

# LT Series Linear Potentiometers



## Features

- Excellent reliability under all conditions
- Suitable for use in applications with heavy vibration
- Designed for easy installation thanks to an absence of electrical signal variation in output
- Mounting grooves provide a good alternative to fastening with brackets
- Typical applications include plastic injection presses, vertical presses, and many other types of processing machinery
- All potentiometers are individually tested at the manufacturer, and an individualized Linearity Error Chart is included with each unit

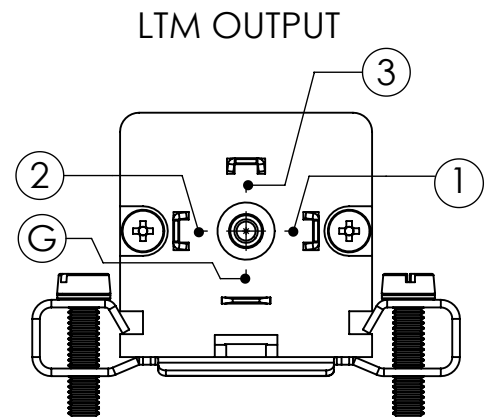
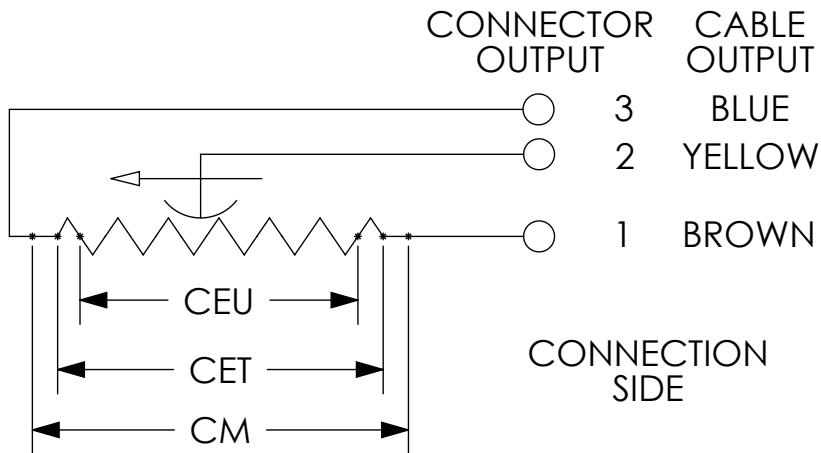
## LT Series Linear Potentiometers Selection Chart

Part Number	Price	Drawing Link	Useful Electrical Stroke (CEU) mm [in]	Theoretical Electrical Stroke (CET) mm [in]	Resistance	Mechanical Stroke (CM) mm [in]	Case Length (A) mm [in]
<a href="#">LT-M-0050-S-L</a>	\$160.00	<a href="#">PDF</a>	50 [1.97]	53 [2.09]	5KΩ	59 [2.32]	113 [4.45]
<a href="#">LT-M-0075-S-L</a>	\$169.00	<a href="#">PDF</a>	75 [2.95]	78 [3.07]	5KΩ	84 [3.31]	138 [5.43]
<a href="#">LT-M-0100-S-L</a>	\$172.00	<a href="#">PDF</a>	100 [3.94]	103 [4.06]	5KΩ	109 [4.29]	163 [6.42]
<a href="#">LT-M-0130-S-L</a>	\$180.00	<a href="#">PDF</a>	130 [5.12]	133 [5.24]	5KΩ	139 [5.47]	193 [7.60]
<a href="#">LT-M-0150-S-L</a>	\$188.00	<a href="#">PDF</a>	150 [5.91]	153 [6.02]	5KΩ	159 [6.26]	213 [8.39]
<a href="#">LT-M-0175-S-L</a>	\$193.00	<a href="#">PDF</a>	175 [6.89]	178 [7.01]	5KΩ	184 [7.24]	238 [9.37]
<a href="#">LT-M-0200-S-L</a>	\$196.00	<a href="#">PDF</a>	200 [7.87]	204 [8.03]	5KΩ	210 [8.27]	264 [10.39]
<a href="#">LT-M-0250-S-L</a>	\$219.00	<a href="#">PDF</a>	250 [9.84]	254 [10.00]	5KΩ	260 [10.24]	314 [12.36]
<a href="#">LT-M-0300-S-L</a>	\$222.00	<a href="#">PDF</a>	300 [11.81]	304 [11.97]	5KΩ	310 [12.20]	364 [14.33]
<a href="#">LT-M-0400-S-L</a>	\$311.00	<a href="#">PDF</a>	400 [15.75]	406 [15.98]	5KΩ	412 [16.22]	466 [18.35]

