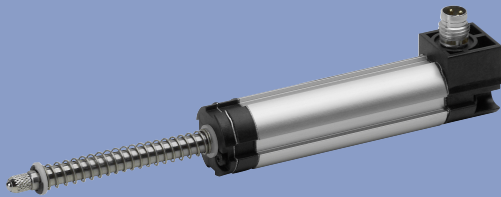


**Position Transducers  
with return spring  
potentiometric  
up to 200 mm, IP 54**

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
- compatible to standard probe tips
- cable or connector version available

This cost effective linear transducer is characterized by its various mounting options and compact dimensions.

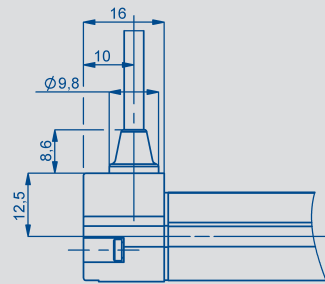
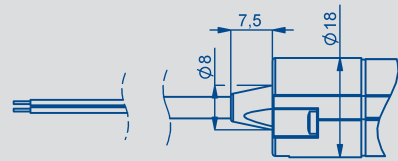
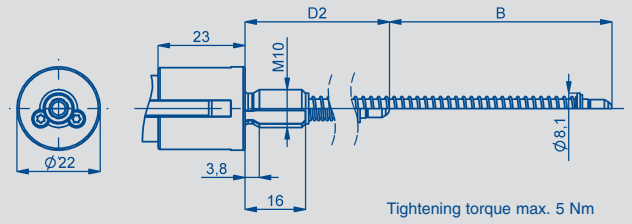
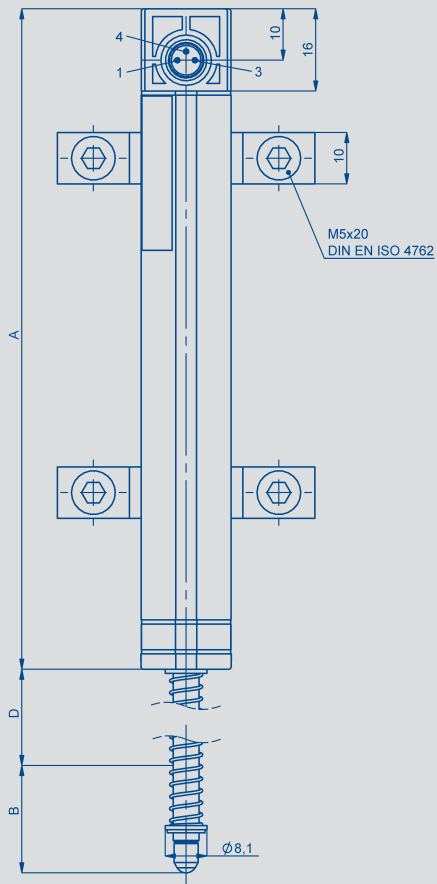
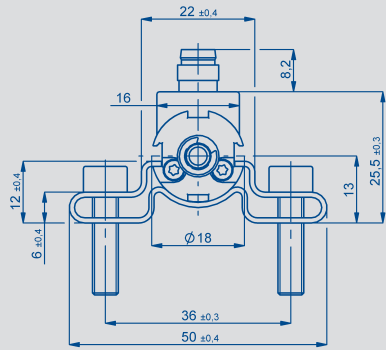
Mounting clamps or central mounting for easy mounting under various conditions.

The return spring design allows a direct measurement without connection to the moving part.

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

For transducers without return spring and pivot head mounting, please see separate data sheets.

Description	
Housing	aluminium, anodized
Mounting	see drawing
Actuating rod	stainless steel (1.4304), rotatable. Probe tip stainless steel with external thread M2.5 and pressed-in hardened metal ball
Bearings	sleeve bearing
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper
Electrical connections	3-pin round connector M8x1 3-wire PUR-cable, 3 x 0.14 mm <sup>2</sup> , shielded, 2 m or 5 m length

