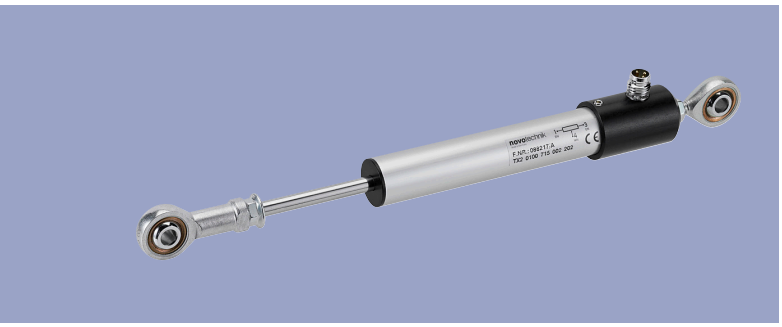
novotechnik
Siedle Group

Position Transducer Pivot head Mounting potentiometric up to 300 mm, IP67

Series TX2



Special features

- outstanding linearity up to ±0.05 %
- resolution better than 0.01 mm
- sealed to IP67 - suitable for harsh environmental conditions (moisture,oil, dust)
- very long life - up to 50 million movements (application dependent)
- compact dimensions = Ø 16 mm
- easy to assemble via low backlash pivot heads with a large angle of freedom (up to ±12.5 degrees)
- cable or plug connection optional

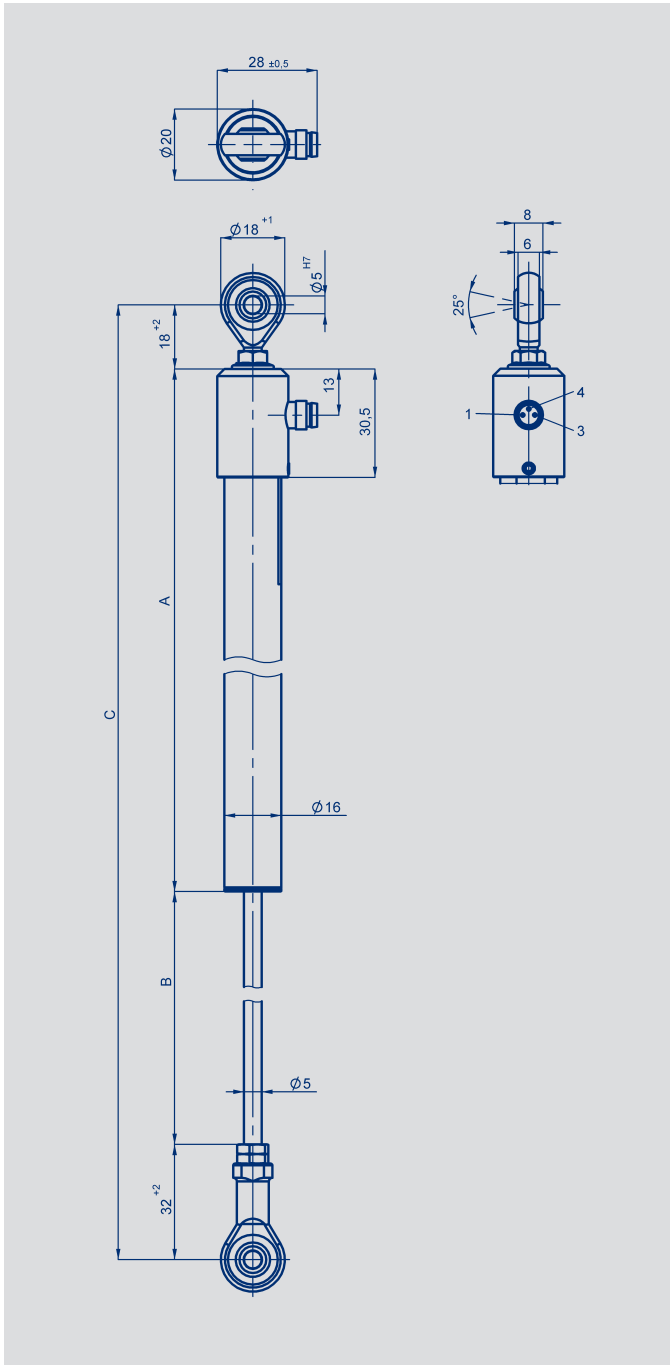
High protection class and very compact dimensions characterize this inexpensive transducer. The heavy-duty design together with metal flanges and double sealed actuating rod make the TX2 Series an ideal choice for applications used in adverse environments with dirt, dust and humidity.

