

**Position Transducers  
potentiometric  
up to 300 mm  
Open System**

Series PTP

**Customized product with  
minimum order quantity**

Position transducers with open housing are suitable for mounting in closed devices. They are a cost-optimized solution for applications, where density against fluid and dust isn't necessary, but reliability and accuracy.

Fixing clamps, screwing the housing directly as well as further mounting possibilities allow an optimum adaption to the particular environmental conditions.

Depending on the construction the position transducers with housing are available in different order sizes.

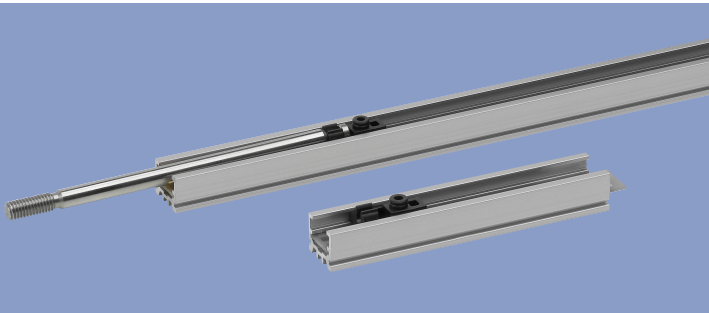
They are also a basis version for customized and modified solutions.

**Special features**

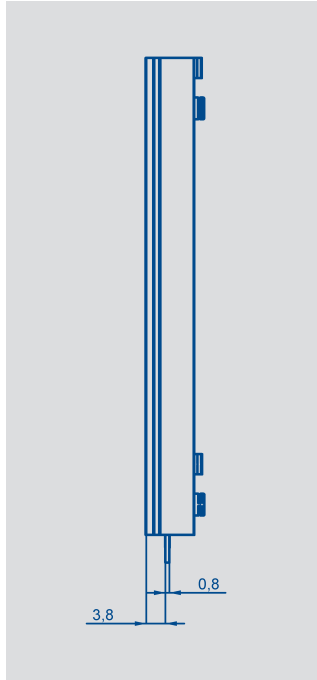
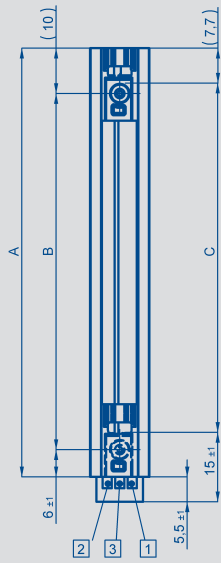
- compact dimensions
- cost-optimized solution with open housing
- suitable for mounting in closed applications
- very long life up to 50 million movements, depending on application
- resolution better than 0.01 mm
- variable mechanical customer interfaces
- outstanding linearity up to  $\pm 0,05\%$
- easy mounting

**Description**

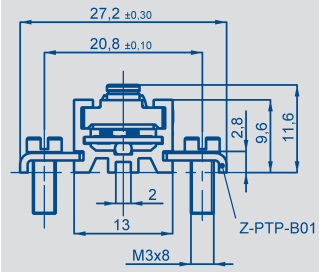
Housing	aluminium, anodized
Fixings	optional accessories, longitudinally adjustable clamps
Actuating rod	optional accessories stainless steel, rotatable
Coupling	optional follower pin DIN1473-2x6
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper
Electrical connections	Soldering pads Cu/Ni/Au on FR4 cable and lead wires optional on request



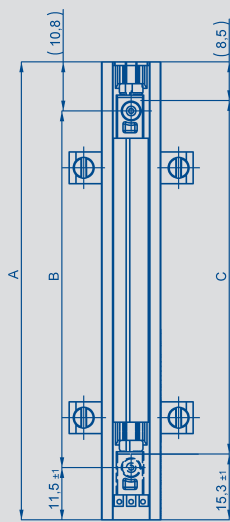
PTP\_xxx\_3x1\_002\_001



Optional

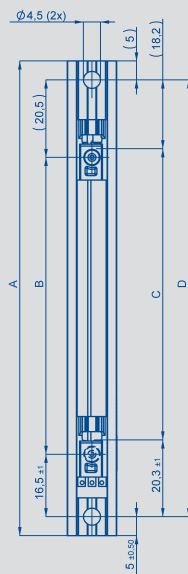


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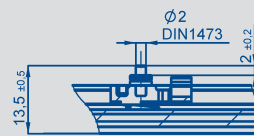


