

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

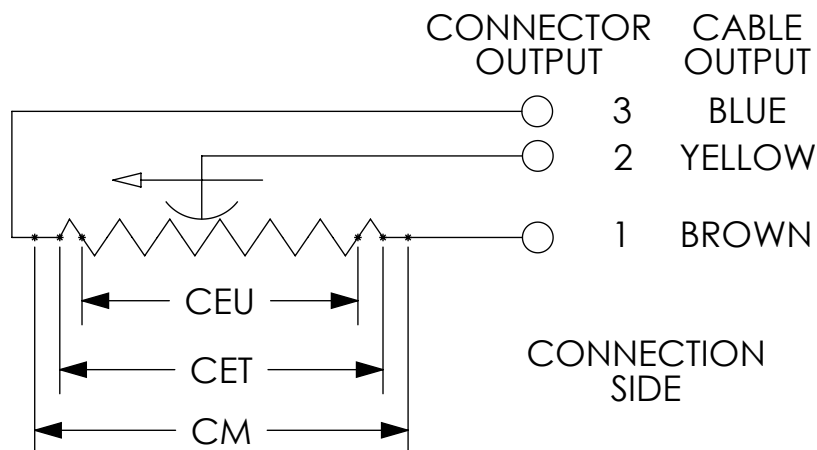
| Part Number | Price | Drawing Link | Useful Electrical Stroke (CEU) mm [in] | Theoretical Electrical Stroke (CET) mm [in] | Resistance (CET) | Mechanical Stroke (CM) mm [in] | Case Length (A) mm [in] | Recommended Distance Between Brackets (B) mm [in] | Minimum Distance Between Rod Eyes (C) mm [in] |
|--|-----------|---------------------|---|--|------------------|-----------------------------------|----------------------------|--|--|
| PZ12-F-xxxx-L Flange Mount Models | | | | | | | | | |
| PZ12-F-0025-L | \$-04jo6: | PDF | 25 [0.98] | 26 [1.02] | 1KΩ | 30 [1.18] | 74.5 [2.93] | – | – |
| PZ12-F-0050-L | \$-04jo7: | PDF | 50 [1.97] | 51 [2.01] | 2KΩ | 55 [2.17] | 99.5 [3.92] | – | – |
| PZ12-F-0075-L | \$-04jo8: | PDF | 75 [2.95] | 76 [2.99] | 3KΩ | 80 [3.15] | 124.5 [4.90] | – | – |
| PZ12-F-0100-L | \$-04jo9: | PDF | 100 [3.94] | 101 [3.98] | 4KΩ | 105 [4.13] | 149.5 [5.89] | – | – |
| PZ12-F-0200-L | \$-04joa: | PDF | 200 [7.87] | 201 [7.91] | 8KΩ | 205 [8.07] | 249.5 [9.82] | – | – |
| PZ12-A-xxxx-L Rod Eyes Mount Models | | | | | | | | | |
| PZ12-A-0025-L | \$-04job: | PDF | 25 [0.98] | 26 [1.02] | 1KΩ | 30 [1.18] | 102 [4.02] | – | 153 [6.02] |
| PZ12-A-0050-L | \$-04joc: | PDF | 50 [1.97] | 51 [2.01] | 2KΩ | 55 [2.17] | 127 [5.00] | – | 178 [7.01] |
| PZ12-A-0075-L | \$-04jod: | PDF | 75 [2.95] | 76 [2.99] | 3KΩ | 80 [3.15] | 152 [5.98] | – | 203 [7.99] |
| PZ12-A-0100-L | \$-04joe: | PDF | 100 [3.94] | 101 [3.98] | 4KΩ | 105 [4.13] | 177 [6.97] | – | 228 [8.98] |
| PZ12-A-0200-L | \$-04jof: | PDF | 200 [7.87] | 201 [7.91] | 8KΩ | 205 [8.07] | 277 [10.91] | – | 328 [12.91] |
| PZ12-S-xxxx-L Clamp Brackets Mount Models | | | | | | | | | |
| PZ12-S-0025-L | \$-04jog: | PDF | 25 [0.98] | 26 [1.02] | 1KΩ | 30 [1.18] | 74.5 [2.93] | 42 [1.65] | – |
| PZ12-S-0050-L | \$-04joh: | PDF | 50 [1.97] | 51 [2.01] | 2KΩ | 55 [2.17] | 99.5 [3.92] | 67 [2.64] | – |
| PZ12-S-0075-L | \$-04joi: | PDF | 75 [2.95] | 76 [2.99] | 3KΩ | 80 [3.15] | 124.5 [4.90] | 92 [3.62] | – |
| PZ12-S-0100-L | \$-04joj: | PDF | 100 [3.94] | 101 [3.98] | 4KΩ | 105 [4.13] | 149.5 [5.89] | 117 [4.61] | – |
| PZ12-S-0200-L | \$-04jok: | PDF | 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 ²) | | | | |
| Displacement Speed | Standard ≤ 10 m/s [32.81 ft/s] | | | | |
| Protection Level | IP60 | | | | |
| Life | > 25x10 ⁶ strokes or > 100x10 ⁶ 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 |
|-----------------------------------|-----------|----------------------------|---|-----------------|
| <u>CON006-1KJ</u> | \$-4jov: | <u>PDF</u> | 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 |
| <u>CON008-1KJ</u> | \$;-4jo[: | <u>PDF</u> | 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 |
|------------------------------------|-----------|--|
| <u>PKIT009-1KJ</u> | \$-4jox: | Gefran mounting brackets, for use with Gefran LT Series potentiometers. |
| <u>PKIT015-1KJ</u> | \$-4joy: | Gefran rod eye joint accessory, for use with Gefran LT Series potentiometers. |
| <u>PKIT059-1KJ</u> | \$-4joz: | Gefran mounting brackets, for use with 100 to 900mm Gefran PK Series potentiometers. |
| <u>PKIT061-1KJ</u> | \$;-4jo]: | Gefran mounting brackets, for use with 1000 to 2000mm Gefran PK Series potentiometers. |
| <u>STA074-1KJ</u> | \$-4jo_: | Gefran mounting brackets, for use with Gefran PZ12-S Series potentiometers. |


[PKIT009-1KJ](#)

[PKIT015-1KJ](#)

[PKIT059-1KJ](#)

[PKIT061-1KJ](#)

[STA074-1KJ](#)