

Potentiometric displacement sensor

Type 2125A...

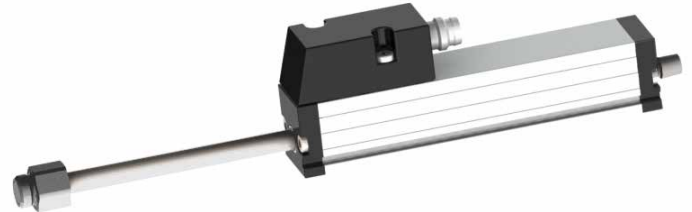
for displacement, tolerance measurement and continuous position sensing

Position sensors employing conductive plastic resistance and collector tracks for direct, precise measurement in control and regulation systems and instrumentation.

- Long life: up to 100×10^6 strokes
- Outstanding linearity up to $\pm 0.075\%$
- Actuating rod with double bearing system
- Special ball coupling eliminates sideways forces
- High operational speeds up to 10 m/s
- Insensitive to shock and vibration

Description

Using this type of sensor, problems traditionally associated with rotary potentiometers, especially reliability, life expectancy, accuracy and operational speed, are overcome. A ball coupling offers backlash-free operation even where there are parallel or angular errors between the sensor axis and the direction of movement.



Housing	Aluminum, anodized
Actuating rod	Stainless steel
Ball coupling	Stainless steel with a hardened ball sprung against a hardened plate surface
Resistance element	Conductive plastic
Wiper	Precious metal multi-finger wiper, elastomer-damped
Electrical Connection	M8 pos., 3 pin

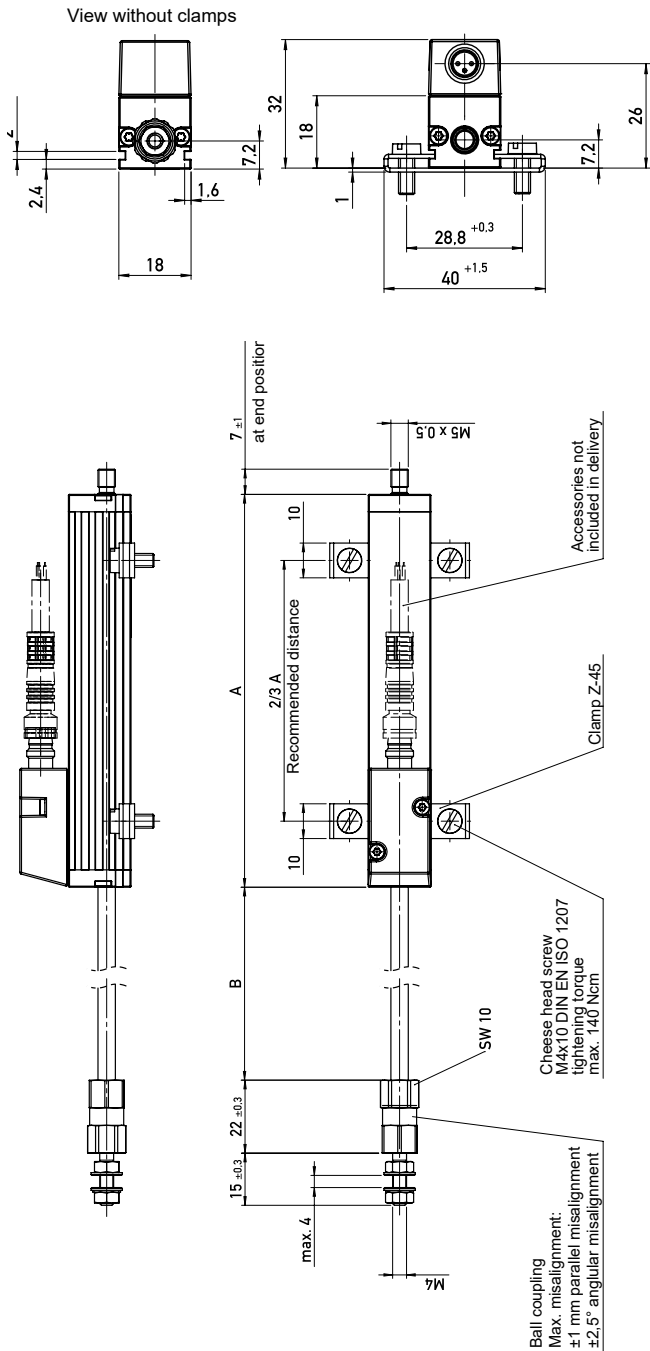
Technical data

Model		2125A25	2125A50	2125A75	2125A100	2125A150
Electrical data						
Defined electrical range	mm	25	50	75	100	150
Nominal resistance	kΩ	1	5	5	5	5
Linearity, independent	±%	0.2	0.15	0.1	0.075	0.075
Repeatability	mm	0.002				
Max. permissible applied voltage	V	42				
Recommended operating wiper current	μA	≤ 1				
Max. wiper current in case of malfunction	mA	10				
Mechanical data						
Overall length (dimension A ^{+1 mm})	mm	63	88	113	138	188
Mechanical stroke (dimension B ^{+1.5 mm})	mm	30	55	80	105	155
Total weight	g	70 ^{±5}	97 ^{±5}	125 ^{±5}	145 ^{±5}	180 ^{±5}
Operating force (horizontal)	≤N	0.3				
Environmental data						
Temperature range	°C	-30 ... 100				
Vibration	Hz	5 ... 2 000				
Shock	g/ms	50/11				
Protection class (EN 60529)	IP	40				

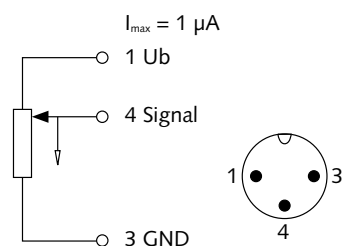
Important: All values specified in this data sheet for linearity, lifetime and vibration resistance are only valid for a sensor used as a voltage divider with virtually no load applied to the wiper ($I_e \leq 0.1 \mu A$).

2125A_003-545e-04_21

Dimensions



Connection diagram



Included accessories

- 2 mounting clamps Z-45 incl. 4 allen screw M4x10
- 1 ball coupling

Accessories (Optional)

- | Accessories (Optional) | Type |
|---|--------------|
| • Connection cable for maXYmos family, L = 2 m | 1200A243A2 |
| • Connection cable for maXYmos family, L = 3 m | 1200A243A3 |
| • Connection cable for maXYmos family, L = 5 m | 1200A243A5 |
| • Connection cable for maXYmos family, L = 10 m | 1200A243A10 |
| • Connection cable for maXYmos family, L = SP (0.5 ... 20 m, in 0.5 m steps) | 1200A243ASP |
| • Connection cable with open cable end, L = SP (0.5 ... 20 m, in 0.5 m steps) | 1200A243BSP |
| • Connection cable with 5 pin round plug, L = SP (0.5 ... 20 m, in 0.5 m steps) | 1200A243CSP |
| • Adapter cable M8 round connector, straight to 5 pin IEC 130-9 round connector L = 0.2 m | 1200A245A0.2 |
| • Extension cable for maXYmos family, L = SP | 18025475 |
| • Certificate of compliance with the order "EN 10204 3.1" | 44002530 |
| • Calibration certificate | 44002121 |

Ordering key

Potentiometric displacement sensor

25 mm	25
50 mm	50
75 mm	75
100 mm	100
150 mm	150

Type 2125A

Colour scheme 1200A243 with open cable end

