



PLS



PL2S



PL231

LINEAR MOTION POTENTIOMETERS

Series PLS • PL2S • PL231

- 50 to 950 mm strokes
- Excellent linearity
- Infinite resolution

- Easy mounting method
- Several fittings
- IP65 protection degree

| PLS | PL2S | PL231 |
|--|---|---|
| Strokes: 50 to 950 mm • rod Ø 6 mm • axial connector | Strokes: 50 to 750 mm • rod Ø 6 mm • radial connector • two ball joints Ø 5 mm | Strokes: 50 to 750 mm • rod Ø 8 mm • radial connector • two ball joints Ø 8 mm |

| ELECTRICAL & OPERATING SPECIFICATIONS | | | |
|---------------------------------------|--|--------|--------|
| Series | PLS • PL2S • PL231 | | |
| ▪ Sensor | Conductive plastic resistive element | | |
| ▪ Resistive value | 5 KOhm ±20% Optional 10 KOhm ±20% | | |
| ▪ Strokes mm | 50 • 100 • 150 • 200 • 250 • 300 • 400 • 500 • 750 • 950* | | |
| ▪ Linearity | ±0,075% | | ±0,1% |
| ▪ Resolution | Infinite | | |
| ▪ Permissible applied voltage | 28 Vdc | | |
| ▪ Load resistance | 1 MOhm min. | | |
| ▪ Recommended cursor current | < 1 µA | | |
| ▪ Mechanical life | 100 milion cycles | | |
| ▪ Ripetibility | <0.01 mm | | |
| ▪ Dissipation at 40°C | 3 W | | |
| ▪ Insulation resistance | >100 MOhm at 500 Vdc | | |
| ▪ Connections | Connector DIN EN61984 (VDE 0627) provided with female angled orientable connector | | |
| ▪ Connector position | Axial | Radial | Radial |

*Stroke mm 950 is only available for PLS series

| MECHANICAL & ENVIRONMENTAL SPECIFICATIONS | | | |
|---|--|------|------|
| Series | PLS • PL2S • PL231 | | |
| ▪ Dimensions | See the drawing | | |
| ▪ Materials: housing rod | Anodised aluminium with glass-filled nylon flanges Stainless steel on self-lubricating bearings – free rotation | | |
| ▪ Rod Ø | 6 mm | 6 mm | 8 mm |
| ▪ Fixing | Freely movable clamping brackets or ball joints | | |
| ▪ Stem max linear speed | 5 m/sec | | |
| ▪ Sliding friction | 0.1 Kg – with return spring: 0.5 Kg | | |
| ▪ Vibration resistance (10÷2000 Hz) | 15 g | | |
| ▪ Shock resistance (11 ms) | 50 g | | |
| ▪ Operating temperature | -20 ÷ 80°C | | |
| ▪ Stocking temperature | -30 ÷ 90°C | | |
| ▪ Protection degree | IP65 | | |



AVAILABLE STROKES

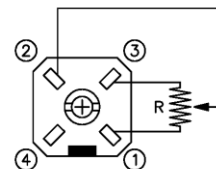
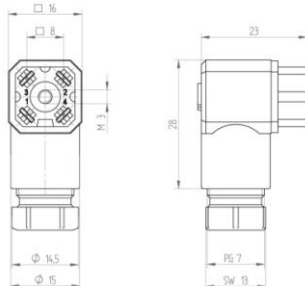
| Series PLS • PL2S • PL231 | | | | | | | | | | |
|---|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| NOMINAL STROKE mm | 50 • | 100 • | 150 • | 200 • | 250 • | 300 • | 400 • | 500 • | 750 • | 950* |
| ELECTRICAL STROKE | Nominal stroke + 1 mm | | | | | | | | | |
| MECHANICAL STROKE | Nominal stroke + 3 mm | | | | | | | | | |
| *Stroke mm 950 is only available for PLS series | | | | | | | | | | |

CONNECTIONS

The electrical connection is granted by means of 4-pin connector type DIN EN61984 (VDE 0627) provided with female connector orientable in four positions.



