



Gefran LT Series Linear Potentiometers

GEFRAN
BEYOND TECHNOLOGY

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

Gefran LT Series Linear Potentiometers Selection Chart

| Part Number | Price | Useful Electrical Stroke (CEU) mm [in] | Theoretical Electrical Stroke (CET) mm [in] | Resistance | Mechanical Stroke (CM) mm [in] | Case Length (A) mm [in] |
|---------------|----------|---|--|-------------|-----------------------------------|----------------------------|
| LT-M-0050-S-L | \$149.00 | 50 [1.97] | 53 [2.09] | 5K Ω | 59 [2.32] | 113 [4.45] |
| LT-M-0075-S-L | \$157.00 | 75 [2.95] | 78 [3.07] | 5K Ω | 84 [3.31] | 138 [5.43] |
| LT-M-0100-S-L | \$160.00 | 100 [3.94] | 103 [4.06] | 5K Ω | 109 [4.29] | 163 [6.42] |
| LT-M-0130-S-L | \$167.00 | 130 [5.12] | 133 [5.24] | 5K Ω | 139 [5.47] | 193 [7.60] |
| LT-M-0150-S-L | \$175.00 | 150 [5.91] | 153 [6.02] | 5K Ω | 159 [6.26] | 213 [8.39] |
| LT-M-0175-S-L | \$180.00 | 175 [6.89] | 178 [7.01] | 5K Ω | 184 [7.24] | 238 [9.37] |
| LT-M-0200-S-L | \$183.00 | 200 [7.87] | 204 [8.03] | 5K Ω | 210 [8.27] | 264 [10.39] |
| LT-M-0250-S-L | \$204.00 | 250 [9.84] | 254 [10.00] | 5K Ω | 260 [10.24] | 314 [12.36] |
| LT-M-0300-S-L | \$207.00 | 300 [11.81] | 304 [11.97] | 5K Ω | 310 [12.20] | 364 [14.33] |
| LT-M-0400-S-L | \$289.00 | 400 [15.75] | 406 [15.98] | 5K Ω | 412 [16.22] | 466 [18.35] |

