

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.

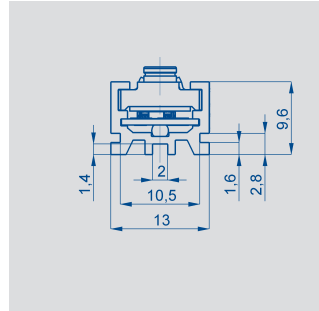
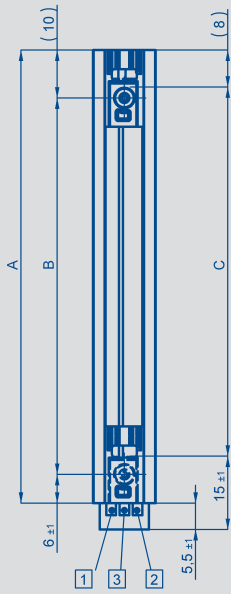
Special features

- 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

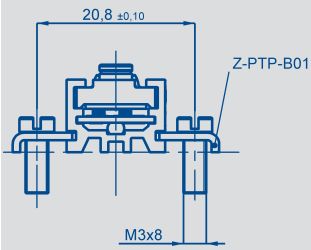
Description

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

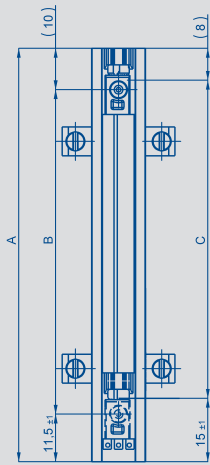
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Optional Accessories: fixing clamps

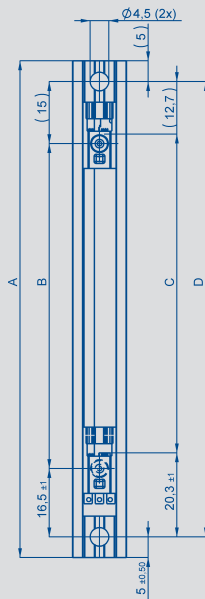


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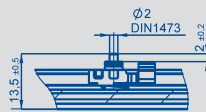


Fixing clamps optional

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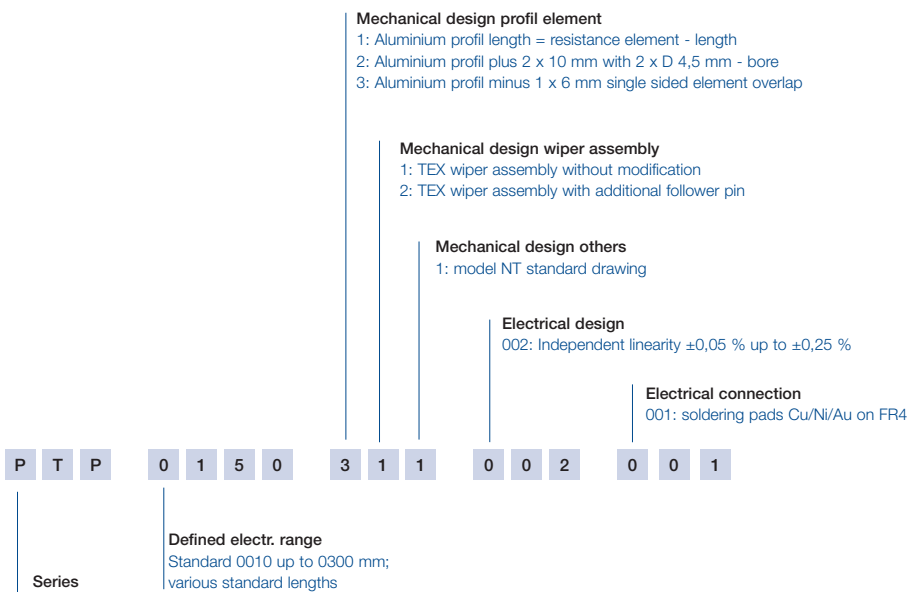
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Type designations	PTP 0010	PTP 0025	PTP 0050	PTP 0075	PTP 0100	PTP 0125*	PTP 0150	PTP 0175*	PTP 0200	PTP 0250	PTP 0300	
Electrical Data												
Defined electrical range	10	25	50	75	100	125	150	175	200	250	300	mm
Electrical stroke (dimension C)	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 = 1 bar, 2 s)	≥ 10											MΩ
Dielectric strength (50Hz, 2s, 1bar, 500VAC)	≤ 100											μA
Mechanical Data												
Body length (dimension A)												
PTP_XXXX_1X1_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_2X1_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_3X1_002_001	55	70	95	120	145	173	198	223	248	298	348	±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_2X1_002_001	45	60	85	110	135	163	188	213	238	288	338	±0,2 mm
Weight												g
Operating force horizontal	≤ 0,5											N
Environmental Data												
Temperature range	-40 ... +100											°C
Vibration	5...2000 A _{max} = 0,75 a _{max} = 20											Hz mm g
Shock	50 6											g ms
Life	>50 x 10 ⁶ typical											movements
Operating speed	10											m/s max.
Protection class	no											

*) on request

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 request.

Included in delivery

PTP without fixing material and without actuating rod. These has to be ordered separately if required.

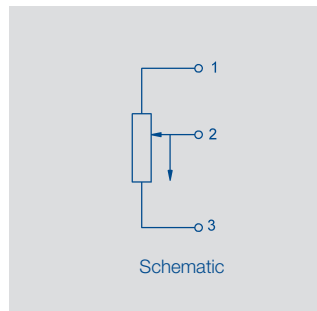
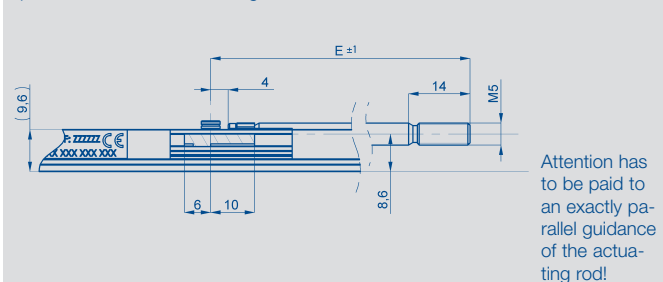
Mounting instruction

Sensor has to be mounted in dry and clean environment.

Important

All the values given in this data sheet for linearity, lifetime- and temperature coefficient in the voltage dividing mode are quoted for the device operating with the wiper voltage driving on operational amplifier working as a voltage follower, where virtually no load is applied to the wiper ($I_e \leq 1 \mu A$).

Optional accessories: actuating rods



Connection actuating rods

(Dimension E)	55	70	95	120	145	186	211	236	261	311	361	mm
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Further actuating rods on request



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