
<td>4US1</td>
</tr>
<tr>
<td>DP</td>
<td>On None None</td>
<td>5 - 6, 2 - 3, 2 (Comms)</td>
<td>4UD1</td>
</tr>
</tbody>
</table>

## Specification Table

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch, Rocker, Sub-Miniature, SPDT, On-On</td>
<td>4US1R102M2RN</td>
</tr>
<tr>
<td>Switch, Rocker, Sub-Miniature, DPDT, On-On</td>
<td>4UD1R102M2RN</td>
</tr>
<tr>
<td>Switch, Rocker, Sub-Miniature, Horizontal R/A, SPDT, On-On</td>
<td>4US1R102M6RN</td>
</tr>
<tr>
<td>Switch, Rocker, Sub-Miniature, Horizontal R/A, DPDT, On-On</td>
<td>4UD1R102M6RN</td>
</tr>
<tr>
<td>Switch, Rocker, Sub-Miniature, Vertical R/A, SPDT, On-On</td>
<td>4US1R102M7RN</td>
</tr>
<tr>
<td>Switch, Rocker, Sub-Miniature, Vertical R/A, DPDT, On-On</td>
<td>4UD1R102M7RN</td>
</tr>
<tr>
<td>Switch, Lever, Sub-Miniature, SPDT, On-On</td>
<td>4US1R202M2RN</td>
</tr>
<tr>
<td>Switch, Lever, Sub-Miniature, DPDT, On-On</td>
<td>4UD1R202M2RN</td>
</tr>
<tr>
<td>Switch, Lever, Sub-Miniature, Horizontal R/A, SPDT, On-On</td>
<td>4US1R202M6RN</td>
</tr>
<tr>
<td>Switch, Lever, Sub-Miniature, Horizontal R/A, DPDT, On-On</td>
<td>4UD1R202M6RN</td>
</tr>
<tr>
<td>Switch, Lever, Sub-Miniature, Vertical R/A, SPDT, On-On</td>
<td>4US1R202M7RN</td>
</tr>
<tr>
<td>Switch, Lever, Sub-Miniature, Vertical R/A, DPDT, On-On</td>
<td>4UD1R202M7RN</td>
</tr>
</tbody>
</table>

## Part Number Explanation:

- **Model Number**: 4US1 = SP On-None-On and 4UD1 = DP On-None-On.
- **Actuator**: R10 = Rocker (std) and R20 = Lever (std).
- **Actuator Colour**: 02 = Colour: Black (std) and Pantone: Black C.
- **Terminations**: M2 = PC Through Hole and M6 = Right Angle PC Through Hole and M7 = Vertical Right Angle PC Through Hole.
- **Contact Material**: R = Gold.
- **Seal**: N = No Epoxy.
Notes:

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