Fixing clamps optional

PTP\_xxx\_4xx\_002\_001



PTP\_xxx\_x2x\_002\_101



Type designations	PTP 0010	PTP 0025	PTP 0050	PTP 0075	PTP 0100	PTP 0125*	PTP 0150	PTP 0175*	PTP 0200	PTP 0250	PTP 0300	
<b>Electrical Data</b>												
Defined electrical range	10	25	50	75	100	125	150	175	200	250	300	mm
Electrical stroke (dimension C)	12	27	52	77	102	130	155	180	205	255	305	±0,1 mm
Nominal resistance	1	1	2	3	4	5	6	7	8	10	12	kΩ
Resistance toleranz	30											±%
Independent linearity	0,25	0,2	0,10	0,10	0,10	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 multifunction	10											mA
Max. permissible applied voltage	42											V
Temperature coefficient of the output-to-applied voltage ration	5											ppm/K
Insulation resistance (500 VDC)	≥ 10											MΩ
Dielectric strength (500 VAC, 50Hz)	≤ 100											μA
<b>Mechanical Data</b>												
Body length (dimension A)												
PTP_xxxx_1xx_002_001	35,8	50,8	75,8	100,8	125,8	153,8	178,8	203,8	228,8	278,8	328,8	±0,5 mm
PTP_xxxx_3x1_002_001	29,5	44,5	69,5	94,5	119,5	147,5	172,5	197,5	222,5	272,5	322,5	±0,5 mm
PTP_xxxx_4xx_002_001	60,5	75,5	100,5	125,5	150,5	178,5	203,5	228,5	253,5	303,5	353,5	±0,5 mm
Mechanical stroke (dimension B)	13,5	28,5	53,5	78,5	103,5	131,5	156,5	181,5	206,5	256,5	306,5	±1 mm
Hole separation (dimension D)												
PTP_xxxx_4xxx_002_001	50,5	65,5	90,5	115,5	140,5	168,5	193,5	218,5	243,5	293,5	343,5	±0,2 mm
Weight												g
Operating force horizontal	≤ 0,5											N
<b>Environmental Data</b>												
Temperature range	-40 ... +100											°C
Operating humidity range	0...95 (no condensation)											% R.H.
Vibration	5...2000 A <sub>max</sub> = 0,75 a <sub>max</sub> = 20											Hz mm g
Shock	50 6											g ms
Life	>50 x 10 <sup>6</sup> typical											movements
Operating speed	10											m/s max.
Protection class	no											

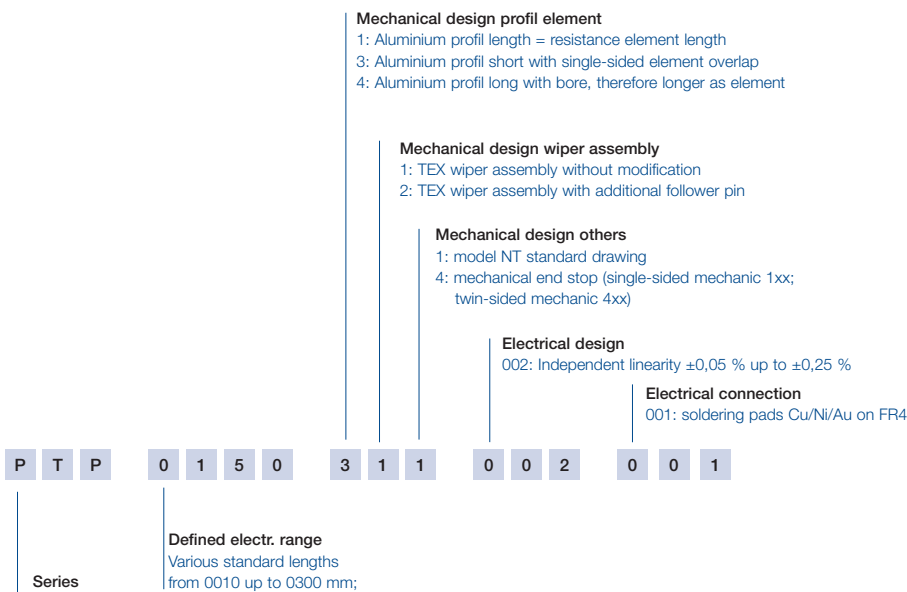
\*) on request

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## Ordering specifications



## Recommended accessories

Fixing clamps Z-PTP-B01,  
 Art.No. 056034, VE50  
 (4 clamps Z1-11 with 4  
 screws M3x8);  
 Various actuating rods on re-  
 quest.

## Included in delivery

PTP without fixing material  
 and without actuating rod.  
 These has to be ordered se-  
 paratly if required.

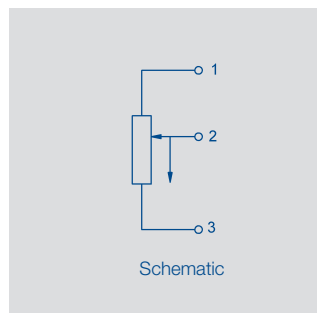
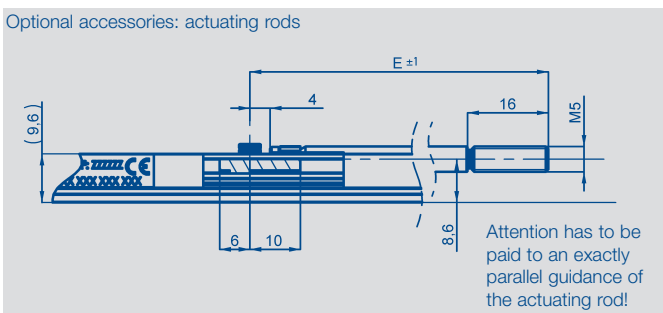
## Mounting instruction

Sensor has to be mounted in  
 dry and clean environment.

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

Optional accessories: actuating rods



## Connection actuating rods

Typ	Z-PTP-S01-xxxx											
(Dimension E)	55	70	95	120	145	183	208	233	258	308	358	$\pm 1$ mm

Further actuating rods on request