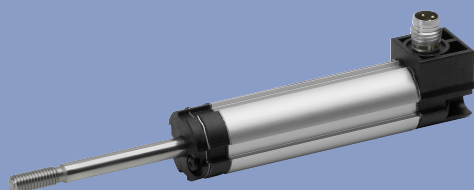


Position Transducers with actuating rod potentiometric up to 300 mm, IP 67

Series TEX



Special features

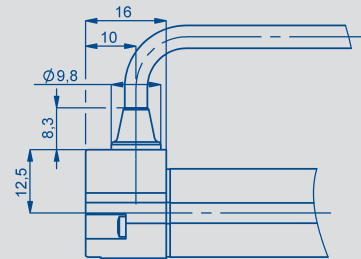
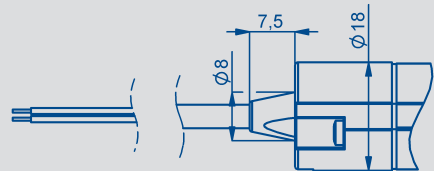
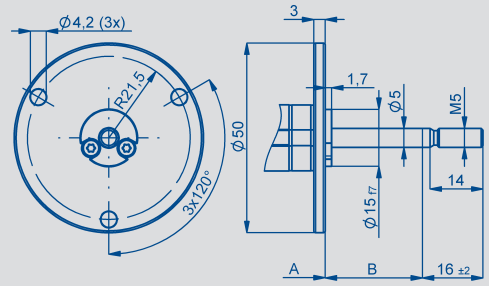
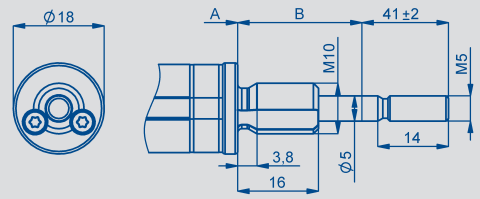
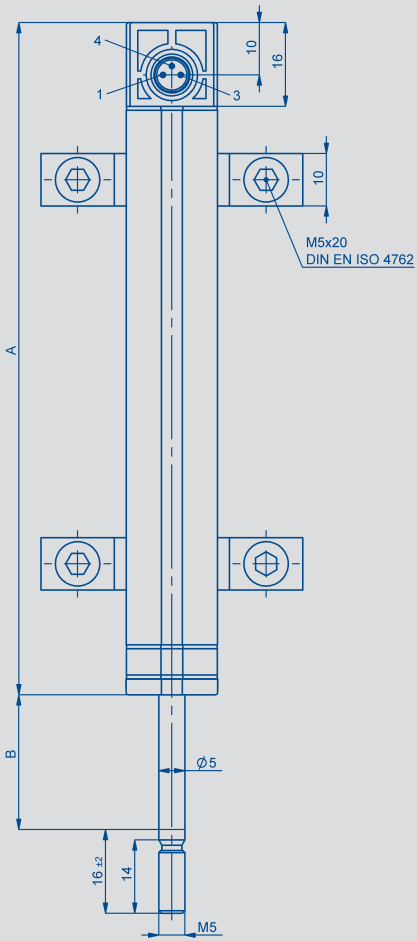
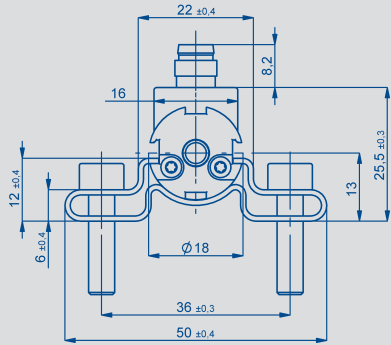
- compact dimensions
- protection class up to IP67
- very long life (depending on application) up to 100 million movements
- resolution better than 0,01 mm
- outstanding linearity up to $\pm 0,05\%$
- variable mechanical customer interfaces
- usable under harsh environmental conditions (humidity, oil, dust)
- cable or plug connection optional

Highest protection class and very compact dimensions characterize this inexpensive transducer.

Mounting clamps, central threads or flange plates allow an optimum adaption to the particular environmental conditions. The use of a ball coupling is recommended for a side load-free guidance. The electrical connection is made by radial plug connector or radial or axial cable.

