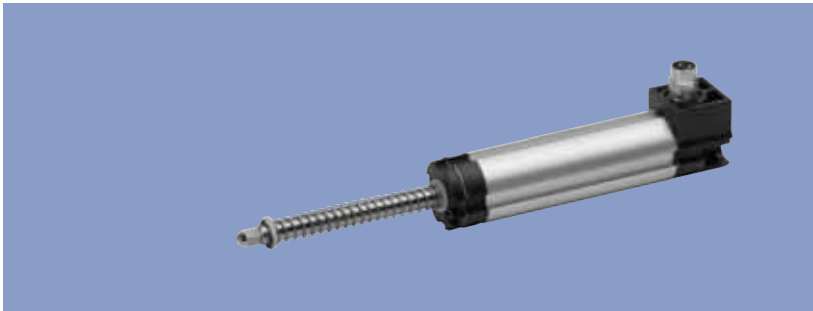


**Position Transducers  
with return spring  
potentiometric  
up to 200 mm, IP 54**

Series TEX



**Special features**

- compact dimensions
- protection class IP54
- Position transducer with return 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
- hardened tip
- cable or M8 connector available

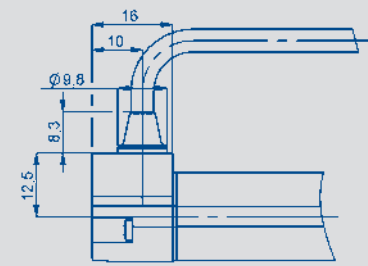
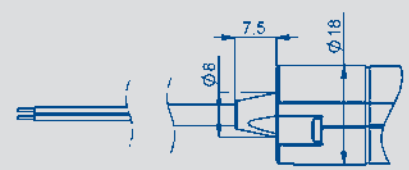
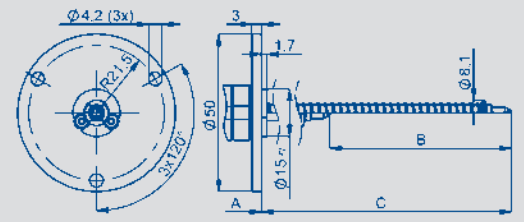
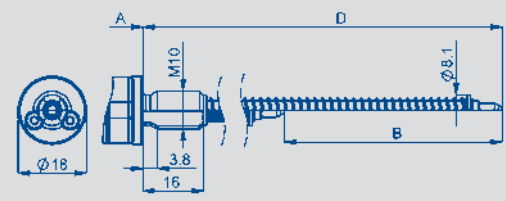
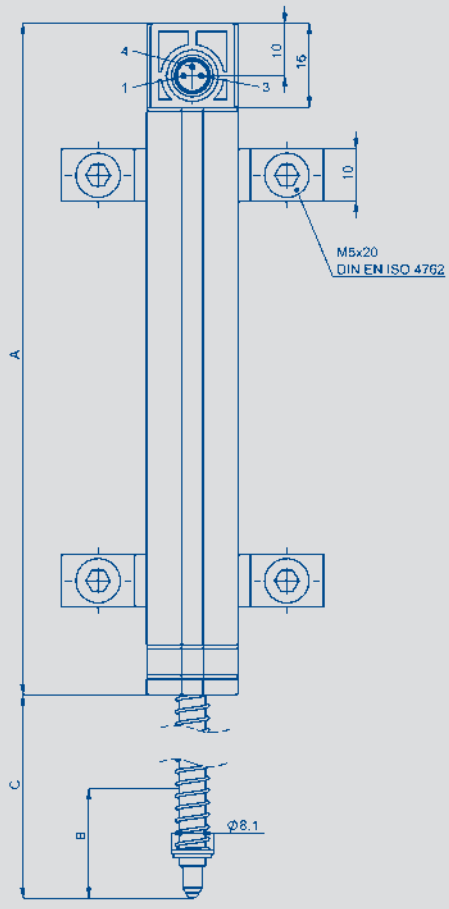
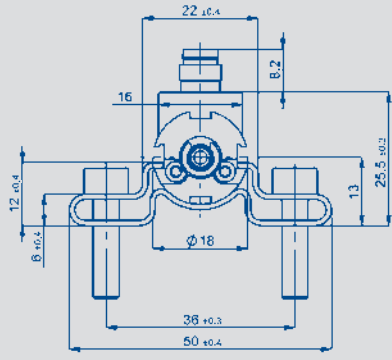
This cost effective linear transducer features compact dimensions, and three options for easy mounting under various conditions. These options are mounting clamps, bushing mount or flange plates.

A return spring allows direct measurement without connection to the moving part.

The electrical connection is provided with an M8 connector or a radial or axial cable.

For transducers without a return spring, please refer to separate data sheets.

Description	
Housing	aluminium, anodized
Mounting	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-wire, shielded cable, 2 or 5 m long

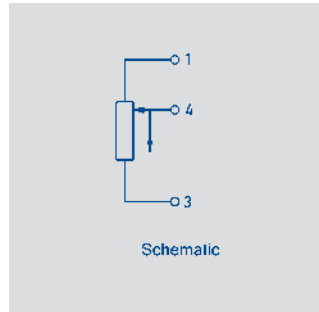
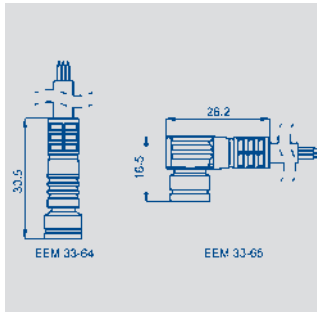


Type designations	TEX 0010	TEX 0025	TEX 0050	TEX 0075	TEX 0100	TEX 0125*	TEX 0150	TEX 0175*	TEX 0200		
<b>Electrical Data</b>											
Defined electrical range	10	25	50	75	100	125	150	175	200	mm	
Electrical range	12	27	52	77	102	130	155	180	205	mm	
Nominal resistance	1	1	2	3	4	5	6	7	8	kΩ	
Resistance 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 ratio	typical 5										ppm/K
Insulation resistance (500 VDC)	≥10										MΩ
Dielectric strength (500 VAC, 50 Hz)	≤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 approx. with cable TEX_XXXX_X21_002_202 with conector TEX_XXXX_X21_002_101 additional weight	80 50	85 55	95 65	105 75	115 85	155 125	165 135	175 145	185 155	g g	
Operating force horizontal	5.6 (at RT 20° C)										±0,8 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										°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> typ.										movements
Operating speed	5										m/s max.
Protection class	IP54 DIN EN 60529										

\*) = on request

**Novotechnik U.S., Inc.**  
155 Northboro Road  
Southborough, MA 01772

Phone: 508-485-2244  
Fax: 508-485-2430  
Email: info@novotechnik.com



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  $\pm 0.05\%$  up to  $\pm 0.25\%$

**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: Clamps  
2: Bushing mount M10 up to  $\varnothing 150$  mm  
4: Flange plate mounting up to 150 mm on request

**Mechanical version actuating rod x2x**  
2: Transducer with return spring and hardened tip

**Protection class**  
4: one-side actuating rod, IP54

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

Series

**Electrical defined range**  
Various standard lengths, 0010 up to 0200 mm

**Included in delivery**

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

**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  
current supply and standardi-  
zed output signals.



Signal conditioner MUP

**Mounting instructions**

The standard hardened tip  
with M2,5 thread can be  
replaced with other gauging  
tips.  
The actuating rod is not  
locked against rotation.

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