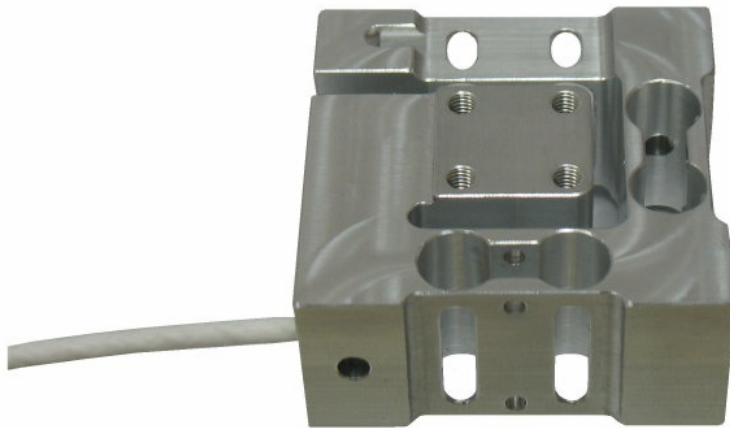


3-Axis Force Sensor K3D40

Variant: $\pm 2\text{N}$, $\pm 10\text{N}$, $\pm 20\text{N}$, $\pm 50\text{N}$



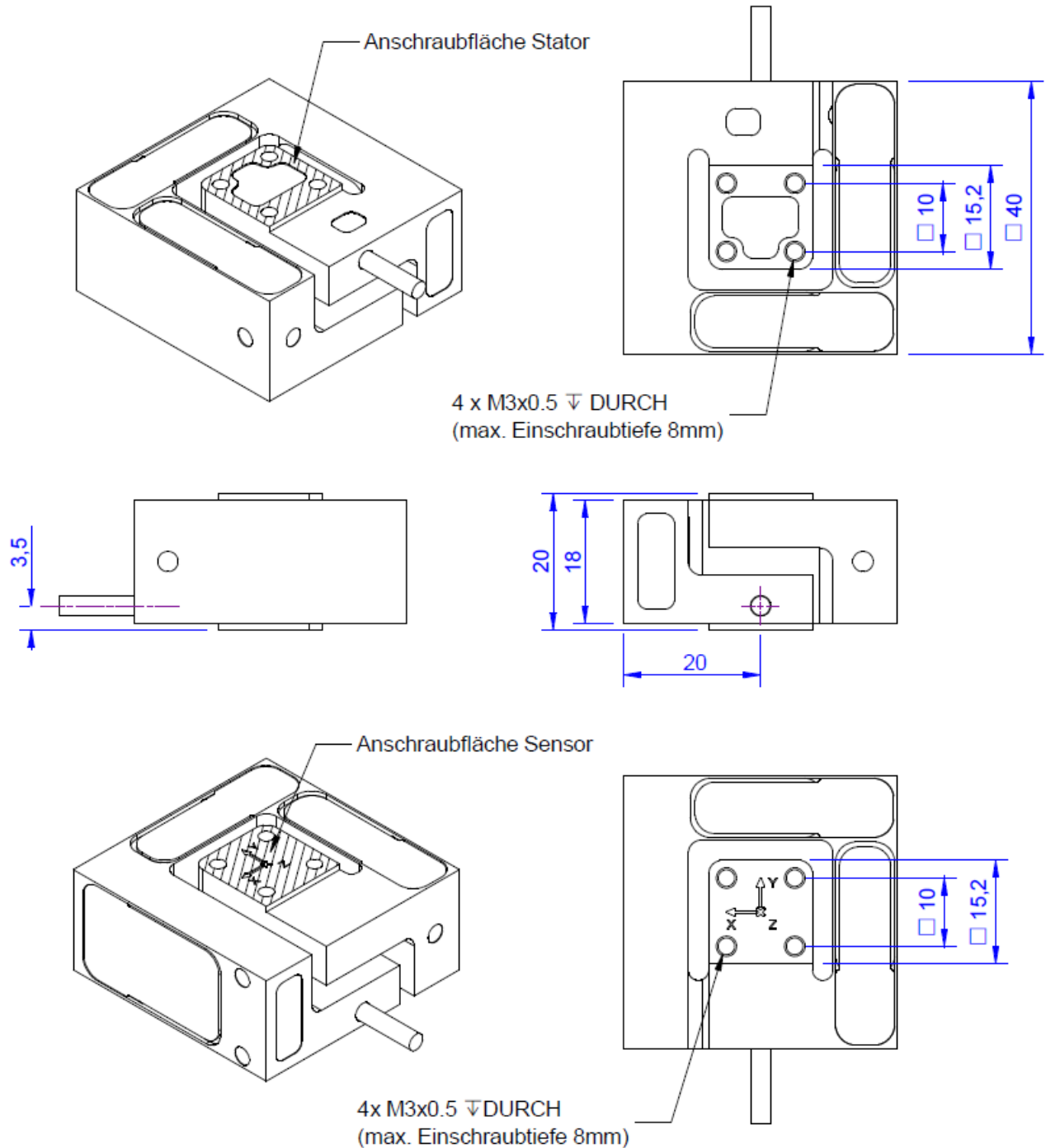
Description

The 3-axis sensor K3D40 is suitable for measuring force on three mutually perpendicular axes.

It is available for $\pm 2\text{ N}$ or $\pm 10\text{ N}$ in all three axes, and can optionally be manufactured for other measurement ranges.

This model stands out for its particularly compact size with a footprint of only 40 mm x 40 mm and a low overall height of only 20 mm.

Dimensions





Technical Data

Kraftsensoren

Type	3-axis force sensor
Force introduction	Inner thread
Dimension 1	M3x0,5
Sensor Fastening	Inner thread
Dimension 2	M3x0,5
Operating force	200 %FS
Rated displacement	0.1 mm
Material	Aluminium alloy
Height	20 mm
Length or Diameter	40 mm

Elektrische Daten

Zero signal	0.1 mV/V
Rated range of excitation voltage f	2.5 ... 5 V
Operating range of excitation voltage f	1 ... 10 V
Insulation resistance	5x10 ⁹ Ohm

Precision

Accuracy class	0,5%
Relative linearity error	0.2 %FS
Relative zero signal hysteresis	0.1 %FS
Temperature effect on zero signal	0.05 %FS/K
Temperature effect on characteristic value	0.05 %RD/K
Relative creep	0.05 %FS

Connection Data

Connection type	12 conductor open
Name of the connection	STC-32T-12
Cable length	3 m

Temperature

Rated temperature range f	-20 ... 60 °C
