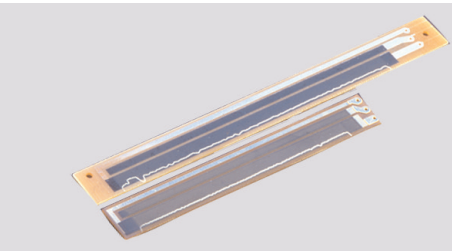


Resistance Elements up to 300 mm

Series PTX



Special features

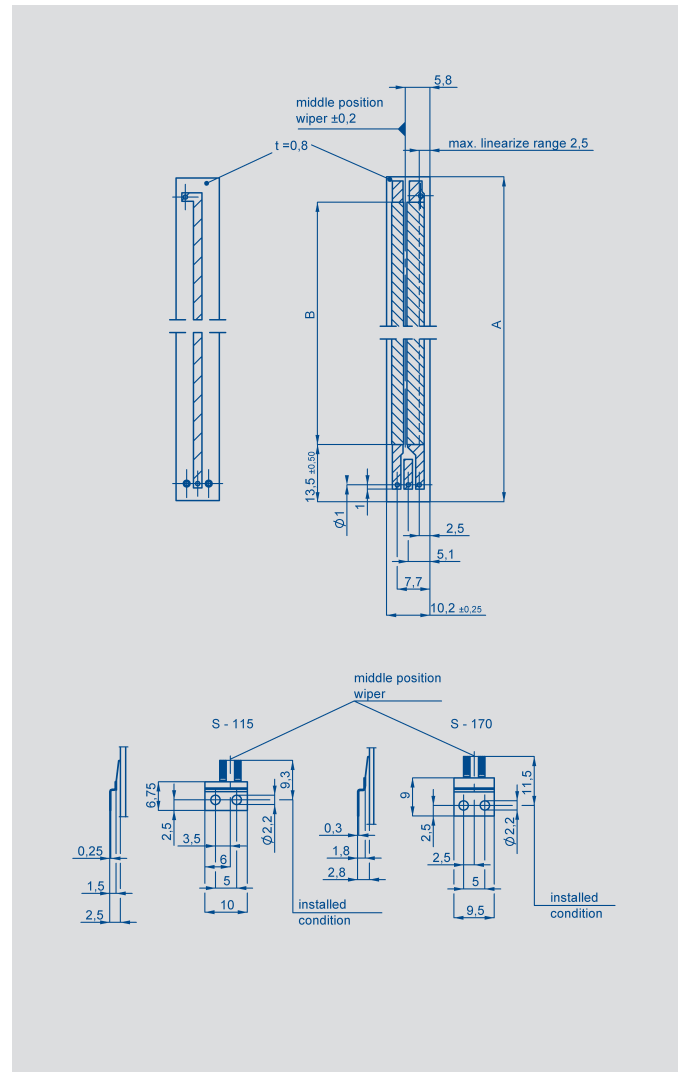
- suitable for mounting in closed applications
- easy mounting by bonding or clamping
- outstanding linearity
- very long life

Translational resistance elements suitable for installation in closed devices, which are so compact built, that for a position transducer with housing and actuating rod no sufficient place is available. Positioning drives represent a typical field of application.

The mounting of the resistance element should be on an even, clean surface in correct position to the wiper as indicated in the dimensional drawing.

In addition, the stated distance between the wiper carrier and the resistance element must be adhered to. Thus ensure the necessary wiper tracking force as well as the operability and durability. Two different wiper designs are available.

Only the standard lengths are specified in this data sheet. Other lengths and outlines of the resistance elements on request.



Description

Substrate	glass filled epoxy
Resistance element and collector	conductive plastic
Wiper	precious metal multi-finger wiper
Electrical connections	lead wires to be soldered onto soldering eyelet of resistance element

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Type designations	PTX 0010	PTX 0025	PTX 0050	PTX 0075	PTX 0100	PTX 0125*	PTX 0150	PTX 0175*	PTX 0200	PTX 0250	PTX 0300	
Electrical Data												
Defined electrical range	10	25	50	75	100	125	150	175	200	250	300	mm
Electrical range	12	27	52	77	102	130	155	180	205	255	305	±0.1 mm
Total resistance	1	1	2	3	4	5	6	7	8	10	12	kΩ
Resistance tolerance	20											±%
Independent linearity	0.25	0.2	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	±%
Repeatability	0,01											mm
Recommended operating wiper current	≤ 1											μA
Max. wiper current in case of malfunction	10											mA
Max. permissible applied voltage	42											V
Temperature coefficient of the output-to-applied voltage ratio	typ. 5											ppm/K
Insulation resistance (500 VDC)	≥ 10											MΩ
Dielectric strength (500 VAC, 50 Hz)	≤ 100											μA
Mechanical Data												
Mechanical range (Dimension B)	15.5	30.5	55.5	80.5	105.5	133.5	158.5	183.5	208.5	258.5	308.5	mm
Total length (Dimension A)	35	50	75	100	125	153	178	203	228	278	328	±0.4 mm
Environmental Data												
Temperature range	-40 ... +100											°C
Operating humidity range	0...95 (no condensation)											% R.H.
Life	> 50 x 10 ⁶ typ.											cycles

Order designations

Type	Art.-No.
PTX 0010	022301
PTX 0025	022302
PTX 0050	022303
PTX 0075	022304
PTX 0100	022305
PTX 0125*	022306
PTX 0150	022307
PTX 0175*	022308
PTX 0200	022309
PTX 0250	022311
PTX 0300	022313
Wiper S-115 or Wiper S-170	002161 021110

When ordering please indicate art.no. for resistance element and corresponding wiper.

*) on request

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 ($I_e \leq 1 \mu A$).

Mounting instruction

Pay attention to isolate the conductive track on the back side of resistance element.

