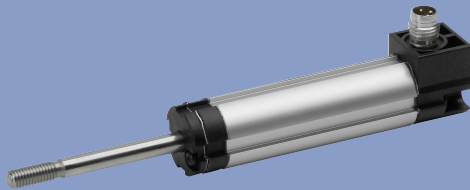


**Position Transducers  
with actuating rod  
potentiometric  
up to 300 mm, IP 67**

Series TEX



**Special features**

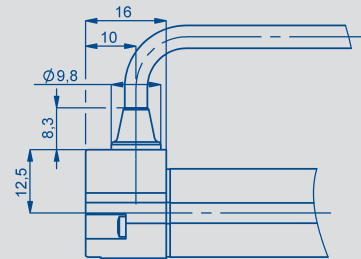
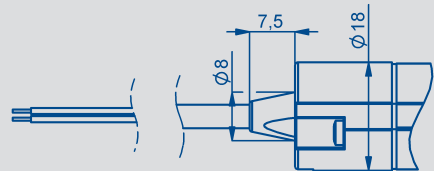
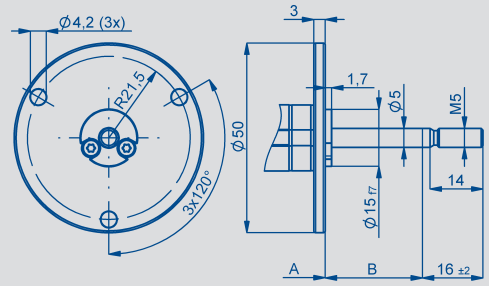
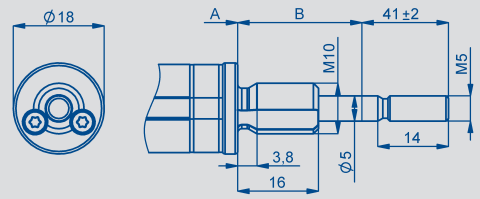
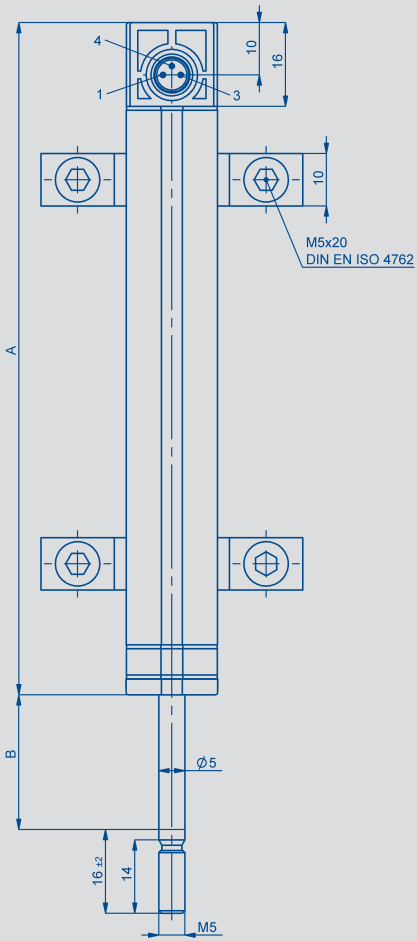
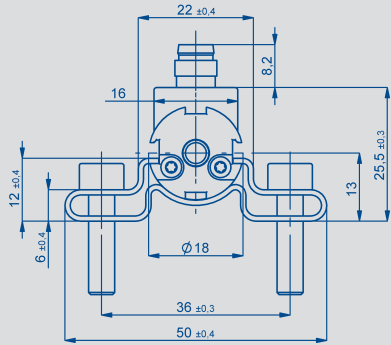
- compact dimensions
- protection class up to IP67
- very long life (depending on application) up to 100 million movements
- resolution better than 0,01 mm
- outstanding linearity up to  $\pm 0,05\%$
- variable mechanical customer interfaces
- usable under harsh environmental conditions (humidity, oil,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

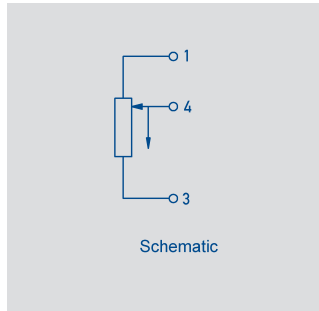
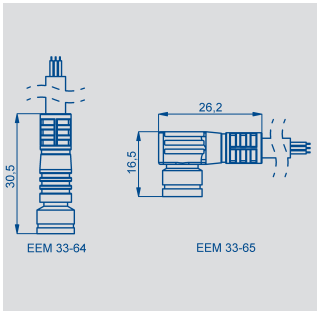


Type designations	TEX 0010	TEX 0025	TEX 0050	TEX 0075	TEX 0100	TEX 0125*	TEX 0150	TEX 0175*	TEX 0200	TEX 0250	TEX 0300	
<b>Electrical Data</b>												
Defined electrical range	10	25	50	75	100	125	150	175	200	250	300	mm
Electrical range	12	27	52	77	102	130	155	180	205	255	305	mm
Nominal resistance	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
<b>Mechanical Data</b>												
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 approx. with cable TEX_XXXX_X11_002_202	77	82	92	102	112	152	162	172	182	202	222	g
with connector TEX_XXXX_X11_002_101	45	50	60	70	80	120	130	140	150	170	190	g
additional weight	central mounting 3 g, flange plate 16 g											
Operating force horizontal	≤ 0.5 (IP40), ≤ 3.0 (IP67)											N
<b>Environmental Data</b>												
Temperature range	-40 ...+85 (-40...+100 on request)											°C
Vibration	5...2000 A <sub>max</sub> = 0.75 a <sub>max</sub> = 20											Hz mm g
Shock	50 6											g ms
Life	> 100 x 10 <sup>6</sup> typ. (IP40, IP54) > 50 x 10 <sup>6</sup> 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

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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

**Mechanical mounting**  
 1: Fixing clamps  
 2: Central mounting M10 up to Ø150 mm  
 4: Flange plate mounting up to Ø150 mm 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 on request

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

**TEX 0150 411 002 202**

Series

#### Included in delivery

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

#### Optional accessories

Pivot Head Z-G01,  
 Art.No. 056014

#### 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  
 current supply and standardi-  
 zed output signals.



Signal conditioner MUP100  
 and MUP400 for current  
 supply and standardized out-  
 put signals.

#### 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 opera-  
 ting with the wiper voltage  
 driving on operational amplifier  
 working as a voltage follower,  
 where virtually no load is app-  
 lied to the wiper ( $I_e \leq 1 \mu A$ ).

#### Mounting instructions

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