Single-Turn Conductive Plastic Potentiometers

PL240 Series

Special features
- very small dimensions
- $1 \times 10^6$ movements
- linearity ±2%
- excellent resolution – better than $0.1^\circ$

Low-cost potentiometer with a conductive plastic resistance element for control electronics and measuring applications.

Careful selection of materials and high-quality components ensure a constant and accurate angle measurement throughout the entire service life of the sensor.

Special designs with other angular ranges, and shaft dimensions are available on request.

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>housing diameter 20 mm</td>
</tr>
<tr>
<td>Housing</td>
<td>high-quality, temperature-consistent plastic</td>
</tr>
<tr>
<td>Shaft</td>
<td>brass, nickel plated</td>
</tr>
<tr>
<td>Bearings</td>
<td>sleeve bearings</td>
</tr>
<tr>
<td>Resistance element</td>
<td>conductive plastic</td>
</tr>
<tr>
<td>Wiper assembly</td>
<td>precious metal</td>
</tr>
<tr>
<td>Electrical connections</td>
<td>tin plated</td>
</tr>
</tbody>
</table>
Order designations / Abbreviations
4A: connecting pin, radial
MB: bushing M10 x 0.75
axis Ø 6 mm with slot

Included in delivery
1 nut M10 x 0.75
1 serrated washer 3/8"

Recommended accessories
Fork coupling Z 104 G6, Art. no.
005690;
Fork coupling Z 105 G6 (back-
lash-free), Art. no. 005691,
MAP process-control indicators
and display. MUP signal condi-
tioner for standardized output
signals.

Important
All values given for this series –
including linearity, lifetime, micro-
linearity, resistance to external
disturbances and temperature
coefficient in voltage dividing
mode – are quoted for the device
operating with the wiper voltage
driving an operational amplifier
working as a voltage follower
where virtually no load is applied
to the wiper (le ≤ 1 µA).

Order designations

<table>
<thead>
<tr>
<th>Type</th>
<th>Art. no.</th>
<th>R in kΩ</th>
<th>Length of shaft in mm</th>
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<tbody>
<tr>
<td>PL240 1K0</td>
<td>79950</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>PL240 5K0</td>
<td>79951</td>
<td>5</td>
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Environmental Data

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<th>Temperature range</th>
<th>-25...+125 °C</th>
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<tr>
<td>Vibration</td>
<td>30...2000 Hz, Amax = 0.75, Amin = 10 g</td>
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<tr>
<td>Life</td>
<td>1 x 106 movements</td>
</tr>
<tr>
<td>Shock (DIN IEC 68 T2-27)</td>
<td>50 g, 7 ms</td>
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<td>Protection class (DIN 40053)</td>
<td>IP 50</td>
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