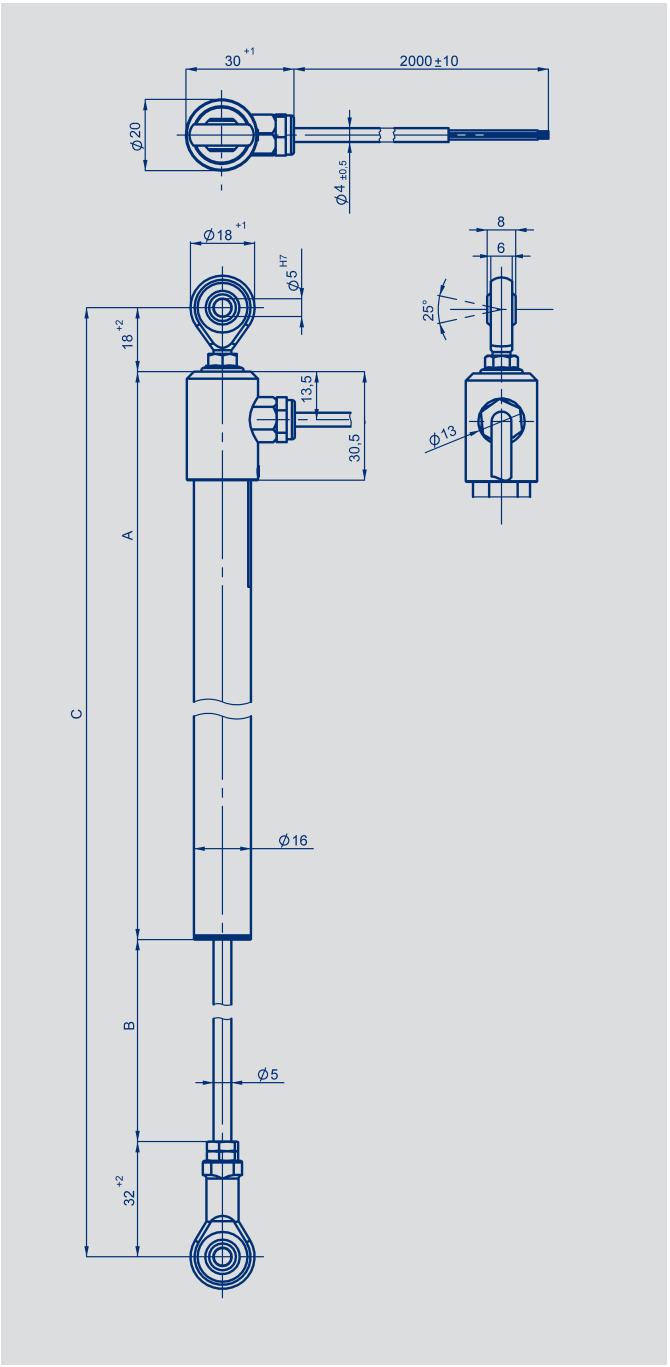
Users with mobile applications can especially benefit from the TX2 Series‘ pivot-head mounting.

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

For transducers with and without return spring and mounting clamp, central thread or flange plates see separate TEX-series data sheets.