Gefran LT Series Linear Potentiometers Specifications

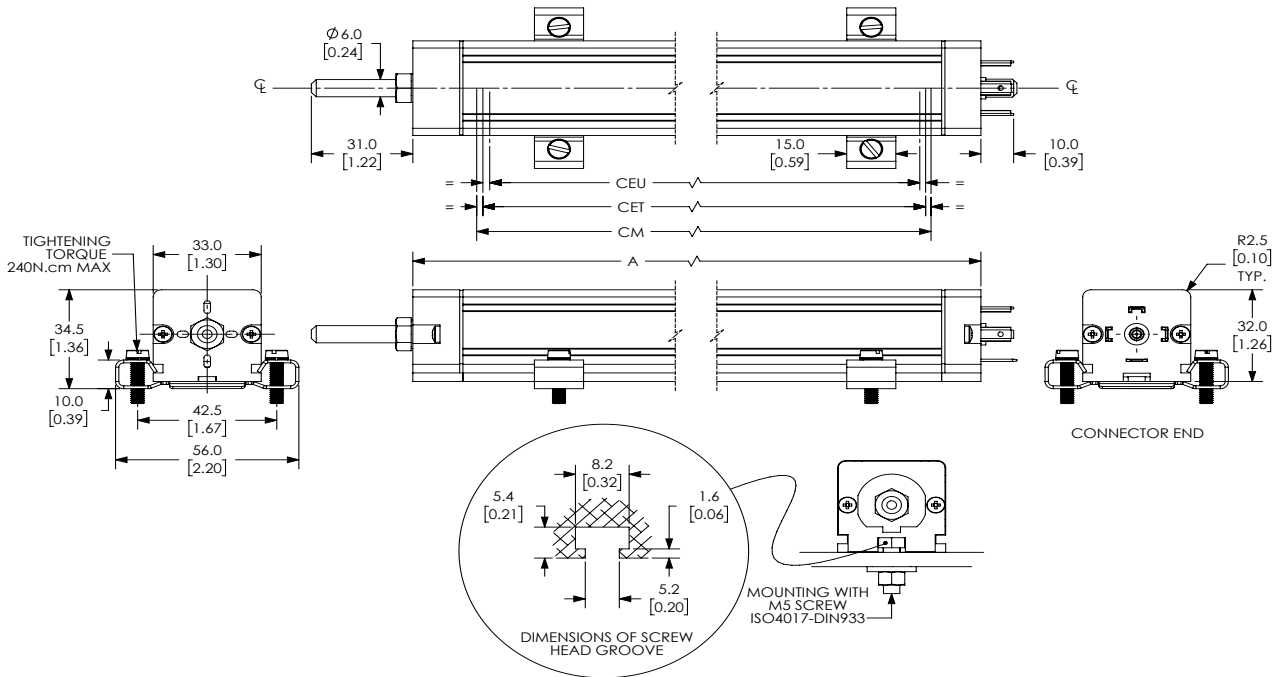
| | |
|--|---|
| Independent Linearity (Within CEU) | $\pm 0.05\%$ |
| Resolution | Infinite |
| Repeatability | 0.01 mm [0.0004 in] |
| Electrical Connections | 4 pole connector DIN43650 |
| Displacement Speed | Standard ≤ 10 m/s [32.81 ft/s] |
| Protection Level | IP60 |
| Life | $> 25 \times 10^6$ strokes or $> 100 \times 10^6$ 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 ² max (20g) |
| Tolerance on Resistance | $\pm 20\%$ |
| Recommended Cursor Current | $< 0.1 \mu\text{A}$ |
| Maximum Cursor Current | 10mA |
| Maximum Applicable Voltage | 60V |
| Electrical Isolation | $> 100\text{M}\Omega$ at 500V~, 1bar, 2s |
| Dielectric Strength | $< 100\mu\text{A}$ 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 |

LT Series Linear Potentiometers

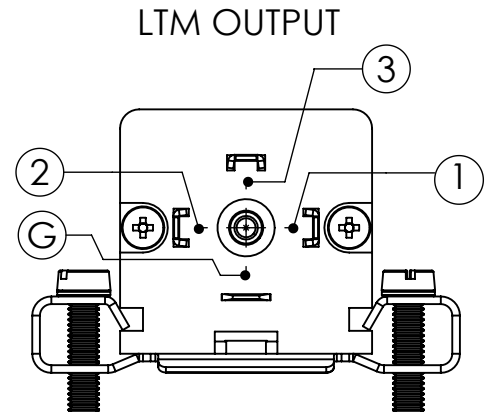
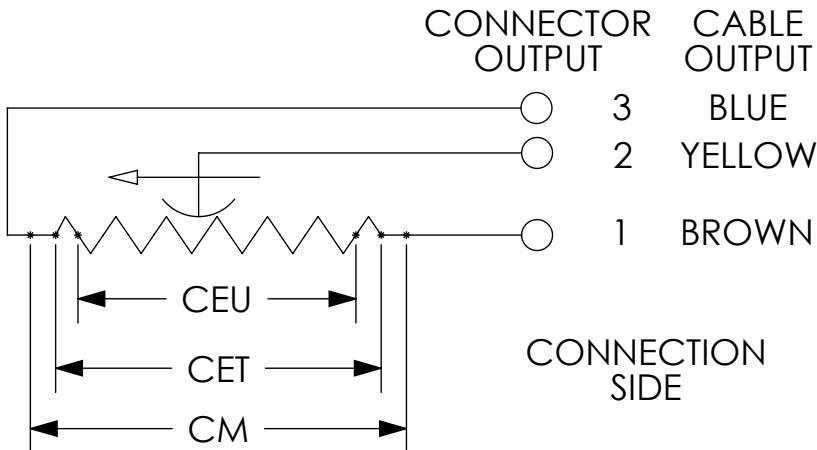
Dimensions

mm [in]

LT-M-xxxx-S-L



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.