Female flying connector



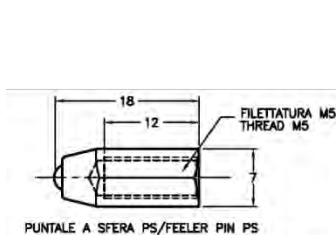
PIN 1 resistenza 0 Ohm con stelo inserito
resistance 0 Ohm with rod in

Male fixed connector

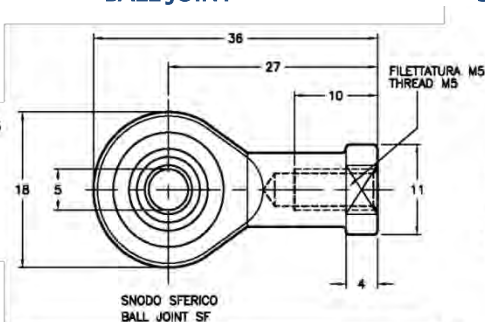
MOUNTING & OPTIONAL FITTINGS

The potentiometers are easily fastened by means of the provided **brackets**, which can be placed **freely along the body**. **Ball joints and self-aligning articulated joints** can be used for **air-fixing**, allowing to compensate mounting mis-alignments. The potentiometer series **PLS** can be provided with **feeler pin** and **in- or out return spring** (for strokes up to 150 mm) for applications as comparator.

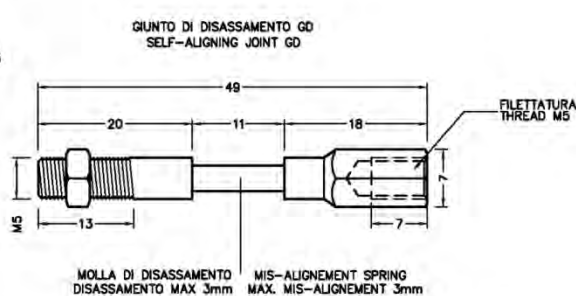
FEELER PIN



BALL JOINT



SELF-ALIGNING JOINT



REF. M1040/ M1041/M1039

ORDERING INFORMATION

| PLS | 50 | 5K | GD |
|-------------|------------------|-----------------------|--|
| TYPE | STROKE | RESISTANCE | FITTINGS |
| PLS | 50 50 mm | 5K Resistance 5KOhm | (series PLS) |
| PL2S | 100 100 mm | 10K Resistance 10KOhm | MR Inside return spring (up to 150 mm) |
| PL231 | 150 150 mm | | MRE Out return spring (up to 150 mm) |
| | 200 200 mm | | SF Ball joint |
| | 250 250 mm | | GD Self-aligning joint |
| | 300 300 mm | | PS Feeler pin |
| | 400 400 mm | | |
| | 500 500 mm | | |
| | 750 750 mm | | |
| | 950 950 mm * | | |
| | *Series PLS only | | |

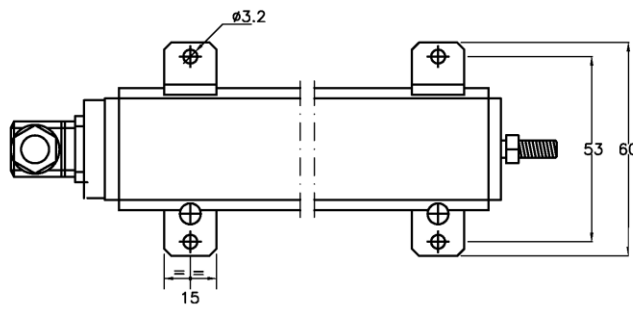
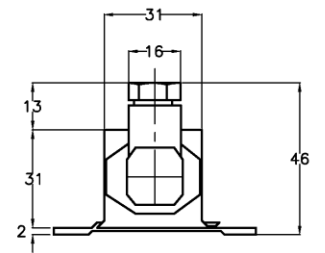
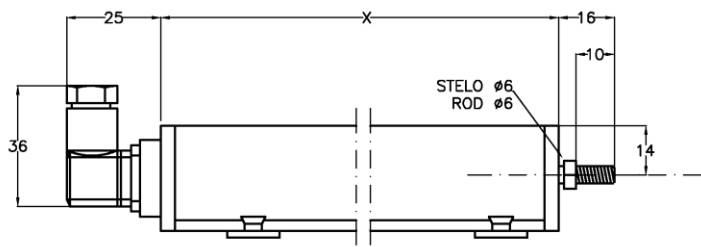


