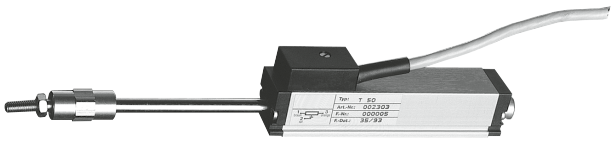
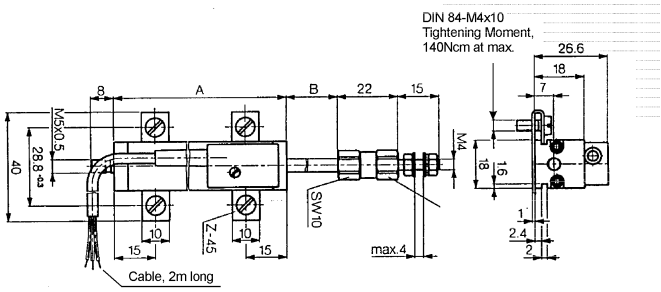
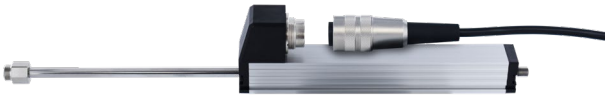
Displacement Sensor, Potentiometric FWA xxx T







with option OWA071AK: Plug connection on the sensor

- Displacement transducers are suitable for direct, accurate measurement of displacements in automatic control and metrology.
- The pickup of the displacement is performed by using a pull rod with a universal joint. This allows for an actuation that is free from backlash and transverse forces, even in case of parallel and angular displacements of transducer and measuring direction.
- Elastomer-damped, independently resilient multi-finger noble metal sliding contact for reliable contact, even at high adjustment speed, shock or vibration.
- Long life, extraordinary linearity, pull rod running on two exact bearings, very high adjustment speed of up to 10 m/s, shock and vibration resistant.

! Pre-adjusted in the factory by storing the correction values in the ALMEMO® connector.
The precise adjustment can be locally performed by the user with final measures after the installation.

Other version: Displacement transducer with digital ALMEMO® D7 measuring plug, see ZWD700FS
Digital sensor, can be calibrated without measuring device.
High measured value resolution.

Technical Data:

Independent linearity:	T25: ±0.2 %; T50: ±0.15 % T75: ±0.1 %; T100: ±0.075 % T150: ±0.075 %
Housing length (meas. A+1 mm):	T25: 63 mm; T50: 88 mm T75: 113 mm; T100: 138 mm T150: 188 mm
Mech. stroke (meas. B ±1.5 mm):	T25: 30 mm; T50: 55 mm T75: 80 mm; T100: 105 mm T150: 155 mm
Total weight (with 2 m cable):	T25: 140 g; T50: 160 g T75: 170 g; T100: 190 g T150: 220 g
Weight of the pull rod incl. coupling and sliding contact block:	T25: 35 g; T50: 43 g T75: 52 g; T100: 58 g T150: 74 g

Movability, ball-shaped coupling:	±1 mm parallel displacement, ±2.5 ° angular displacement
Operating force (horizontal):	≤ 0.30 N
Reproducibility:	0.002 mm
Insulation resistance:	≥ 10 MW, (500 VDC, 1 bar, 2 s)
Dielectric strength:	≤ 1 mA, (50 Hz, 2 s, 1 bar, 500 VAC)
Max. permissible torque:	140 Ncm
Temperature range:	–30 to +100 °C
Temperature coefficient:	typ. 5 ppm/°C
Vibrations:	5 to 2000 Hz/Amax = 0.75 mm/amax = 20 g
Shock:	50 g / 11 ms
Life span:	> 100 x 106 strokes
Protection system:	IP 40

Options

	Order no.
Plug connection (instead of fixed connected cable), including 3 m cable with screwed round socket and ALMEMO® connector	**OWA071AK**

Types

Working length/resolution, incl. ALMEMO® cable 2 m long	Order no.
25 mm / 0.001 mm	**FWA025T**
50 mm / 0.01 mm	**FWA050T**
75 mm / 0.01 mm	**FWA075T**
100 mm / 0.01 mm	**FWA100T**
150 mm / 0.01 mm	**FWA150T**

included with delivery 2 tensioning clamps Z3-31
including 4 cap screws M 4 x 10, 1 ball-shaped coupling

