

# Gefran 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

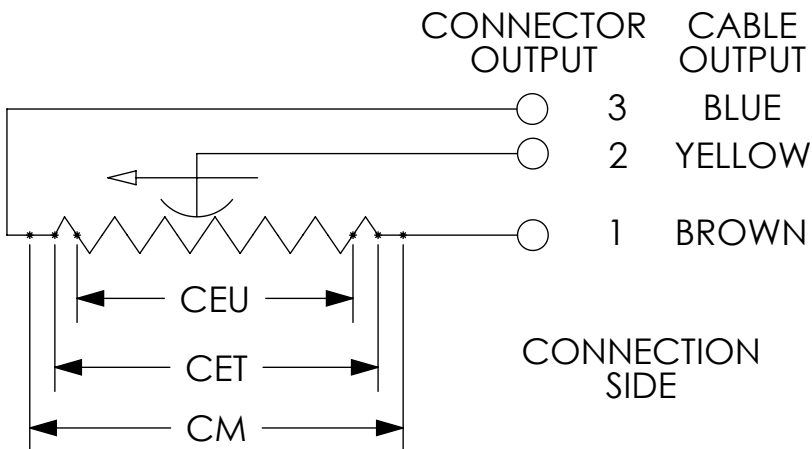
**Gefran PZ12 Series Linear Potentiometers Selection Chart**

Part Number	Price	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>								
<b>PZ12-F-0025-L</b>	\$146.00	25 [0.98]	26 [1.02]	1K $\Omega$	30 [1.18]	74.5 [2.93]	–	–
<b>PZ12-F-0050-L</b>	\$155.00	50 [1.97]	51 [2.01]	2K $\Omega$	55 [2.17]	99.5 [3.92]	–	–
<b>PZ12-F-0075-L</b>	\$159.00	75 [2.95]	76 [2.99]	3K $\Omega$	80 [3.15]	124.5 [4.90]	–	–
<b>PZ12-F-0100-L</b>	\$164.00	100 [3.94]	101 [3.98]	4K $\Omega$	105 [4.13]	149.5 [5.89]	–	–
<b>PZ12-F-0200-L</b>	\$178.00	200 [7.87]	201 [7.91]	8K $\Omega$	205 [8.07]	249.5 [9.82]	–	–
<b>PZ12-A-xxxx-L Rod Eyes Mount Models</b>								
<b>PZ12-A-0025-L</b>	\$200.00	25 [0.98]	26 [1.02]	1K $\Omega$	30 [1.18]	102 [4.02]	–	153 [6.02]
<b>PZ12-A-0050-L</b>	\$260.00	50 [1.97]	51 [2.01]	2K $\Omega$	55 [2.17]	127 [5.00]	–	178 [7.01]
<b>PZ12-A-0075-L</b>	\$265.00	75 [2.95]	76 [2.99]	3K $\Omega$	80 [3.15]	152 [5.98]	–	203 [7.99]
<b>PZ12-A-0100-L</b>	\$270.00	100 [3.94]	101 [3.98]	4K $\Omega$	105 [4.13]	177 [6.97]	–	228 [8.98]
<b>PZ12-A-0200-L</b>	\$283.00	200 [7.87]	201 [7.91]	8K $\Omega$	205 [8.07]	277 [10.91]	–	328 [12.91]
<b>PZ12-S-xxxx-L Clamp Brackets Mount Models</b>								
<b>PZ12-S-0025-L</b>	\$155.00	25 [0.98]	26 [1.02]	1K $\Omega$	30 [1.18]	74.5 [2.93]	42 [1.65]	–
<b>PZ12-S-0050-L</b>	\$170.00	50 [1.97]	51 [2.01]	2K $\Omega$	55 [2.17]	99.5 [3.92]	67 [2.64]	–
<b>PZ12-S-0075-L</b>	\$175.00	75 [2.95]	76 [2.99]	3K $\Omega$	80 [3.15]	124.5 [4.90]	92 [3.62]	–
<b>PZ12-S-0100-L</b>	\$180.00	100 [3.94]	101 [3.98]	4K $\Omega$	105 [4.13]	149.5 [5.89]	117 [4.61]	–
<b>PZ12-S-0200-L</b>	\$194.00	200 [7.87]	201 [7.91]	8K $\Omega$	205 [8.07]	249.5 [9.82]	217 [8.54]	–