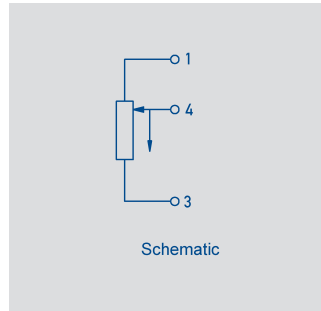
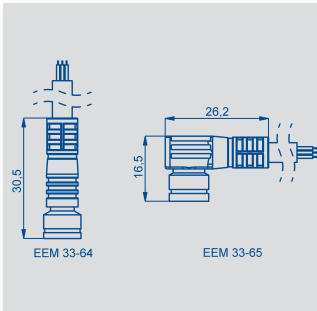


Type designations	TEX 0010	TEX 0025	TEX 0050	TEX 0075	TEX 0100	TEX 0125	TEX 0150	TEX 0175	TEX 0200	
<b>Electrical Data</b>										
Defined electrical range	10	25	50	75	100	125	150	175	200	mm
Electrical range	12	27	52	77	102	130	155	180	205	mm
Nominal resistance	1	1	2	3	4	5	6	7	8	k $\Omega$
Resistance tolerance	20									$\pm$ %
Independent linearity	0.25	0.2	0.1	0.1	0.1	0.05	0.05	0.05	0.05	$\pm$ %
Repeatability	0,01 (without side loads)									mm
Recommended operating wiper current	$\leq$ 1									$\mu$ A
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)	$\geq$ 10									M $\Omega$
Dielectric strength (500 VAC, 50 Hz)	$\leq$ 100									$\mu$ A
<b>Mechanical Data</b>										
Body length (dimension A)	63	78	103	128	153	194	219	244	269	$\pm$ 2 mm
Mechanical stroke (dimension B)	14	29	54	79	104	132	157	182	207	$\pm$ 2 mm
Dimension D	25	25	50	75	95	98	105	113	121	$\pm$ 2 mm
Dimension D2	41	41	50	75	95	98	105			$\pm$ 2 mm
Weight approx.										
cable version TEX-____-42_-002-202	80	85	95	105	115	155	165	175	185	g
connector version TEX-____-42_-002-101	50	55	65	75	85	125	135	145	155	g
additional weight	central mounting 10 g									
Operating force horizontal	5.6 (at RT 20° C)									$\pm$ 0,8 N
Operating frequency max. in center position	49	43	35	28	24	21	20	20	20	Hz
<b>Environmental Data</b>										
Temperature range	-40 ...+85									°C
Operating humidity range	0...95 (no condensation)									% R.H.
Vibration	5...2000 $A_{max} = 0.75$ $a_{max} = 20$									Hz mm g
Shock	50 6									g ms
Life	$> 50 \times 10^6$ typ.									movements
Operating speed	5									m/s max.
Protection class	IP54 DIN EN 60529									

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 changes.  
 Printed in  
 Germany.



Output connector Code 101	Cable Code 202, 205 302, 305	Connector with cable EEM 33-64 / -66 / -68 / -65 / -67 / -69
PIN 1	BN brown	BN brown
PIN 4	WH white	BK black
PIN 3	GN green	BU blue

## Ordering specifications

Electrical version  
002: linearized

### 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  
 8: Central mounting M10 with collar up to Ø150 mm

### Mechanical version actuating rod x2x

2: Transducer with return spring and probe tip

### Protection class

4: one-side actuating rod

### Electrical defined range

Standard lengths, 0010 up to 0200 mm

## Optional accessories

PUR-cable with 3-pin, female connector M8x1, 3x0.34mm<sup>2</sup>, IP67, unshielded:

2 m length, EEM 33-64, P/N 005617;

5 m length, EEM 33-66, P/N 005619;

10 m length, EEM 33-68, P/N 005643;

PUR-cable with 3-pin angled female connector M8x1, 3x0.34 mm<sup>2</sup>, IP67, unshielded:

2 m length, EEM 33-65, P/N 005618;

5 m length, EEM 33-67, P/N 005620;

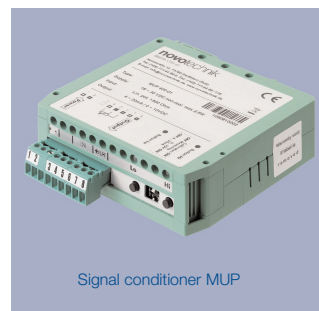
10 m length, EEM 33-69, P/N 005644.

Other cable on request.

Process-controlled indicators MAP... with display, Signal conditioner MUP.../MUK... for current supply and standardized output signals.

## Included in delivery

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



## 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 ( $I_e \leq 1 \mu\text{A}$ ).