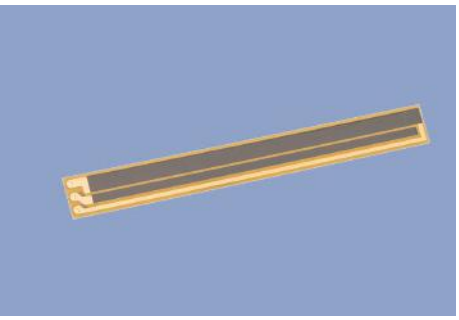
novotechnik
Siedle Group

Resistance Elements up to 250 mm

Series PTN



Special features

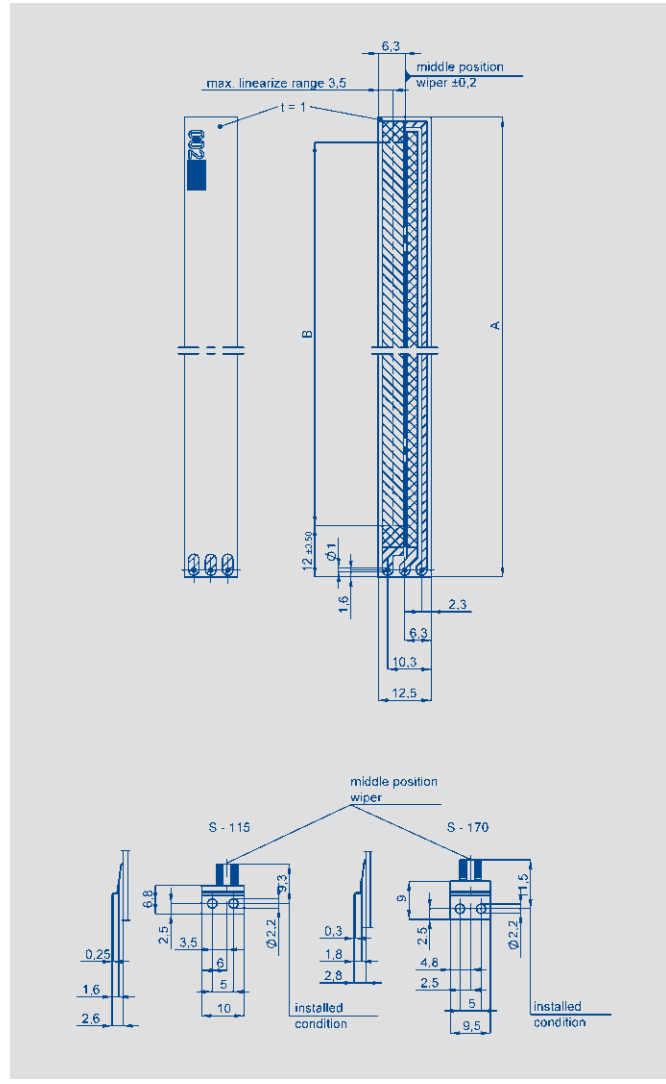
- suitable for mounting in closed applications
- easy mounting by bonding or clamping
- outstanding linearity
- very long life up to 50 million movements, depending on application

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 operatbility 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

Novotechnik
Messwertaufnehmer OHG

Postfach 4220
73745 Ostfildern (Ruit)
Horbstraße 12
73760 Ostfildern (Ruit)

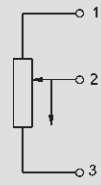
Telefon +49 71144 89-0
Telefax +49 711 44 89-118
info@novotechnik.de
www.novotechnik.de

© 01/2011
Art.-Nr.: 062 775
Subject to changes
Printed in Germany

Type designations	PTN 025	PTN 050	PTN 075	PTN 100	PTN 150	PTN 200	PTN 250	
Electrical Data								
Defined electrical range	25	50	75	100	150	200	250	mm
Electrical range	27	52	77	102	152	205	255	±0,1 mm
Total resistance	2.5	5	5	5	10	10	10	kΩ
Resistance tolerance	20							±%
Independent linearity	0.25	0.25	0.1	0.1	0.1	0.1	0.1	±%
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)	34,5	59,5	84,5	109,5	159,5	212,5	262,5	mm
Total length (Dimension A)	45	70	85	120	170	223	273	±0.3 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.**
PTN 025	002187
PTN 050	002188
PTN 075	002189
PTN 100	002190
PTN 150	002191
PTN 200	002192
PTN 250	002193
Wiper S-115 or Wiper S-170	002161 021110

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



Schematic

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 ($I_e \leq 1$ µA).