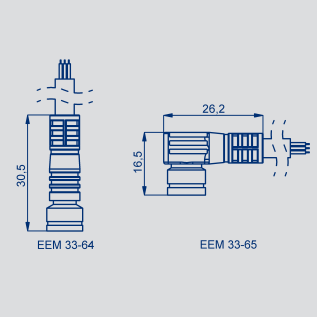
Description	
Housing	Aluminium, anodized
Mounting	see drawing
Actuating rod	stainless steel, (1.4305), rotatable
Bearings	sintered bronze bush
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper
Electrical connections	3-pin round connector M8x1 4-wire PUR-cable, 4x0.14 mm², shielded, 2 m length

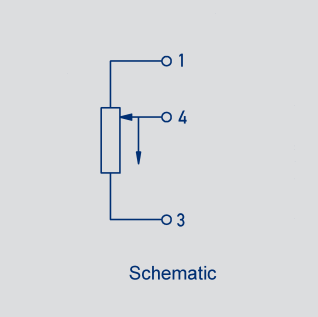

28 ±0,5
Ø20
Ø18 +1
Ø5 H7
18 +2
13
30,5
A
C
B
Ø16
Ø5
32 +2
8
6
25°
1
4
3


30 +1
2000 ±10
Ø20
Ø4 ±0,5
Ø18 +1
Ø5 H7
18 +2
13,5
30,5
A
C
B
Ø16
Ø5
32 +2
8
6
25°
Ø13

Type designations	TX2 0025	TX2 0050	TX2 0075	TX2 0100	TX2 0150	TX2 0200	TX2 0250	TX2 0300	
Electrical Data									
Defined electrical range	25	50	75	100	150	200	250	300	mm
Electrical range	27	52	77	102	155	205	255	305	mm
Nominal resistance	1	2	3	4	6	8	10	12	kΩ
Resistance tolerance	20								±%
Independent linearity	0.2	0.1	0.1	0.1	0.05	0.05	0.05	0.05	±%
Repeatability	0,01								mm
Recommended operating wiper current	≤ 1								µA
Maximum wiper current (in case of system malfunction)	10								mA
Maximum permissible applied voltage	42								V
Effective temperature coefficient of the output-to-applied voltage ration	typical 5								ppm/K
Insulation resistance (500 VDC)	≥ 10								MΩ
Dielectric strength (500 VAC, 50 Hz)	≤ 100								µA
Mechanical Data									
Body length (dimension A)	86	111	136	161	224	274	324	374	±1 mm
Mechanical stroke (dimension B)	30	55	80	105	158	208	258	308	±1 mm
Minimum distance between pivot heads, nominal (dimension C)	136	161	186	211	274	324	374	424	mm
Weight approx. with connector (101) with cable (202)	 100 120	 110 156	 120 160	 130 177	 150 190	 163 225	 190 250	 205 270	 g g
Operating force horizontal vertical	 < 5 (at RD 20° C)								 N
Initial operating force	max. 15 (*)								N
Environmental Data									
Temperature range -	40 ...+85 connector / -20 ...+100 cable								°C
Operating humidity range	0 ... 95 (no condensation)								% R.H.
Vibration	5...2000 Amax = 0.75 mm amax = 20 g								Hz mm g
Shock	50 6								g ms
Life	> 50 x 10^6 typical								movements
Operating speed	5								m/s max.
Protection class	IP67 - requires mating connector of IP67 or higher IP67 defined under DIN EN 60529 with submersion depth of 1 m water and duration of 0.5 hour. Durability of actuating rod seal is dependent upon both application environment and operating cycles. Read instructions prior to starting application equipment.								

* Initial operating force is dependent on ambient temperature and inactive time.





Output connector Code 101	Cable Code 202	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 (standard)

Electrical connection
101: 3-pin round connector M8x1, radial output
202: NT standard cable 2 m, radial output

T X 2 – 0 1 5 0 – 7 1 6 – 0 0 2 – 2 0 2

Series

Electrical defined range
Standard lengths 0025 up to 0300 mm

Protection class
7: one-side actuating rod, IP67

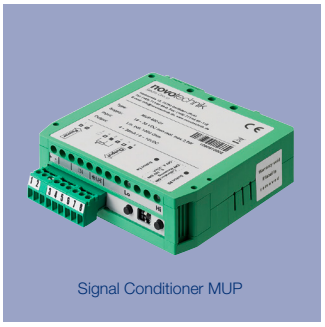
Mechanical version actuating rod
1: Transducer with one-side rod and thread M5

Mechanical mounting
6: Pivot heads

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.

MAP - Process-control indicators with display
MUP / MUK Signal conditioners ±24 V power with standard voltage or current output signals.


Signal Conditioner MUP

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 ≤ 1 µA).