

# LTK - Capteur de déplacement potentiométrique 0-50mm à 0-1500mm

“Rodless, Sliding System for Long Distance Measurements ”



## GENERAL FEATURES

The most important feature of LTK series position sensors is that they have a rodless and sliding system. They take measurement by movement of the sled along the profile. This provides the body to be shorter and allows up to 1500 mm stroke length.

They work as ABSOLUTE because they are measuring with the potentiometric principle, that is, they do not lose their position in case of power off. Potentiometric, 4-20 mA (optional 0-20 mA) or 0-10V analog output options are available.

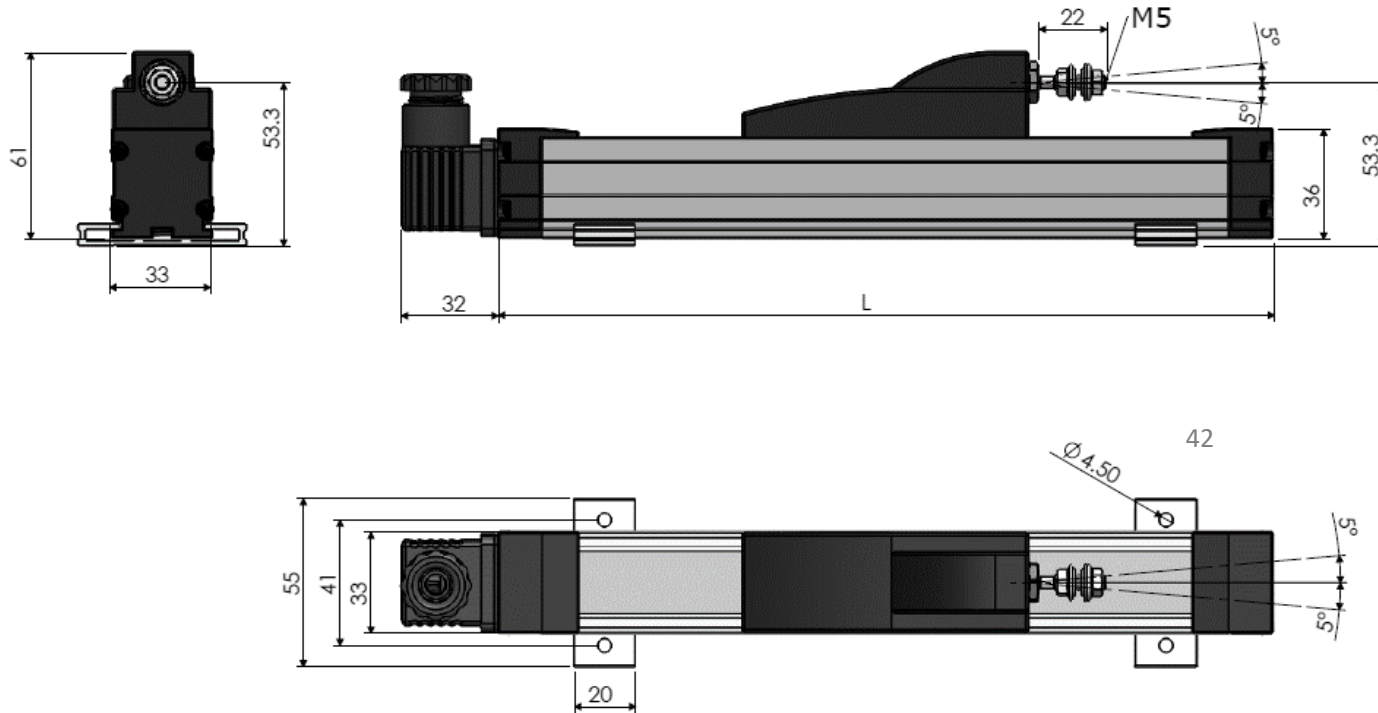
Because of their linearized conductive plastic resistance alloy and special contacts, they are not affected by wear and operate for a long time with a life cycle of up to 100 million. They are stable by being linear and they measure evenly.

- Rodless, sliding system
- Measuring lengths between 50 mm and 1500 mm
- Potentiometric measurement
- Potentiometric, 4-20 mA or 0-10V analog output options
- Long life up to 100 million movements
- High accuracy
- Compact design
- DIN43650-A socket connection
- IP 40 protection class  
(if slider is mounted upside down, it becomes IP54)

