



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		
▪ Stacking temperature	-30 ÷ 90°C		
▪ Protection degree	IP65		

AVAILABLE STROKES

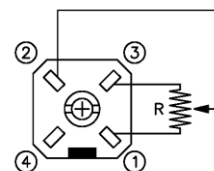
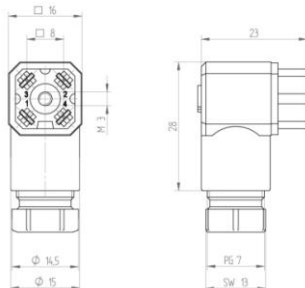
Series PLS • PL2S • PL231										
NOMINAL STROKE mm	50 •	100 •	150 •	200 •	250 •	300 •	400 •	500 •	750 •	950*
ELECTRICAL STROKE	Nominal stroke + 1 mm									
MECHANICAL STROKE	Nominal stroke + 3 mm									
*Stroke mm 950 is only available for PLS series										

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

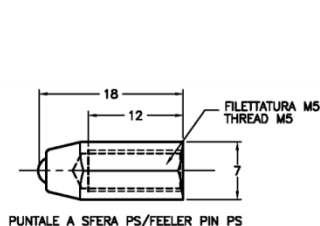
MOUNTING & OPTIONAL FITTINGS

The potentiometers are easily fastened by means of the provided **brackets**, which can be placed **freely along the body**.

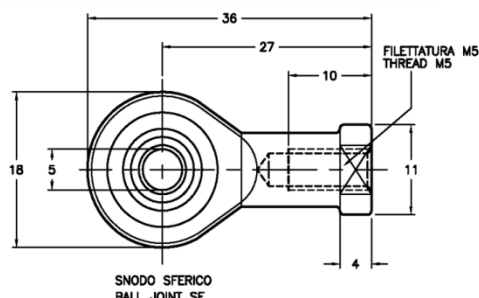
Ball joints and self-aligning articulated joints can be used for **air-fixing**, allowing to compensate mounting mis-alignments.

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.

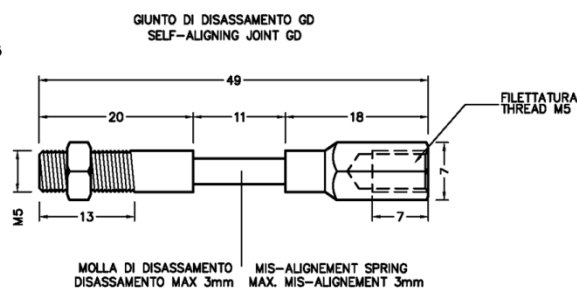
FEELER PIN



BALL JOINT



SELF-ALIGNING JOINT



REF. M1040/ M1041/M1039

ORDERING INFORMATION

PLS	50	5K	GD
<u>TYPE</u>	<u>STROKE</u>	<u>RESISTANCE</u>	<u>FITTINGS</u>
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 *		

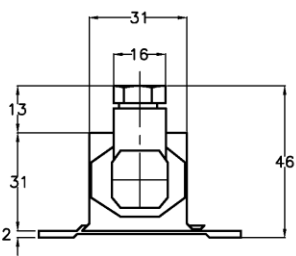
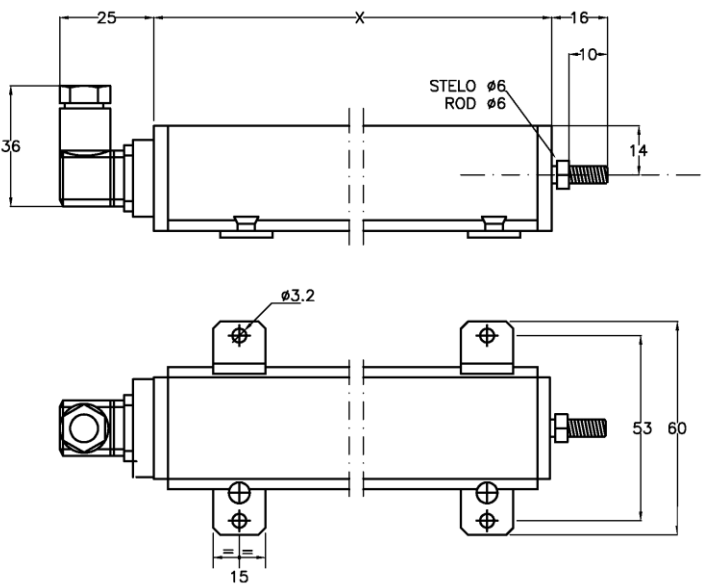


