

# PC Series Linear Potentiometers With Cylindrical Case



## Features

- Designed with mechanical strength to handle demanding applications
- 10mm [0.39 in] diameter rod, large steel joints, and reinforced structure are ideal for metalworking, woodworking and ceramics applications
- Designed for easy installation thanks to an absence of electrical signal variation in output
- Self-aligning and weight-bearing rod eyes permit assembly with free movement of the transducer axle
- All potentiometers are individually tested at the manufacturer, and an individualized Linearity Error Chart is included with each unit

## PC Series Linear Potentiometers Selection Chart

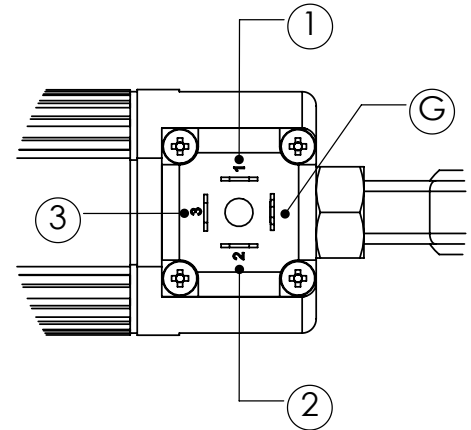
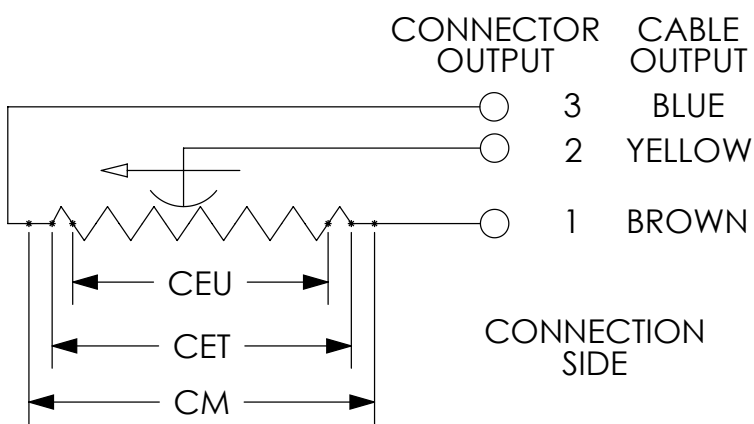
Part Number	Price	Drawing Link	Useful Electrical Stroke (CEU) mm [in]	Theoretical Electrical Stroke (CET) mm [in]	Resistance	Mechanical Stroke (CM) mm [in]	Case Length (A) mm [in]	Minimum Distance Between Rod Eyes (B) mm [in]
<a href="#">PC-M-0050-L</a>	\$306.00	<a href="#">PDF</a>	50 [1.97]	53 [2.09]	5KΩ	59 [2.32]	180.5 [7.11]	227
<a href="#">PC-M-0100-L</a>	\$326.00	<a href="#">PDF</a>	100 [3.94]	103 [4.06]	5KΩ	109 [4.29]	230.5 [9.07]	227
<a href="#">PC-M-0125-L</a>	\$335.00	<a href="#">PDF</a>	130 [5.12]	133 [5.24]	5KΩ	139 [5.47]	260.5 [10.26]	307
<a href="#">PC-M-0150-L</a>	\$346.00	<a href="#">PDF</a>	150 [5.91]	153 [6.02]	5KΩ	159 [6.26]	280.5 [11.04]	327
<a href="#">PC-M-0175-L</a>	\$353.00	<a href="#">PDF</a>	175 [6.89]	178 [7.01]	5KΩ	184 [7.24]	305.5 [12.03]	352
<a href="#">PC-M-0200-L</a>	\$358.00	<a href="#">PDF</a>	200 [7.87]	204 [8.03]	5KΩ	210 [8.27]	331.5 [13.05]	378
<a href="#">PC-M-0225-L</a>	\$366.00	<a href="#">PDF</a>	225 [8.86]	229 [9.02]	5KΩ	235 [9.25]	356.5 [14.04]	403
<a href="#">PC-M-0275-L</a>	\$379.00	<a href="#">PDF</a>	275 [10.83]	279 [10.98]	5KΩ	285 [11.22]	406.5 [16.00]	453
<a href="#">PC-M-0300-L</a>	\$382.00	<a href="#">PDF</a>	300 [11.81]	304 [11.97]	5KΩ	310 [12.20]	431.5 [16.00]	478

## PC 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	IP65
Life	> 25x106 strokes or > 100x106 operations, whichever is less (within CEU)
Displacement Force	≤15N
Vibrations	5-2000 Hz: Amax=0.75 mm [0.03 in], amax=20g
Shock	50g, 11ms
Acceleration	—
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	—
Actual Temperature Coefficient of Output Voltage	≤ 1.5 ppm/°C
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	Two self-loading and self-aligning rod eyes

# PC Series Linear Potentiometers With Cylindrical Case

## 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](#)