Operating temperature range f	-20 ... 70 °C
Storage temperature range f	-20 ... 70 °C



Exzentrizität und Übersprechen

Influence of eccentric load to FS	0.5	%FS/100mm
Crosstalk from x to y at rated load	0.5	%FS
Crosstalk from y to x at rated load	0.5	%FS
Crosstalk from z to x/y at rated load	1	%FS

¹⁾ The exact nominal sensitivity is indicated in the test report.



Pin Configuration

Channel	Symbol	Description	Wire colour	PIN
1	+Us	positive bridge supply	brown	
	-Us	negative bridge supply	white	
	+Ud	positive bridge output	green	
	-Ud	negative bridge output	yellow	
2	+Us	positive bridge supply	pink	
	-Us	negative bridge supply	grey	
	+Ud	positive bridge output	blue	
	-Ud	negative bridge output	red	
3	+Us	positive bridge supply	purple	
	-Us	negative bridge supply	black	
	+Ud	positive bridge output	orange	
	-Ud	negative bridge output	transparent	

accessories

Description Description



Calibration
Certificate
kn/20/5/K3D

Factory calibration certificate for force to 20 kN in accordance with DIN EN ISO / IEC 17025 for test materials monitoring according to DIN ISO 9001: 2008 with 5 load levels and 3 series of measurements.



GSV-1A4
SubD37/2



GSV-4USB
SubD37

4-channel strain measurement amplifier with USB port with configurable input for strain gauges, temperature sensors, active sensors, displacement sensors and other sensors. Sensor connection via 1 piece Sub D37 connector