## TECHNICAL SPECIFICATIONS

| Model                             | LTK 50   | LTK 75 | LTK 100 | LTK 125 | LTK 150 | LTK 175 | LTK 200 | LTK 225 | LTK 250 | LTK 275 | LTK 300 | LTK 325 | LTK 350 | LTK 375 | LTK 400                           | LTK 450 | LTK 500 | LTK 550 | LTK 600 | LTK 650 | LTK 700 | LTK 750 | LTK 800 | LTK 900 | LTK 1000 | LTK 1250 | LTK 1500 |  |
|-----------------------------------|--|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|--|
| <b>Electrical Stroke (mm)</b>     | 50   | 75     | 100     | 125     | 150     | 175     | 200     | 225     | 250     | 275     | 300     | 325     | 350     | 375     | 400                               | 450     | 500     | 550     | 600     | 650     | 700     | 750     | 800     | 900     | 1000     | 1250     | 1500     |  |
| <b>Independent Linearity (±%)</b> | 0,1  |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Repeatability</b>              | 0.01 mm  |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Operating Speed</b>            | ≤ 5 m/s  |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Resistance Element</b>         | Conductive Plastic                                       |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Output Signal</b>              | Potentiometric   |        |         |         |         |         |         |         |         |         |         |         |         |         | 4-20 mA (opt. 0...20 mA) or 0-10V |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Supply Voltage</b>             | 42V max.   |        |         |         |         |         |         |         |         |         |         |         |         |         | 15...30 VDC                       |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Resistance (KΩ)</b>            | Models from 50 to 1000mm: 5K, 10K (optional others)      |        |         |         |         |         |         |         |         |         |         |         |         |         | -                                 |         |         |         |         |         |         |         |         |         |          |          |          |  |
|                                   | Models with 1250 or 1500mm: 20K (standard)               |        |         |         |         |         |         |         |         |         |         |         |         |         | -                                 |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Resistance Tolerance (±%)</b>  | 20   |        |         |         |         |         |         |         |         |         |         |         |         |         | -                                 |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Electrical Connection</b>      | DIN 43650-A 4 pin socket                                 |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Mechanical Fixing</b>          | Adjustable (sliding) mounting feet                       |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Operating Temperature</b>      | -30°C...+100°C   |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>IP Protection Class</b>        | IP40 (if slider is mounted upside down, it becomes IP54) |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Life</b>                       | 100 x 10 <sup>6</sup> movements                          |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |
| <b>Material</b>                   | Sliding parts: Plastic<br>Body: Aluminum                 |        |         |         |         |         |         |         |         |         |         |         |         |         |                                   |         |         |         |         |         |         |         |         |         |          |          |          |  |

## MECHANICAL DIMENSIONS (mm)

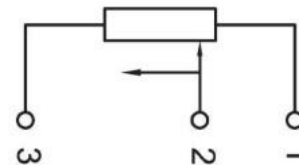
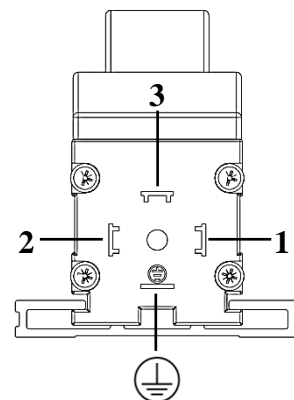


| Stroke | Body Length (L) |
|--------|-----------------|
| 50     | 204             |
| 75     | 229             |
| 100    | 254             |
| 125    | 279             |
| 150    | 304             |
| 175    | 329             |
| 200    | 354             |
| 225    | 379             |
| 250    | 404             |
| 275    | 429             |
| 300    | 454             |
| 325    | 479             |
| 350    | 504             |
| 375    | 529             |
| 400    | 554             |
| 450    | 604             |
| 500    | 654             |
| 550    | 704             |
| 600    | 754             |
| 650    | 804             |
| 700    | 854             |
| 750    | 904             |
| 800    | 954             |
| 900    | 1054            |
| 1000   | 1154            |
| 1250   | 1404            |
| 1500   | 1654            |

## ELECTRICAL CONNECTION

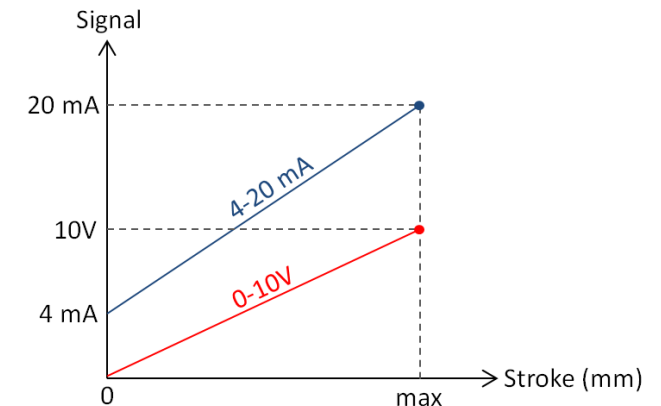
| SIGNAL         | DIN 43650-A SOCKET |
|----------------|--------------------|
| + V            | Pin 1              |
| Output Signal* | Pin 2              |
| - V            | Pin 3              |

\* **Output Signal** may be potentiometric, 0-10 VDC or 4-20 mA depending on the model (See Product code table).



**Potentiometer Connection (Voltage Divider)**

**Note:** The GND line of the feed and signal output is common. Therefore it can be connected with 3-wire cable.



## SAMPLE APPLICATION FIELDS

- Measuring /control technology
- Manufacturing engineering like woodwork machines, riveting machines, packaging machines etc.
- Hydraulic machines
- Press brakes
- Metal working machines
- Bending machines
- Assembly and test equipment
- Medical applications
- Building technology
- Textile machinery
- Plastic and metal injection machines

## ORDER CODE

### Order Code For Analog Output

#### Model No

LTK - XXX - X - XX

#### Output Signal

A: 4-20 mA (\*Optional 0-20 mA )  
V: 0-10 VDC

#### Measuring length (Stroke)

Different measuring lengths between 50 mm and 1500 mm

#### Electrical Connection

No code: DIN43650-A Socket (standard)

### Order Code For Potentiometric Output

#### Model No

LTK - XXX - XXX - XX

#### Resistance Value<sup>(1)</sup>

5K: 5K $\Omega$   
10K: 10K $\Omega$   
20K: 20K $\Omega$   
\*Optional others

#### Measuring length (Stroke)

Different measuring lengths between 50 mm and 1500 mm

#### Electrical Connection

No code: DIN43650-A Socket (standard)

(1) Resistance value can be selected;  
5K or 10K (optional others) in models from 50 to 1000mm  
20K in models 1250 and 1500mm