Other designs are available on request



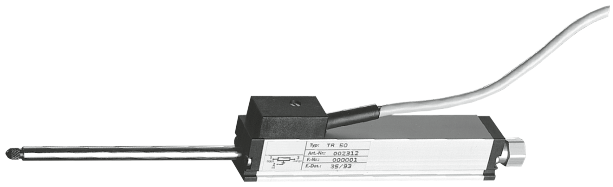
Displacement transducers FWA xxx TEX
with pivot joint Protective class IP54, 10 to 300 mm

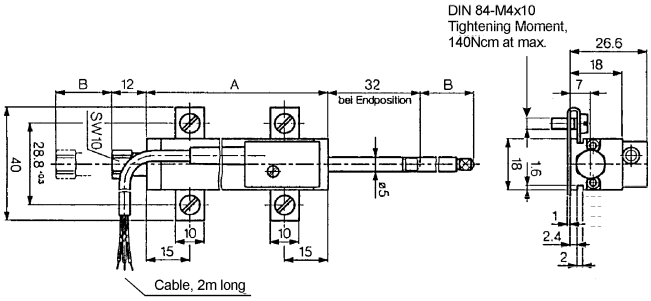


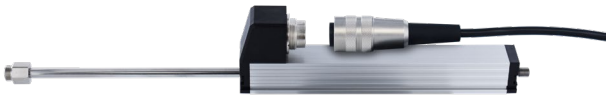
Displacement transducers FWA xxx TX2
Protective class IP67 with pivot joint, 25 to 300 mm

02/2026 • We reserve the right to make technical changes.

Displacement Tracer, Potentiometric FWA xxx TR







with option OWA071AK: Plug connection on the sensor

- Resistor and collector paths made from conducting plastic.
- Suitable for direct measurements of displacement without a form-locking connection, position detection at stationary measuring objects, tolerance measurements and for continuous contour measurement.
- The pull rod, which is supported on both sides, allows for accepting transverse forces that, for example, occur during a continuous scan of curves or spline parts.
- Rear limit stop is used to provide a simple mechanical coupling of automatic retraction systems, such as pneumatic cylinders or electromagnets.
- Long life, extraordinary linearity, tracer pin running on two exact bearings, DIN compliant standard measuring inserts can be used, shock and vibration resistant.

! Pre-adjusted in the factory by storing the correction values in the ALMEMO® connector. The precise adjustment can be locally performed by the user with final measures after the installation.

Other version:
Displacement transducer with digital ALMEMO® D7 measuring plug, see ZWD700FS
Digital sensor, can be calibrated without measuring device. High measured value resolution.

Technical Data:

Independent linearity:	TR25: ±0.2 %; TR50: ±0.15 % TR75: ±0.1 %; TR100: ±0.075 %
Housing length (meas. A+1 mm):	TR25: 63 mm; TR50: 94.4 mm; TR75: 134.4 mm; TR100: 166 mm
Mech. stroke (meas. B ±1.5 mm):	TR25: 30 mm; TR50: 55 mm TR75: 80 mm; TR100: 105 mm
Total weight (with 2 m cable):	TR25: 120 g; TR50: 150 g TR75: 180 g; TR100: 200 g
Weight of the pull rod incl. coupling and sliding contact block:	TR25: 25 g; TR50: 36 g TR75: 48 g; TR100: 57 g
Max. operating frequency: (for most critical application ´probe tip upright´)	TR25: 18 Hz; TR50: 14 TR75: 11 Hz; TR100: 10 Hz

Operating force (horizontal):	≤ 5 N
Reproducibility:	0.002 mm
Insulation resistance:	≥ 10 MW (500 VDC, 1 bar, 2 s)
Dielectric strength:	≤ 1 mA (50 Hz, 2 s, 1 bar, 500 VAC)
Max. permissible torque:	140 Ncm
Temperature range:	–30 to +100 °C
Temperature coefficient:	typ. 5 ppm/°C
Vibrations:	5 to 2000 Hz/Amax = 0.75 mm/amax = 20 g
Shock:	50 g / 11 ms
Life span:	> 100 x 106 strokes
Protection system:	IP 40

Option

	Order no.
Plug connection (instead of fixed connected cable), including 3 m cable with screwed round socket and ALMEMO® connector	**OWA071AK**

Types

Working length/resolution, incl. ALMEMO® cable 2 m long	Order no.
25 mm / 0.001 mm	**FWA025TR**
50 mm / 0.01 mm	**FWA050TR**
75 mm / 0.01 mm	**FWA075TR**
100 mm / 0.01 mm	**FWA100TR**

included with delivery
2 tensioning clamps Z3-31 including 4 cap screws M 4 x 10,
1 probe tip with hard-metal ball

02/2026 • We reserve the right to make technical changes.