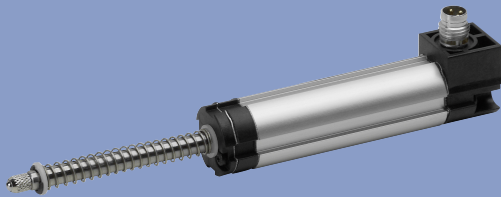


**Position Transducers  
with restoring spring  
potentiometric  
up to 200 mm, IP 67**

Series TEX



**Special features**

- compact dimensions
- protection class up to IP67
- Position transducer with restoring spring
- very long life (depending on application) up to 50 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)
- DIN standard gauging end
- 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 transducers with outside restoring spring enables the direct measurement without form-fit positioning.

The electrical connection is made by radial plug connector or radial or axial cable.

Transducers without restoring spring and mountable with pivot heads 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

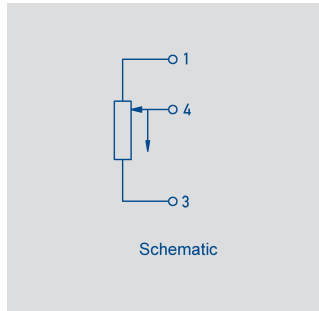
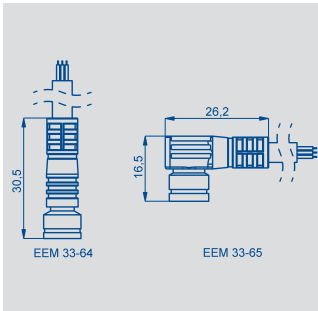


Type designations	TEX 0010	TEX 0025	TEX 0050	TEX 0075	TEX 0100	TEX 0125*	TEX 0150	TEX 0175*	TEX 0200	
<b>Electrical Data</b>										
Defined electrical range	10	25	50	75	100	125	150	175	200	mm
Electrical range	12	27	52	77	102	130	155	180	205	mm
Nominal resistance	1	1	2	3	4	5	6	7	8	kΩ
Resistance tolerance	20									±%
Independent linearity	0.25	0.2	0.1	0.1	0.1	0.05	0.05	0.05	0.05	±%
Repeatability	0,01 (without side loads)									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	±2 mm
Mechanical stroke (dimension B)	14	29	54	79	104	132	157	182	207	±2 mm
Dimension C	41	56	106	156	201	233	265	298	331	±2 mm
Dimension D	57	72	106	156	201	233	265	298	331	±2 mm
Weight	n/a									g
Weight actuator with wiper	n/a									g
Operating force horizontal	n/a									N
Operating frequency max. in center position (IP40)	49	43	35	28	24	21	20	20	20	Hz
in center position (IP65)	44	39	32	26	21	18	16	15	15	Hz
<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	> 50 x 10 <sup>6</sup> typ.									movements
Operating speed	5									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

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

Series

**Mechanical mounting**  
 1: Fixing clamps  
 2: Central mounting M10 up to  $\varnothing 150$  mm  
 5: Flange plate mounting up to 150 mm on request

**Mechanical version actuating rod x1x**  
 2: Transducer with restoring spring and gauging head

**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 0200 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;  
 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**  
 The included gauging head with M2,5 thread can be replaced by usual gauging ends.  
  
 Please note that the actuating rod shall not be twisted in general!

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