

# Linear Position Sensor LP 50

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Invented for life



- ▶ Measurement range: 0 to 50 mm
- ▶ Aluminum housing
- ▶ Low power consumption

The LP 50 is a linear potentiometer which is designed to measure the relative position of two points, e.g. the gear position, throttle position or suspension movement.

The operating mode of this sensor is based on the linear tape potentiometer principle where the distance travelled between the moving end to the wiper is proportional to the resistance between them.

The advantage of this LP is its precise and compact design with an anodized aluminum cylindrical housing, low power consumption and infinite resolution.

## Application

|                           |                                      |
|---------------------------|--------------------------------------|
| Application               | 0 to 50 mm                           |
| Temperature range         | -30 to 125°C                         |
| Storage temperature range | -55 to 125°C                         |
| Max. vibration            | 100 m/s <sup>2</sup> at 10 to 500 Hz |

## Technical Specifications

### Mechanical Data

|                   |        |
|-------------------|--------|
| Weight            | 66 g   |
| Length compressed | 172 mm |
| Mounting          | 2 x M5 |

|                   |            |
|-------------------|------------|
| Tightening torque | 10 Nm      |
| Protection        | IP66       |
| Shaft velocity    | < 10 m/sec |

### Electrical Data

|                      |            |
|----------------------|------------|
| Power supply         | 5 V        |
| Power supply max.    | 44 V       |
| Nominal resistance   | 2 kOhm     |
| Resistance tolerance | 20 %       |
| Non-linearity        | < ± 0.25 % |
| Max. current         | 1 mA       |

### Connectors and Wires

|                                      |                  |
|--------------------------------------|------------------|
| Connector (see Ordering Information) | KPSE 6E8-33P-DN  |
| Connector loom<br>KPSE 0E8-33S-DN    | F 02U 000 115-01 |

### Or

|                                      |                  |
|--------------------------------------|------------------|
| Connector (see Ordering Information) | KPTA 6E6-4P-C-DN |
|--------------------------------------|------------------|

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|                                    |                  |
|------------------------------------|------------------|
| Connector loom<br>KPTA 2E6-4S-C-DN | F 02U 000 105-01 |
|------------------------------------|------------------|

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|       |                |
|-------|----------------|
| Pin 1 | U <sub>s</sub> |
|-------|----------------|

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|       |     |
|-------|-----|
| Pin 2 | Gnd |
|-------|-----|

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|       |     |
|-------|-----|
| Pin 3 | Sig |
|-------|-----|

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|        |       |
|--------|-------|
| Sleeve | DR-25 |
|--------|-------|

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|           |        |
|-----------|--------|
| Wire size | AWG 24 |
|-----------|--------|

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|               |             |
|---------------|-------------|
| Wire length L | 15 to 25 cm |
|---------------|-------------|

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Various motorsport and automotive connectors on request.

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Please specify the requested wire length with your order.

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### Installation Notes

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The LP 50 can be connected directly to the most electronic control units and data logging systems.

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Ball joints at shaft end and case.

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Each mounting orientation is possible.

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Please find further application hints in the offer drawing at our homepage.

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### Safety Note

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The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

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### Ordering Information

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#### Linear Position Sensor LP 50

Connector KPSE 6E8-33P-DN

Order number **F 02U V01 319-01**

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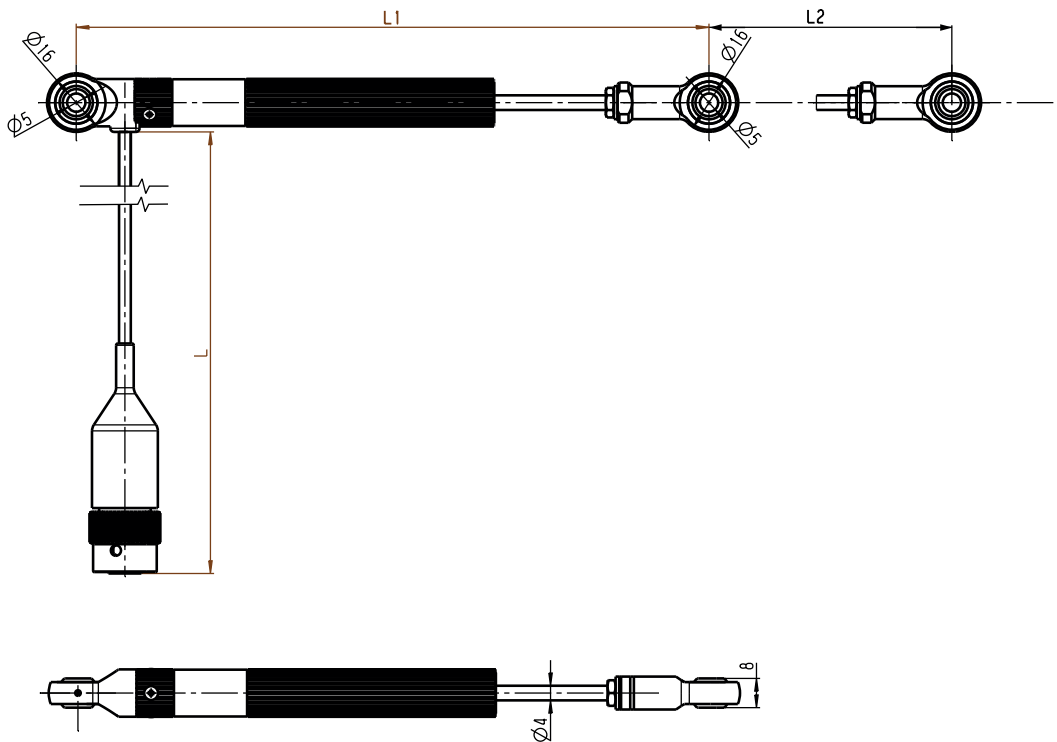
#### Linear Position Sensor LP 50

Connector KPTA 6E6-4P-C-DN

Order number **B 261 209 136-01**

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Dimensions



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