



Gefran 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

Gefran PC 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]	Minimum Distance Between Rod Eyes (B) mm [in]
PC-M-0050-L	\$285.00	50 [1.97]	53 [2.09]	5K Ω	59 [2.32]	180.5 [7.11]	227
PC-M-0100-L	\$303.00	100 [3.94]	103 [4.06]	5K Ω	109 [4.29]	230.5 [9.07]	227
PC-M-0125-L	\$312.00	130 [5.12]	133 [5.24]	5K Ω	139 [5.47]	260.5 [10.26]	307
PC-M-0150-L	\$322.00	150 [5.91]	153 [6.02]	5K Ω	159 [6.26]	280.5 [11.04]	327
PC-M-0175-L	\$328.00	175 [6.89]	178 [7.01]	5K Ω	184 [7.24]	305.5 [12.03]	352
PC-M-0200-L	\$333.00	200 [7.87]	204 [8.03]	5K Ω	210 [8.27]	331.5 [13.05]	378
PC-M-0225-L	\$340.00	225 [8.86]	229 [9.02]	5K Ω	235 [9.25]	356.5 [14.04]	403
PC-M-0275-L	\$353.00	275 [10.83]	279 [10.98]	5K Ω	285 [11.22]	406.5 [16.00]	453
PC-M-0300-L	\$356.00	300 [11.81]	304 [11.97]	5K Ω	310 [12.20]	431.5 [16.00]	478

Gefran PC 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	IP65
Life	$> 25 \times 10^6$ strokes or $> 100 \times 10^6$ operations, whichever is less (within CEU)
Displacement Force	≤ 15 N
Vibrations	5-2000 Hz: $A_{max} = 0.75$ mm [0.03 in], $a_{max} = 20$ g
Shock	50g, 11ms
Acceleration	—
Tolerance on Resistance	$\pm 20\%$
Recommended Cursor Current	< 0.1 μ A
Maximum Cursor Current	10mA
Maximum Applicable Voltage	60V
Electrical Isolation	> 100 M Ω at 500V=, 1bar, 2s
Dielectric Strength	< 100 μ A 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

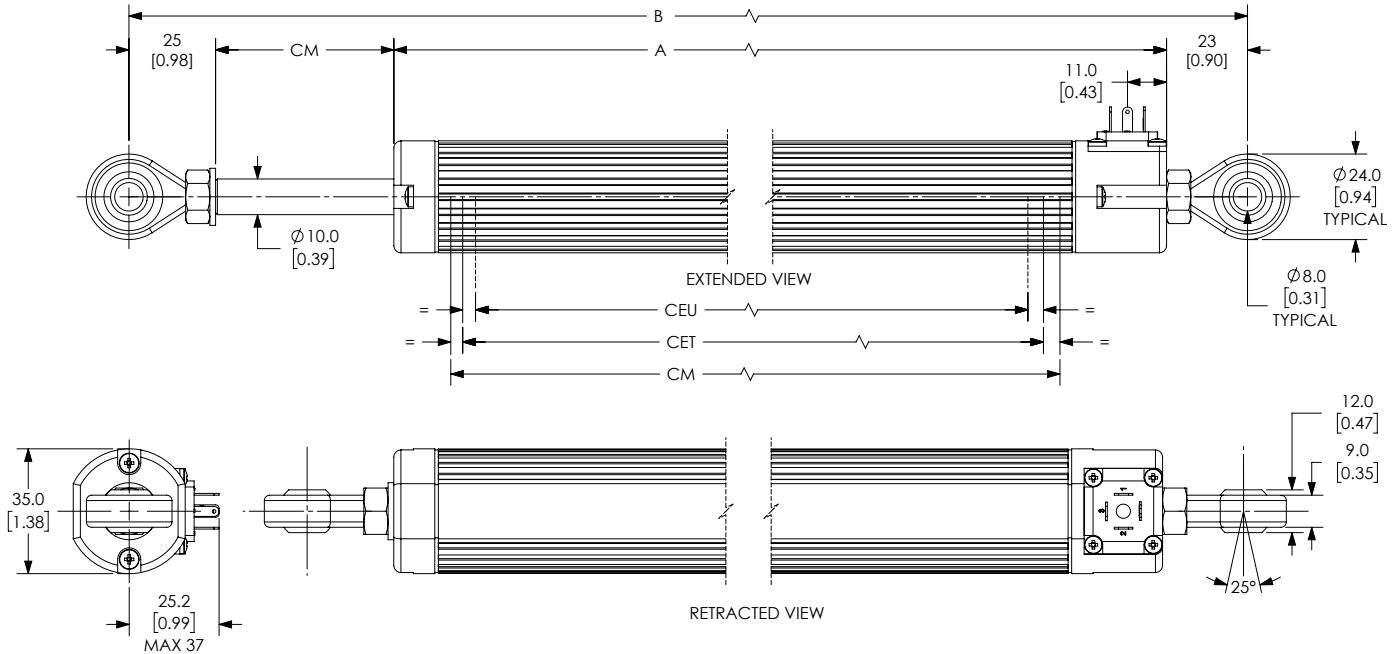
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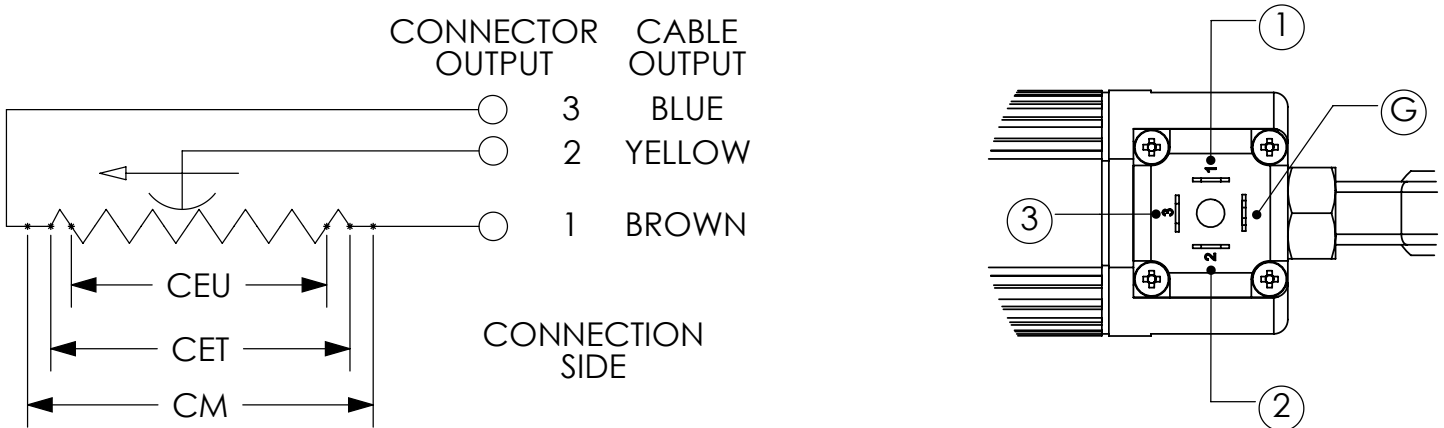
Dimensions

