

# PZ12 Series Linear Potentiometers With Cylindrical Case



## Features

- Half-inch-diameter cylindrical housing
- Multiple mounting options (brackets, rod eyes or flange) enhance versatility for a wide range of applications
- Designed for easy installation thanks to an absence of electrical signal variation in output
- Ideal for applications such as wood and glass working, finishing machinery, and car test benches
- All potentiometers are individually tested at the manufacturer, and an individualized Linearity Error Chart is included with each unit

### PZ12 Series Linear Potentiometers Selection Chart

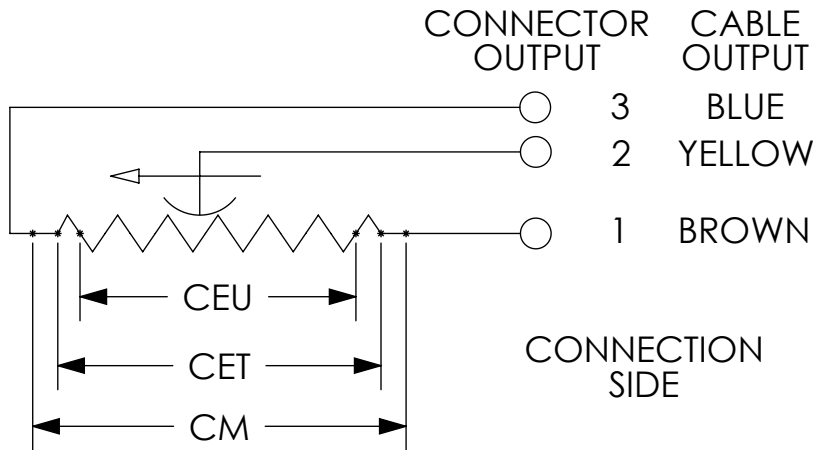
Part Number	Price	Drawing Link	Useful Electrical Stroke (CEU) mm [in]	Theoretical Electrical Stroke (CET) mm [in]	Resistance (CET)	Mechanical Stroke (CM) mm [in]	Case Length (A) mm [in]	Recommended Distance Between Brackets (B) mm [in]	Minimum Distance Between Rod Eyes (C) mm [in]
<b>PZ12-F-xxxx-L Flange Mount Models</b>									
<a href="#">PZ12-F-0025-L</a>	\$157.00	<a href="#">PDF</a>	25 [0.98]	26 [1.02]	1KΩ	30 [1.18]	74.5 [2.93]	–	–
<a href="#">PZ12-F-0050-L</a>	\$166.00	<a href="#">PDF</a>	50 [1.97]	51 [2.01]	2KΩ	55 [2.17]	99.5 [3.92]	–	–
<a href="#">PZ12-F-0075-L</a>	\$171.00	<a href="#">PDF</a>	75 [2.95]	76 [2.99]	3KΩ	80 [3.15]	124.5 [4.90]	–	–
<a href="#">PZ12-F-0100-L</a>	\$177.00	<a href="#">PDF</a>	100 [3.94]	101 [3.98]	4KΩ	105 [4.13]	149.5 [5.89]	–	–
<a href="#">PZ12-F-0200-L</a>	\$191.00	<a href="#">PDF</a>	200 [7.87]	201 [7.91]	8KΩ	205 [8.07]	249.5 [9.82]	–	–
<b>PZ12-A-xxxx-L Rod Eyes Mount Models</b>									
<a href="#">PZ12-A-0025-L</a>	\$215.00	<a href="#">PDF</a>	25 [0.98]	26 [1.02]	1KΩ	30 [1.18]	102 [4.02]	–	153 [6.02]
<a href="#">PZ12-A-0050-L</a>	\$279.00	<a href="#">PDF</a>	50 [1.97]	51 [2.01]	2KΩ	55 [2.17]	127 [5.00]	–	178 [7.01]
<a href="#">PZ12-A-0075-L</a>	\$285.00	<a href="#">PDF</a>	75 [2.95]	76 [2.99]	3KΩ	80 [3.15]	152 [5.98]	–	203 [7.99]
<a href="#">PZ12-A-0100-L</a>	\$290.00	<a href="#">PDF</a>	100 [3.94]	101 [3.98]	4KΩ	105 [4.13]	177 [6.97]	–	228 [8.98]
<a href="#">PZ12-A-0200-L</a>	\$304.00	<a href="#">PDF</a>	200 [7.87]	201 [7.91]	8KΩ	205 [8.07]	277 [10.91]	–	328 [12.91]
<b>PZ12-S-xxxx-L Clamp Brackets Mount Models</b>									
<a href="#">PZ12-S-0025-L</a>	\$166.00	<a href="#">PDF</a>	25 [0.98]	26 [1.02]	1KΩ	30 [1.18]	74.5 [2.93]	42 [1.65]	–
<a href="#">PZ12-S-0050-L</a>	\$183.00	<a href="#">PDF</a>	50 [1.97]	51 [2.01]	2KΩ	55 [2.17]	99.5 [3.92]	67 [2.64]	–
<a href="#">PZ12-S-0075-L</a>	\$188.00	<a href="#">PDF</a>	75 [2.95]	76 [2.99]	3KΩ	80 [3.15]	124.5 [4.90]	92 [3.62]	–
<a href="#">PZ12-S-0100-L</a>	\$193.00	<a href="#">PDF</a>	100 [3.94]	101 [3.98]	4KΩ	105 [4.13]	149.5 [5.89]	117 [4.61]	–
<a href="#">PZ12-S-0200-L</a>	\$209.00	<a href="#">PDF</a>	200 [7.87]	201 [7.91]	8KΩ	205 [8.07]	249.5 [9.82]	217 [8.54]	–

# PZ12 Series Linear Potentiometers With Cylindrical Case

PZ12 Series Linear Potentiometers Specifications					
Model PZ12-x-xxxx-L	0025	0050	0075	0100	0200
Independent Linearity (Within CEU)	± 0.2%	± 0.1%	± 0.1%	± 0.1%	± 0.05%
Resolution	Infinite				
Repeatability	—				
Electrical Connections	PVC, 1m [3.28 ft] 3-wire axial cable, 24AWG (0.25 mm <sup>2</sup> )				
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	≤ 0.5 N				
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	20V	40V	60V	60V	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])	0.5 W	1W	1.5 W	2W	3W
Thermal Coefficient of Resistance	-200 to +200 ppm/°C				
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	Brackets, self-aligning rod eyes, or flange				

# PZ12 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](#)