

Potentiometric displacement sensor

Type 2124A...

with internal return spring for displacement, tolerance measurement and continuous position sensing

Displacement sensor with resistance and collector path of conductive-plastic – with internal return spring – for direct displacement and tolerance measurements and for continuous position sensing.

- Long life: up to 100×10^6 strokes
- Outstanding linearity up to $\pm 0.075\%$
- DIN standard gauging end
- Double bearing system on shaft
- Insensitive to shock and vibration

Description

An important and special feature of these particular units are their robust, industry-proven design. Of particular significance is the double bearing arrangement which is really useful when side forces are met. The rear end of the actuating rod has a special collar, which can be easily employed where automatic retraction by means of air cylinders or solenoid is required.



Housing	Aluminium, eloxiert
Actuating rod	Stainless steel with anti-rotation device, inside thread M2.5
Gauging head	Stainless steel with external M2.5 thread and hardened ball point
Resistance element	Conductive plastic
Wiper	Precious metal multi-finger wiper, elastomer-damped
Electrical connection	M8 pos., 3 pin

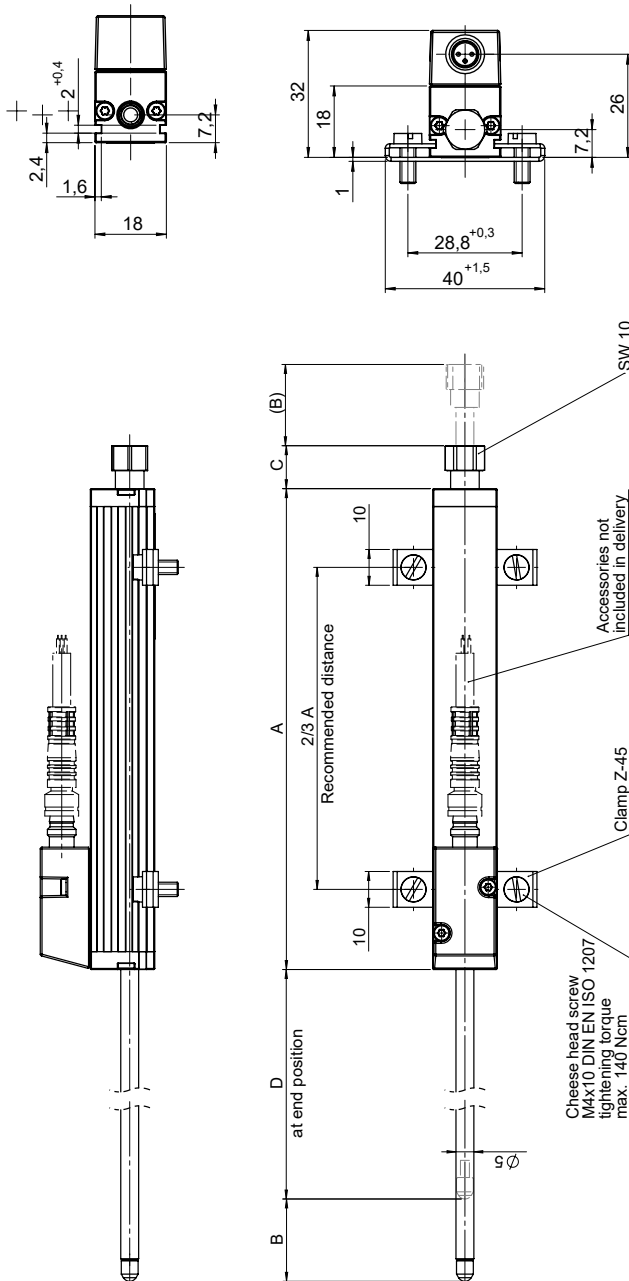
Technical data

Model		2124A10	2124A25	2124A50	2124A75	2124A100
Electrical data						
Defined electrical range	mm	10	25	50	75	100
Electrical area	mm	12	27	52	77	102
Nominal resistance	kΩ	1	1	5	5	5
Resistance tolerance	±%	20				
Linearity, independent	±%	0.25	0.20	0.15	0.1	0.075
Repeatability	mm	0,002				
Max. permissible applied voltage	V	24	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	48	63	94.4	134.4	166
Mechanical stroke (dimension B ^{+1.5 mm})	mm	15	30	55	80	105
Excess length of push rod in end position (dimension D)	mm	6	32	32	32	32
Total weight	g	30 ^{±5}	64 ^{±5}	90 ^{±5}	118 ^{±5}	140 ^{±5}
Operating force (horizontal)	≤N	5				
Operating frequency	Hz	20	18	14	11	10
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 ($I_e \leq 0.1 \mu A$).

Dimensions

View without clamps



Included accessories

- 2 mounting clamps Z-45 incl. 4 allen screw M4x10
- 1 probe tip with pressed-in hardened metal ball

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 |
| • Replacement probe tip with pressed-in hardened metal ball | 18042656 |
| • Certificate of compliance with the order "EN 10204 3.1" | 44002530 |
| • Calibration certificate | 44002121 |

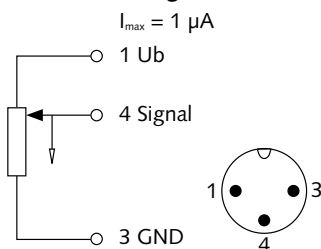
Ordering key

Potentiometric displacement sensor

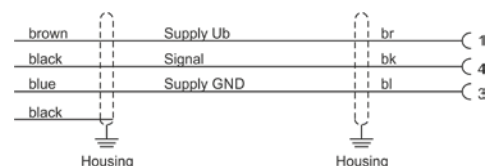
10 mm	10
25 mm	25
50 mm	50
75 mm	75
100 mm	100

Type 2124A

Connection diagram



Colour scheme 1200A243 with open cable end



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