mm [in]

PC-M-xxxx-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

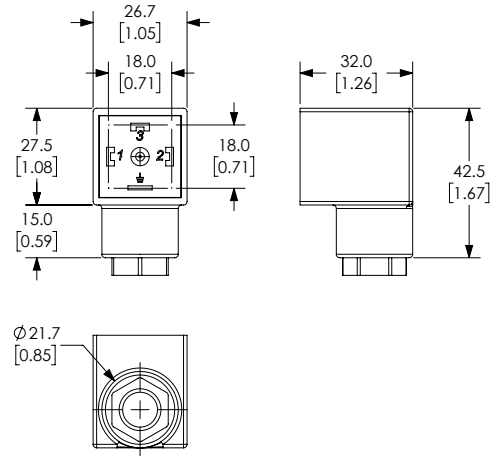


Connectors For Gefran Linear Potentiometers				
Part Number	Price	Description	Cable Entry	Number of Poles
CON006-1KJ	\$7.50	Gefran field wireable connector, 18mm DIN 43650 Form A, screw terminals, for use with Gefran LT and PK series potentiometers	90° cable entry	4
CON008-1KJ	\$7.50	Gefran field wireable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



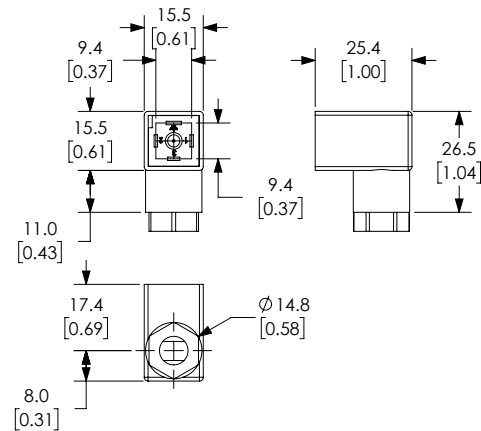
Dimensions
mm [in]



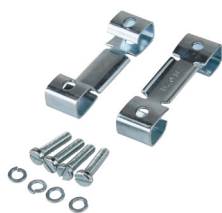
CON008-1KJ



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



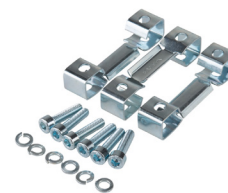
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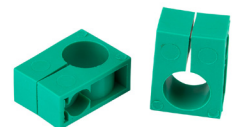
PKIT015-1KJ



PKIT059-1KJ



PKIT061-1KJ



STA074-1KJ