# Gefran PZ12 Series Linear Potentiometers With Cylindrical Case

Gefran PZ12 Series Linear Potentiometers Specifications					
Model PZ12-x-xxxx-L	0025	0050	0075	0100	0200
<b>Independent Linearity (Within CEU)</b>	± 0.2%	± 0.1%	± 0.1%	± 0.1%	± 0.05%
<b>Resolution</b>	Infinite				
<b>Repeatability</b>	-				
<b>Electrical Connections</b>	PVC, 1m [3.28 ft] 3-wire axial cable, 24AWG (0.25 mm <sup>2</sup> )				
<b>Displacement Speed</b>	Standard ≤ 10 m/s [32.81 ft/s]				
<b>Protection Level</b>	IP60				
<b>Life</b>	> 25x10 <sup>6</sup> strokes or > 100x10 <sup>6</sup> maneuvers, whichever is less (within CEU)				
<b>Displacement Force</b>	≤ 0.5 N				
<b>Vibrations</b>	5-2000 Hz: Amax=0.75 mm [0.03 in], amax=20g				
<b>Shock</b>	50g, 11ms				
<b>Acceleration</b>	-				
<b>Tolerance on Resistance</b>	±20%				
<b>Recommended Cursor Current</b>	< 0.1 μA				
<b>Maximum Cursor Current</b>	10mA				
<b>Maximum Applicable Voltage</b>	20V	40V	60V	60V	60V
<b>Electrical Isolation</b>	>100MΩ at 500V=, 1bar, 2s				
<b>Dielectric Strength</b>	< 100μA at 500V~, 50Hz, 2s, 1bar				
<b>Dissipation at 40° C [104° F] (0W at 120° C [248° F])</b>	0.5 W	1W	1.5 W	2W	3W
<b>Thermal Coefficient of Resistance</b>	-200 to +200 ppm/°C				
<b>Actual Temperature Coefficient of Output Voltage</b>	≤ 1.5 ppm/°C				
<b>Working Temperature</b>	-30 to +100°C [-22 to +212°F]				
<b>Storage Temperature</b>	-50 to +120°C [-58 to 248°F]				
<b>Case Material</b>	Anodized aluminum, Nylon 66				
<b>Shaft Material</b>	Stainless steel AISI 303				
<b>Mounting</b>	Brackets, self-aligning rod eyes, or flange				

