EPLB
CYLINDRICAL LINEAR POTENTIOMETER

Specifications
EPLB is an absolute linear potentiometer transducer. Mechanical mounting is made simpler by the presence of two spherical joints on the two sides and by the enclosure’s cylindrical shape. The main characteristic is the absence of variations on the electrical output signal outside of the theoretical electrical stroke. Thanks to its robustness and precision EPLB represents a great solution in most mechanical application for automation.

ORDERING CODE

<table>
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<tr>
<th>ORDERING CODE</th>
<th>EPLB</th>
<th>300</th>
<th>S</th>
<th>5</th>
<th>P</th>
<th>R</th>
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<tr>
<td>STROKE</td>
<td>mm from 50 to 750</td>
<td>see table for stroke availability</td>
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<td>ENCLOSURE RATING</td>
<td>IP 65 S</td>
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<td>TRAVEL SPEED</td>
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<tr>
<td>OUTPUT TYPE</td>
<td>cable (standard length 1 m) F 3 pin connector C3 DIN 43650-C 4 pin connector C4 M16 DIN 43222 5 pin connector C5</td>
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<td>OUTPUT DIRECTION</td>
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ELECTRICAL SPECIFICATIONS

- **Resolution**: virtually infinite
- **Independent linearity**: ± 0.05 %
- **Repeatability**: 0.01 mm
- **Resistance tolerance**: ± 20 %
- **Recommended current**: < 0.1 µA
- **Output voltage**: ≤ 1.5 ppm / °C
- **Power dissipation**: 3 W at 40 °C / 0 W at 120 °C
- **Max cursor current**: 10 mA
- **Applicable voltage**: 60 V max
- **Electrical insulation**: > 100 MΩ, 500 VDC, 1 bar, 2 s
- **Dielectric strenght**: < 100 µA, 500 VAC, 50 Hz, 1 bar, 2 s

Important: datas are valid if the transducer is used as a ratiometric device with a maximum applicable current ≤ 0.1 µA.

MECHANICAL SPECIFICATIONS

- **Stroke**: 50 - 100 - 150 - 200 - 300 - 400 - 450 - 500 - 600 - 750 mm
- **Useful electric stroke (EEU) (+3/-0 mm)**: see model (mm)
- **Theoretical electric stroke (EET) (±1 mm)**: EEU + 3 mm (50 ... 150), EEU + 4 mm (200 ... 300), 406 mm (400), 457 mm (450), 508 mm (500), 609 mm (600), 762 mm (750)
- **Mechanical stroke (EM)**: EEU + 9 mm (50 ... 150), EEU + 10 mm (200 ... 300), 412 mm (400), 463 mm (450), 518 mm (500), 619 mm (600), 772 mm (750)
- **Resistance (on the EET)**: 5 kΩ (50 ... 600), 10 kΩ (750)
- **Case length (LP)**: EEU + 129 mm (50 ... 150), EEU + 130 mm (200 ... 300), 538 mm (400), 589 mm (450), 664 mm (500), 765 mm (600), 918 mm (750)
- **Minimum interaxis length (A)**: EEU + 177 mm (50 ... 150), EEU + 178 mm (200 ... 300), 586 mm (400), 637 mm (450), 712 mm (500), 813 mm (600), 966 mm (750)
- **Travel speed**: 5 m/s max
- **Closure rating**: IP 65 (IEC 60529)
- **Shock**: 50 G, 11 ms (IEC 60068-2-27)
- **Vibration**: 20 G, 5...2000 Hz (IEC 60068-2-6)
- **Displacement force**: ≤ 15 N
- **Moving angle**: ± 25° max
- **Housing material**: anodized aluminium / Nylon 66 G
- **Rod material**: 1.4305 / AISI 303 stainless steel
- **Mounting**: n°2 selfloading and selfaligning ball-joints
- **Life**: > 25 x 10⁶ m strokes or > 100 x 10⁶ manoeuvres
- **Operating temperature**: -30°...+100°C (-22°...+212°F)
- **Storage temperature**: -50°...+120°C (-58°...+248°F)

Installation warning instructions:
- Do not use it as a variable resistance
- Connect the transducer according to the reported connections
- DO NOT use it as a variable resistance
- The transducer calibration has to be done setting the stroke in order to have an output signal between 1% and 99% of the voltage level

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