POTENZIOMETRO PLS WITH SELF-ALIGNING JOINT

DIMENSIONS

Series PLS

Ref M1315A

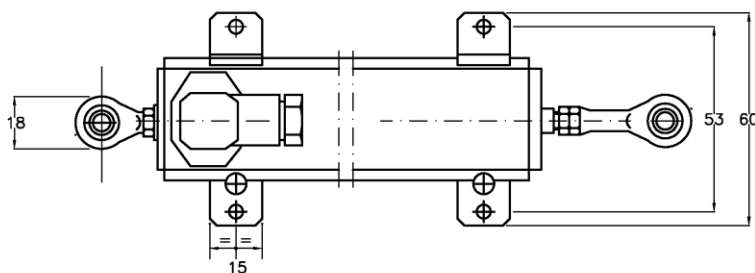
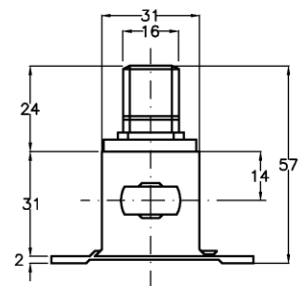
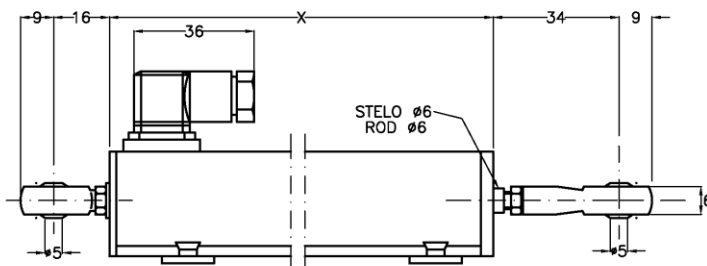


Note:
Connettore volante
orientabile in 4 posizioni.
The flying connector can
be oriented in four positions.

| CORSA NOMINALE STROKE | X |
|-----------------------------|------|
| 50 | 130 |
| 100 | 180 |
| 150 | 230 |
| 200 | 280 |
| 250 | 330 |
| 300 | 380 |
| 400 | 480 |
| 500 | 580 |
| 750 | 830 |
| 950 | 1030 |

Series PL2S

Ref M2073V



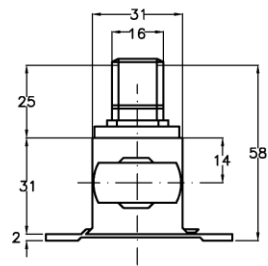
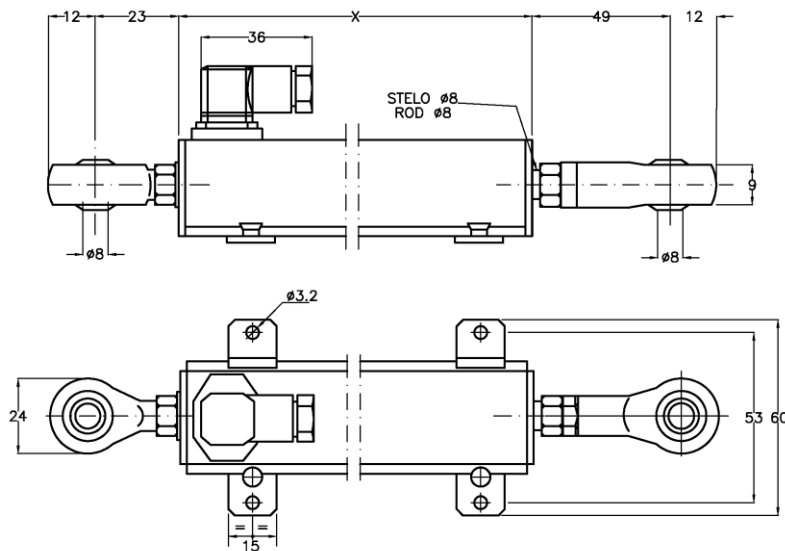
| CORSA NOMINALE STROKE | X |
|-----------------------------|-----|
| 50 | 127 |
| 100 | 177 |
| 150 | 227 |
| 200 | 277 |
| 250 | 327 |
| 300 | 377 |
| 400 | 477 |
| 500 | 577 |
| 750 | 827 |

Note:
Connettore volante
orientabile in 4 posizioni.
The flying connector can
be oriented in four positions.

DIMENSIONS

Series PL231

Rif M1317V



| CORSA NOMINALE STROKE | X |
|-----------------------------|-----|
| 50 | 187 |
| 100 | 237 |
| 150 | 287 |
| 200 | 337 |
| 250 | 387 |
| 300 | 437 |
| 400 | 537 |
| 500 | 637 |
| 750 | 885 |

Note:
Connettore volante
orientabile in 4 posizioni.
The flying connector can
be oriented in four positions.

REFERENCES

Further information at:

Linear Potentiometers

<https://www.elap.it/linear-potentiometers/>

Potentiometers PLS

<https://www.elap.it/linear-potentiometers/pls-series/>

Potentiometers PL2S

<https://www.elap.it/linear-potentiometers/pl2s-series/>

Potentiometers PL231

<https://www.elap.it/linear-potentiometers/pl231-series/>



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