## Electrical Connections

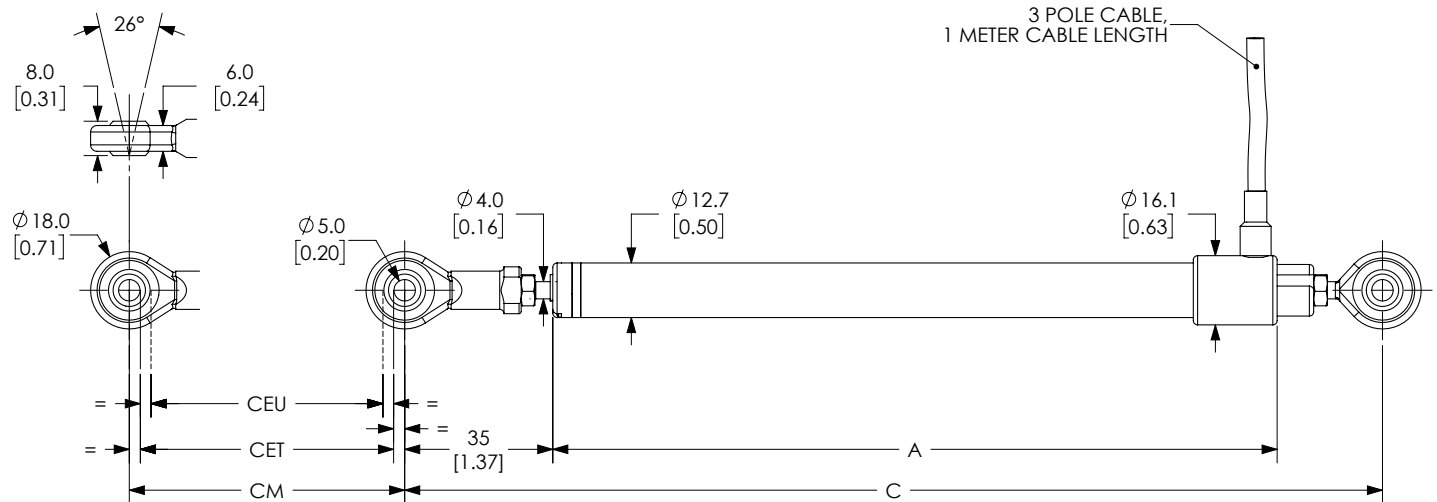


# Gefran PZ12 Series Linear Potentiometers With Cylindrical Case

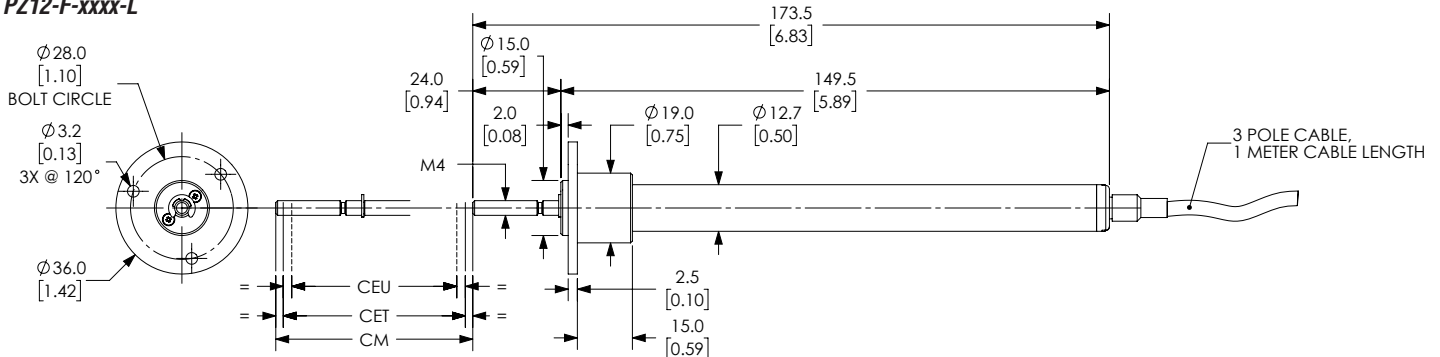
## Dimensions

mm [in]

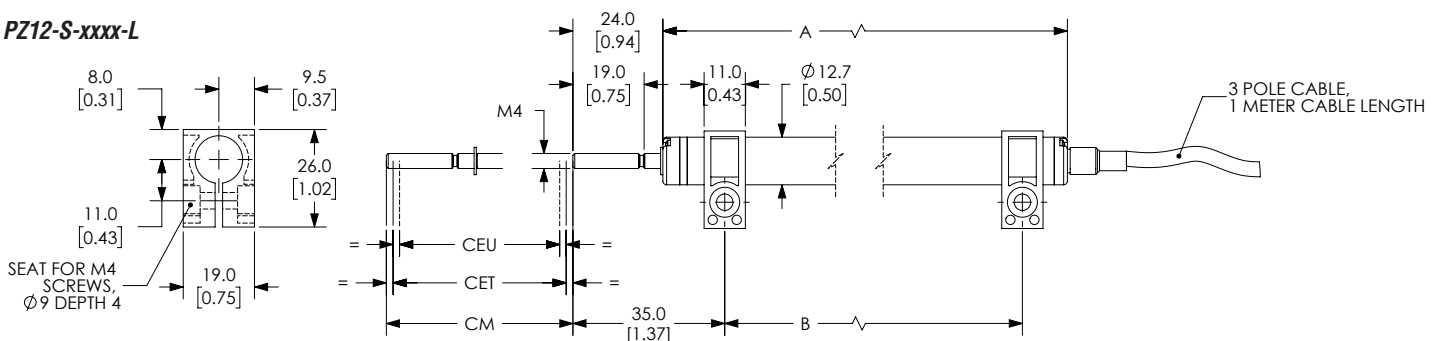
### PZ12-A-xxxx-L



### PZ12-F-xxxx-L



### PZ12-S-xxxx-L



### **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

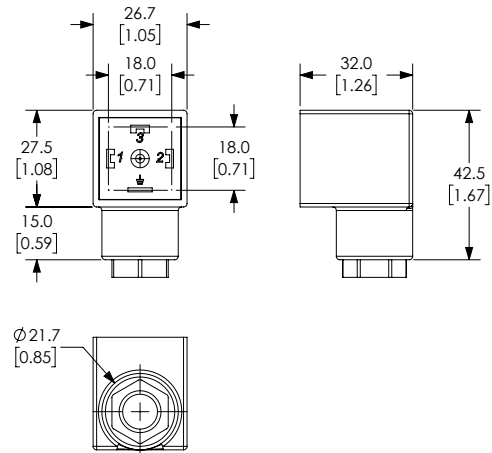


Connectors For Gefran Linear Potentiometers				
Part Number	Price	Description	Cable Entry	Number of Poles
CON006-1KJ	\$7.50	Gefran field wireable connector, 18mm DIN 43650 Form A, screw terminals, for use with Gefran LT and PK series potentiometers	90° cable entry	4
CON008-1KJ	\$7.50	Gefran field wireable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



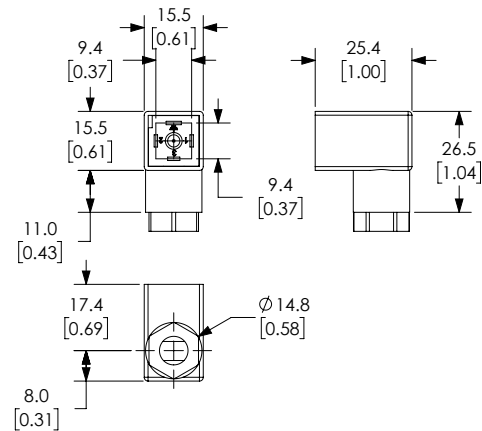
Dimensions  
mm [in]



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



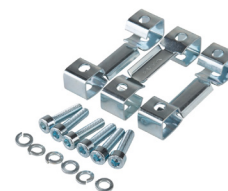
PKIT009-1KJ



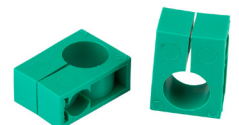
PKIT015-1KJ



PKIT059-1KJ



PKIT061-1KJ



STA074-1KJ