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**Series MicroCosmos**

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### miniature tact switch SMT

- **mounting under foil**

<table>
<thead>
<tr>
<th>insertion/Type of mounting</th>
<th>contacts</th>
<th>material of contacts</th>
<th>actuating force</th>
<th>packaging</th>
<th>part no.</th>
<th>technical drawing</th>
<th>mounting dimensions</th>
<th>component layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>miniature tact switch SMT</td>
<td>automatically</td>
<td>1 Pole, 2 Positions</td>
<td>silver (standard)</td>
<td>4.2 N</td>
<td>tape &amp; reel of 1200 pcs.</td>
<td>MC.10311.91</td>
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Technical drawings from page 719, mounting dimensions from page 720, component layouts from page 721

### miniature tact switch PCB

- **mounting under foil or with buttons through front panel cut-out**

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<th>insertion/Type of mounting</th>
<th>contacts</th>
<th>material of contacts</th>
<th>actuating force</th>
<th>part no.</th>
<th>circuit drawing</th>
<th>mounting dimensions</th>
<th>component layout</th>
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Circuit drawings from page 722, technical drawings from page 719, mounting dimensions from page 720, component layouts from page 721
### miniature tact switch PCB 90°

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<th>component layout</th>
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Circuit drawings from page 722, technical drawings from page 719, component layouts from page 721.
## button for foil

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<th>Typ-Nr.</th>
<th>Guwept produc.</th>
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Further markings on request. Technical drawings from page 719.

## button for front panel mounting

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<td>7</td>
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</tbody>
</table>

Further markings on request. Technical drawings from page 719.
MicroCosmos

**MicroCosmostechnical data**

**electrical characteristics**

- **insulation resistance**
  - at 100 V: > 1000 MΩ

- **life time**
  - at nominal rating: 10⁶ operations

- **contact power rating**
  - 0.5 W

- **rebound time**
  - < 5 ms

- **voltage**
  - nominal: 24 V,
  - minimum:
    - standard contacts Ag: 100 mV,
    - tropicalized contacts Au: 10 mV
  - maximum: 50 V

- **electric strength**
  - at 50 Hz V eff.: 250 V

- **current**
  - nominal: 20 mA,
  - minimum:
    - standard contacts Ag: 10 mA,
    - tropicalized contacts Au: 500 µA

- **contact resistance**
  - standard contacts Ag: < 100 mΩ,
  - tropicalized contacts Au: < 20 mΩ

**mechanical characteristics**

- **terminal plating**
  - mean value: 4 µ Sn Pb on Ni

- **contact plating**
  - mean value: standard contacts Ag: 2 µ Ag on Ni,
  - tropicalized contacts Au: 0.5 µ Au on Ni

- **actuating force**
  - standard mean value:
    - SMD: 4.2 N, through hole operations: 3 or 4.2 N

- **actuating travel**
  - mean value:
    - SMD: 0.5 mm, through hole operations: 0.45 mm,
    - maximum incl. overtravel (mean value): 0.80 mm

- **insulation thermoplastic**
  - glass filled polyamide self-extinguishing 94 V-0 (UL-94)

- **resistance to shock**
  - (IEC 512-4) 100 g: 6 ms

- **resistance to vibrations**
  - (IEC 512-4): 10 - 2000 Hz
  - 0.75 mm Amplitude 10g,
  - Time: 2.5 Hours

**climatic characteristics**

- **service temperature**
  - SMD:
    - contact Ag: -55°C to + 85°C,
    - contact Au: -55°C to + 125°C,
  - through hole mounting: -25°C to + 85°C

- **sealing**
  - (IEC 68-2-45) soldering and cleaning in solvents by immersion,
  - HCFC 141 B type.

- **damp heat**
  - (IEC 512-6) 21 days

- **storage temperature**
  - SMT:
    - contacts Ag: -55°C to + 85°C,
    - contacts Au: -55°C to + 125°C
  - through hole mounting: -55°C to + 85°C

- **soldering**
  - SMT: 200°C < 60 sec., 260°C < 15 sec.
  - through hole: 250°C/5 sec.
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**component layouts**

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   ![Diagram of 1 miniature tact switch SMT]

2. **2 miniature tact switch PCB**  
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   ![Diagram of 2 miniature tact switch PCB]

3. **3 miniature tact switch PCB**  
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   ![Diagram of 3 miniature tact switch PCB]

4. **4 miniature tact switch PCB**  
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   ![Diagram of 4 miniature tact switch PCB]
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[Diagram of a PCB with labeled connectors]

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[Diagram of a PCB with labeled connectors]

circuit drawings

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[Diagram of a PCB with labeled connectors]

2 miniature tact switch PCB
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[Diagram of a PCB with labeled connectors]

3 miniature tact switch PCB 90°
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[Diagram of a PCB with labeled connectors]

Note:
More information about the PCB-Software can be found at www.pcad.com/en/library.