

Position Sensor Model TS

Type 2117A...

for displacement, tolerance measurements 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: 100×10^6 movements
- 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 assembly	precious metal multi-finger wiper, elastomer-damped
Electrical Connection	5 pin round connector IEC 130-9

Technical data

Model		TS25	TS50	TS75	TS100	TS150
Electrical data						
Defined electrical range	mm	25	50	75	100	150
Electrical range	mm	27	52	77	102	152
Nominal resistance	k Ω	1	5	5	5	5
Resistance tolerance	$\pm\%$	20				
Linearity, independent	$\pm\%$	0,2	0,15	0,1	0,075	0,075
Repeatability	mm	0,002				
Max. permissible applied voltage	V	42				
Recommended operating wiper current	< μ A	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
Weight	g	86	107	132	150	190
Operating force (horizontal)	\leq N	0,3				
Environmental data						
Temperature range	$^{\circ}$ C	-30 ... 100				
Vibration	Hz	5 ... 2,000				
Shock	g/ms	50/11				
Protection class (EN 60529)	IP	40				

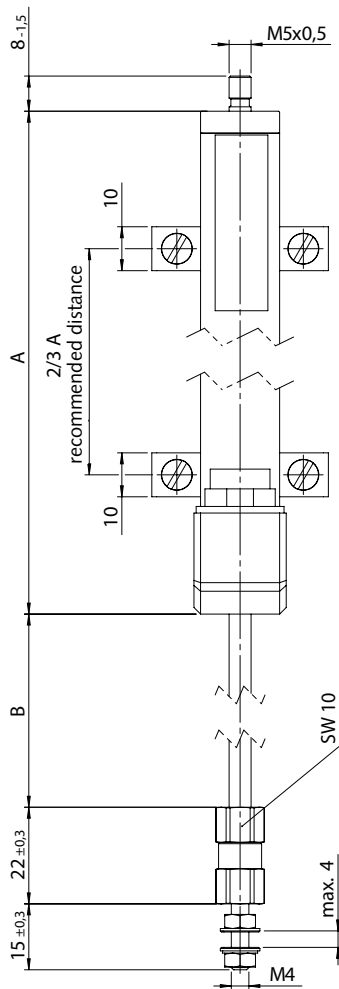
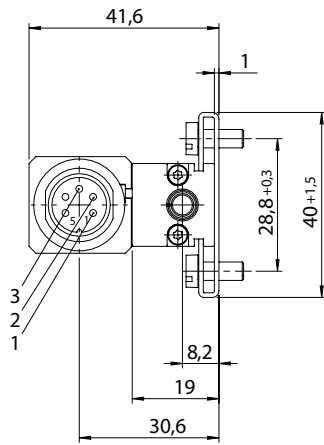
Important: All values specified in this data sheet for linearity, lifetime and temperature coefficient are only valid for a sensor used as a voltage divider with virtually no load applied to the wiper ($I_e \leq 0,1 \mu$ A).

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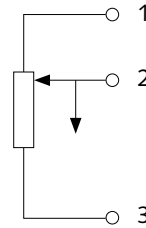
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Dimensions



Schematic



Included accessories

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

Accessories (optional)

- Connection cable for maXYmo family, L = 5 m, **Type** 1200A151C5
- Connection cable for maXYmo family, L = sp, **Type** 1200A151CSP
- Extension cable for maXYmo family, L = 5 m, **Type** 18013960
- Extension cable for maXYmo family, L = sp, **Type** 18025475

Ordering key

Type 2117A

Position sensor TS

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

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