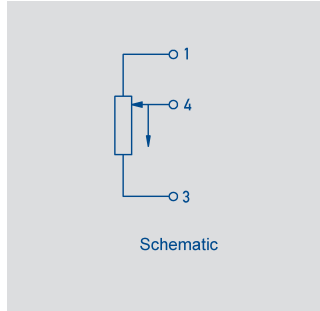
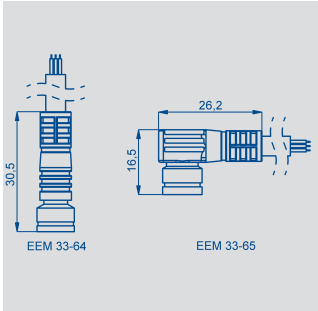
Transducers with restoring spring and pivot heads mounting see separate data sheets.

Description	
Housing	aluminium, anodized
Fixings	see drawing
Actuating rod	stainless steel, rotatable
Bearings	sleeve bearing
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper
Electrical connections	3-pin round connector M8x1 3-pin cable, shielded 2 m long



Type designations	TEX 0010*	TEX 0025	TEX 0050	TEX 0075*	TEX 0100	TEX 0125*	TEX 0150	TEX 0175*	TEX 0200	TEX 0250	TEX 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	mm
Nominal 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
Effective temperature coefficient of the output-to-applied voltage ration	typical 5											ppm/K
Insulation resistance (500 VDC, 1 bar, 2 s)	≥10											MΩ
Dielectric strength (50 Hz, 2 s, 1 bar, 500 VAC)	≤100											μA
Mechanical Data												
Body length (dimension A)	63	78	103	128	153	194	219	244	269	319	369	±2 mm
Mechanical stroke (dimension B)	14	29	54	79	104	132	157	182	207	257	307	±2 mm
Weight	n/a											g
Weight actuator with wiper	n/a											g
Operating force horizontal	≤ 0.5 (IP40), ≤ 3.0 (IP67)											N
Environmental Data												
Temperature range	-40 ...+85 (-40...+100 on request)											°C
Vibration	5...2000 A _{max} = 0.75 a _{max} = 20											Hz mm g
Shock	50 6											g ms
Life	> 100 x 10 ⁶ typ. (IP40, IP54) > 50 x 10 ⁶ typ. (IP67)											movements movements
Operating speed	10 (IP40, IP54) respectively 5 (IP67)											m/s max.
Protection class	up to IP67 DIN 40500 / IEC 529											

*)= on request



Output connector Code 101	Cable Code 202, 205 302, 305	Connector with cable EEM 33-64, EEM 33-65
PIN 1	BN brown	BN brown
PIN 4	WH white	BK black
PIN 3	GN green	BU blue

Ordering specifications

Electrical version
002: Independent linearity $\pm 0.05\%$ bis $\pm 0.25\%$

Electrical connection
101: 3-pin round connector M8x1, radial output
202: NT standard cable 2 m, radial output
205: NT standard cable 5 m, radial output
302: NT standard cable 2 m, axial output
305: NT standard cable 5 m, axial output

T E X **0 1 5 0** **4 1 1** **0 0 2** **2 0 2**

Series

Mechanical mounting
1: Fixing clamps
2: Central mounting M10
4: Flange plate mounting on request

Mechanical version actuating rod x1x
1: Transducer with one-side actuating rod and thread M5

Protection class
3: one-side actuating rod, IP40 on request
4: one-side actuating rod, IP54
5: one-side actuating rod, IP67

Electrical defined range
Standard: 0010 up to 0300 mm, various standard lengths

Recommended accessories

Connector M8x1, 2 m cable, EEM 33-64, IP67, Art.No. 005617;
 Angled connector M8x1, 2 m cable, EEM 33-65, IP67, Art.No. 005618;
 Ball coupling Z301 M5/M5 (s. data sheet accessories).
 Connector with longer cable length on request.
 Process-controlled indicators MAP... with display, Signal conditioner MUP.../MUK... for standardized output signals.

Included in delivery

Clamp mounting: 2 clamps incl. 4 cylinder head screws M5x20.

Mounting instructions

A ball coupling is recommended for backlash-free and side load-free operation to compensate parallel or angular errors between transducer axis and the direction of movement.

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