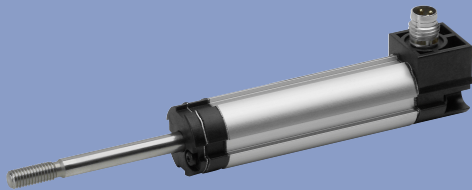


Position Transducers with actuating rod potentiometric up to 300 mm, IP54

Series TEX



Special features

- compact dimensions
- protection class IP54
- 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
- cable or connector version available
- IP 67 version see data sheet TX2

This cost effective transducer is characterized by its various mounting options and compact dimensions. Flexible mounting clamps or central mounting for easy mounting under various conditions.

For transducers with return spring and pivot head mounting, please see separate data sheets.

Typical applications are linear position measurements on small presses and textile machines as well as measurement of deformation in the testing technology.

The use of a ball coupling is recommended for a side load-free guidance.

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

Description	
Housing	aluminium, anodized
Mounting	see drawing
Actuating rod	stainless steel (1.4305), rotatable, external thread M5
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, 3x0.14mm ² , 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	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 ratio	typical 5											ppm/K
Insulation resistance (500 VDC)	≥10											MΩ
Dielectric strength (500 VAC, 50 Hz)	≤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
Excess length (dimension D)	41	41	41	41	41	38	38					±2 mm
Weight approx.												
cable version TEX-_-_-_-41_-002-202	77	82	92	102	112	152	162	172	182	202	222	g
connector version TEX-_-_-_-41_-002-101	45	50	60	70	80	120	130	140	150	170	190	g
additional weight	central mounting 10 g											
Operating force horizontal	≤3.0 (at RT 20° C)											N
Environmental Data												
Temperature range	-40 ...+85											°C
Vibration	5...2000											Hz
	A _{max} = 0.75											mm
	a _{max} = 20											g
Shock	50											g
	6											ms
Life	> 100 x 10 ⁶ typ.											movements
Operating speed	10											m/s max.
Protection class	IP54 DIN EN 60529											



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

Mechanical mounting
 1: Fixing clamps
 8: Central mounting M10 with collar up to Ø150 mm

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

Protection class
 4: one-side actuating rod

Electrical defined range
 Standard lengths, 0010 up to 0300 mm

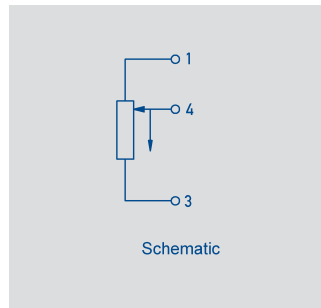
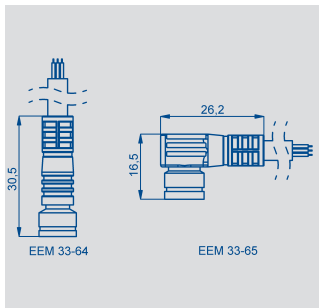
Series T E X

0 1 5 0

4 1 1

0 0 2

2 0 2



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

Optional accessories

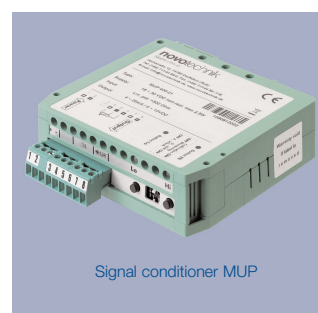
PUR-cable with 3-pin female connector M8x1, 3x0.34 mm², IP67, unshielded
 2 m length, EEM-33-64, P/N 005617
 5 m length, EEM-33-66, P/N 005619
 10 m length, EEM-33-68, P/N 005643.

PUR-cable with 3-pin angled female connector M8x1, 3x0.34 mm², 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.
 Ball coupling Z-301-M5/M5, P/N 058002
 Pivot Head Z-G01, P/N 056014.

Process-controlled indicators MAP... with display, Signal conditioner MUP.../MUK... for current supply 24 V and 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 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 ($I_e \leq 1 \mu A$).