## LT Series Linear Potentiometers Specifications

Independent Linearity (Within CEU)	± 0.05%
Resolution	Infinite
Repeatability	0.01 mm [0.0004 in]
Electrical Connections	4 pole connector DIN43650
Displacement Speed	Standard ≤ 10 m/s [32.81 ft/s]
Protection Level	IP60
Life	> 25x10 <sup>6</sup> strokes or > 100x10 <sup>6</sup> maneuvers, whichever is less (within CEU)
Displacement Force	3.5 N (typical) IP60 version, 15N (typical) IP65 version
Vibrations	5-2000 Hz: Amax=0.75 mm [0.03 in], amax=20g
Shock	50g, 11ms
Acceleration	200 m/s <sup>2</sup> max (20g)
Tolerance on Resistance	±20%
Recommended Cursor Current	< 0.1 μA
Maximum Cursor Current	10mA
Maximum Applicable Voltage	60V
Electrical Isolation	> 100MΩ at 500V~, 1bar, 2s
Dielectric Strength	< 100μA at 500V~, 50Hz, 2s, 1bar
Dissipation at 40 °C [104 °F] (0W at 120 °C [248 °F])	3W
Thermal Coefficient of Resistance	-200 to +200 ppm/°C typical
Actual Temperature Coefficient of Output Voltage	≤ 5 ppm/°C typical
Working Temperature	-30 to +100°C [-22 to +212°F]
Storage Temperature	-50 to +120°C [-58 to 248°F]
Case Material	Anodized aluminum, Nylon 66
Shaft Material	Stainless steel AISI 303
Mounting	Brackets with adjustable distance between centers, or with M5 screw ISO4017-DIN933

## Electrical Connections



**When choosing a transducer, it is important to remember that three different strokes exist:**

- Mechanical Stroke (CM): The actual shift that the transducer's cursor (wiper) is able to make.
- Useful Electrical Stroke (CEU): The part of the mechanical stroke in which transducer linearity is guaranteed.
- Theoretical Electrical Stroke (CET): Stroke expressed in mm or angular degrees between the electrical zero ( $V_{out}=0$ ) and the electrical limit switch ( $V_{out}=V_s$ ), which physically is equal to the distance between the silver pitches at the ends of the resistive track.

Therefore, when designing an application, you should choose a transducer with a useful electrical stroke that is equal to or greater than the maximum displacement carried out by the moving part.

# Linear Potentiometer Accessories

## Connectors For Gefran Linear Potentiometers

Part Number	Price	Drawing Link	Description	Number of Poles
<a href="#"><u>CON006-1KJ</u></a>	\$8.00	<a href="#"><u>PDF</u></a>	Gefran field wireable connector, 18mm DIN 43650 Form A, 90-degree cable entry, 4-pole. For use with Gefran LT, PK and WPG linear position sensors.	4
<a href="#"><u>CON008-1KJ</u></a>	\$8.00	<a href="#"><u>PDF</u></a>	Gefran field wireable connector, 9.4mm DIN 43650 Form C, 90-degree cable entry, 4-pole. For use with Gefran PC series potentiometers.	4

[CON006-1KJ](#)

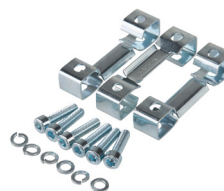
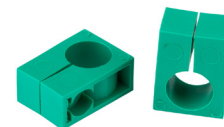
[CON008-1KJ](#)


## Mounting Brackets and Accessories For Gefran Linear Potentiometers

Part Number	Price	Description
<a href="#"><u>PKIT009-1KJ</u></a>	\$12.00	Gefran mounting brackets, for use with Gefran LT Series potentiometers.
<a href="#"><u>PKIT015-1KJ</u></a>	\$21.50	Gefran rod eye joint accessory, for use with Gefran LT Series potentiometers.
<a href="#"><u>PKIT059-1KJ</u></a>	\$12.00	Gefran mounting brackets, for use with 100 to 900mm Gefran PK Series potentiometers.
<a href="#"><u>PKIT061-1KJ</u></a>	\$13.50	Gefran mounting brackets, for use with 1000 to 2000mm Gefran PK Series potentiometers.
<a href="#"><u>STA074-1KJ</u></a>	\$5.50	Gefran mounting brackets, for use with Gefran PZ12-S Series potentiometers.


[PKIT009-1KJ](#)

[PKIT015-1KJ](#)

[PKIT059-1KJ](#)

[PKIT061-1KJ](#)

[STA074-1KJ](#)