POTENZIOMETER PLS WITH SELF-ALIGNING JOINT

DIMENSIONS

Series PLS

Ref M1315A

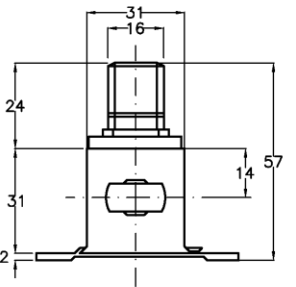
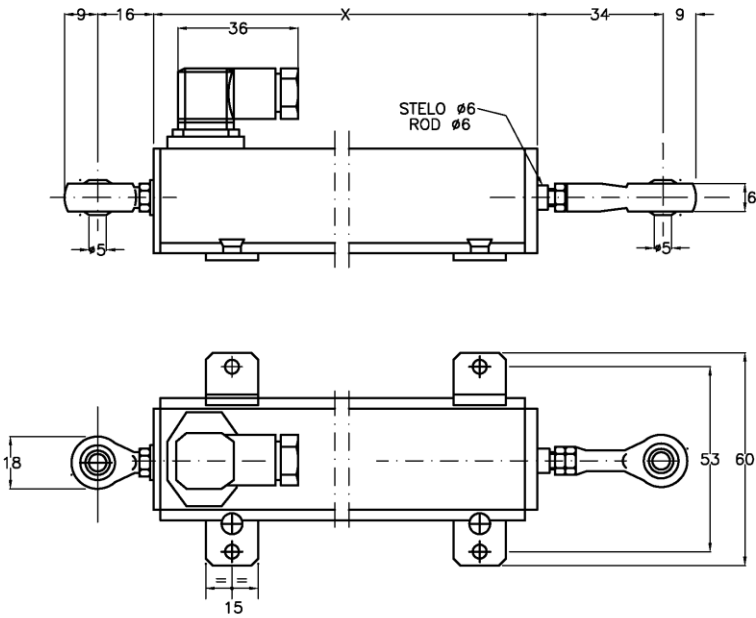


CORSA NOMINALE STROKE	X
50	130
100	180
150	230
200	280
250	330
300	380
400	480
500	580
750	830
950	1030

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

Series PL2S

Ref M2073V



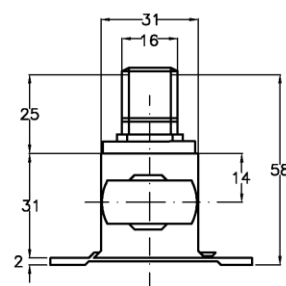
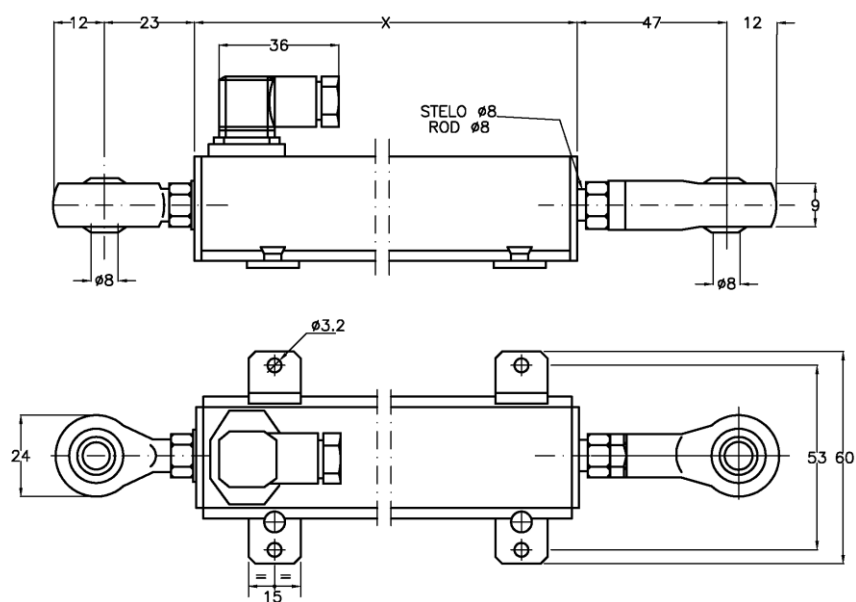
CORSA NOMINALE STROKE	X
50	127
100	177
150	227
200	277
250	327
300	377
400	477
500	577
750	827

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

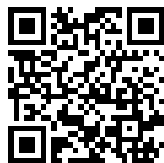
<https://www.elap.it/linear-potentiometers/pls-series/>

Potentiometers PL2S

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

Potentiometers PL231

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



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ELAP VIA VITTORIO VENETO, 4 • I-20094 CORSICO (MI) • TEL. +39.02.4519561
FAX +39.02.45103406 • E-MAIL INFO@ELAP.IT • SITE WWW.ELAP.IT