Gefran Linear Potentiometer Accessories

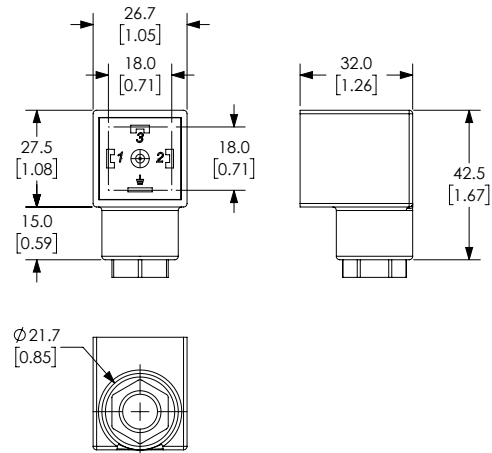


| Connectors For Gefran Linear Potentiometers | | | | |
|---|--------|---|-----------------|-----------------|
| Part Number | Price | Description | Cable Entry | Number of Poles |
| CON006-1KJ | \$7.50 | Gefran field wireable connector, 18mm DIN 43650 Form A, screw terminals, for use with Gefran LT and PK series potentiometers | 90° cable entry | 4 |
| CON008-1KJ | \$7.50 | Gefran field wireable connector, 9.4mm DIN 43650 Form C, 90-degree cable entry, 4-pole. For use with Gefran PC series potentiometers. | 90° cable entry | 4 |

CON006-1KJ



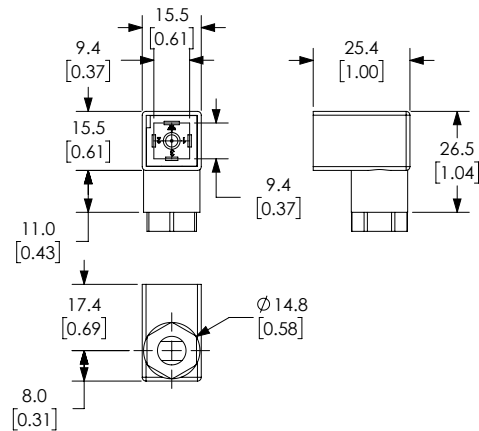
Dimensions
mm [in]



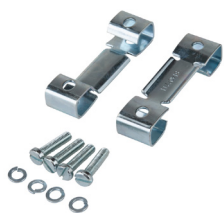
CON008-1KJ



Dimensions
mm [in]



| Mounting Brackets and Accessories For Gefran Linear Potentiometers | | |
|--|---------|---|
| Part Number | Price | Description |
| PKIT009-1KJ | \$11.00 | Gefran mounting brackets, for use with Gefran LT Series potentiometers |
| PKIT015-1KJ | \$20.00 | Gefran rod eye joint accessory, for use with Gefran LT Series potentiometers |
| PKIT059-1KJ | \$11.00 | Gefran mounting brackets, for use with 100 to 900mm Gefran PK Series potentiometers |
| PKIT061-1KJ | \$14.00 | Gefran mounting brackets, for use with 1000 to 2000mm Gefran PK Series potentiometers |
| STA074-1KJ | \$5.00 | Gefran mounting brackets, for use with Gefran PZ12-S Series potentiometers |



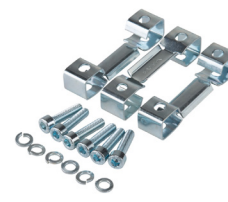
PKIT009-1KJ



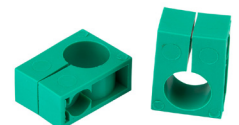
PKIT015-1KJ



PKIT059-1KJ



PKIT061-1KJ



STA074-1KJ