

3-Axis Force Sensor K3D400 500kN

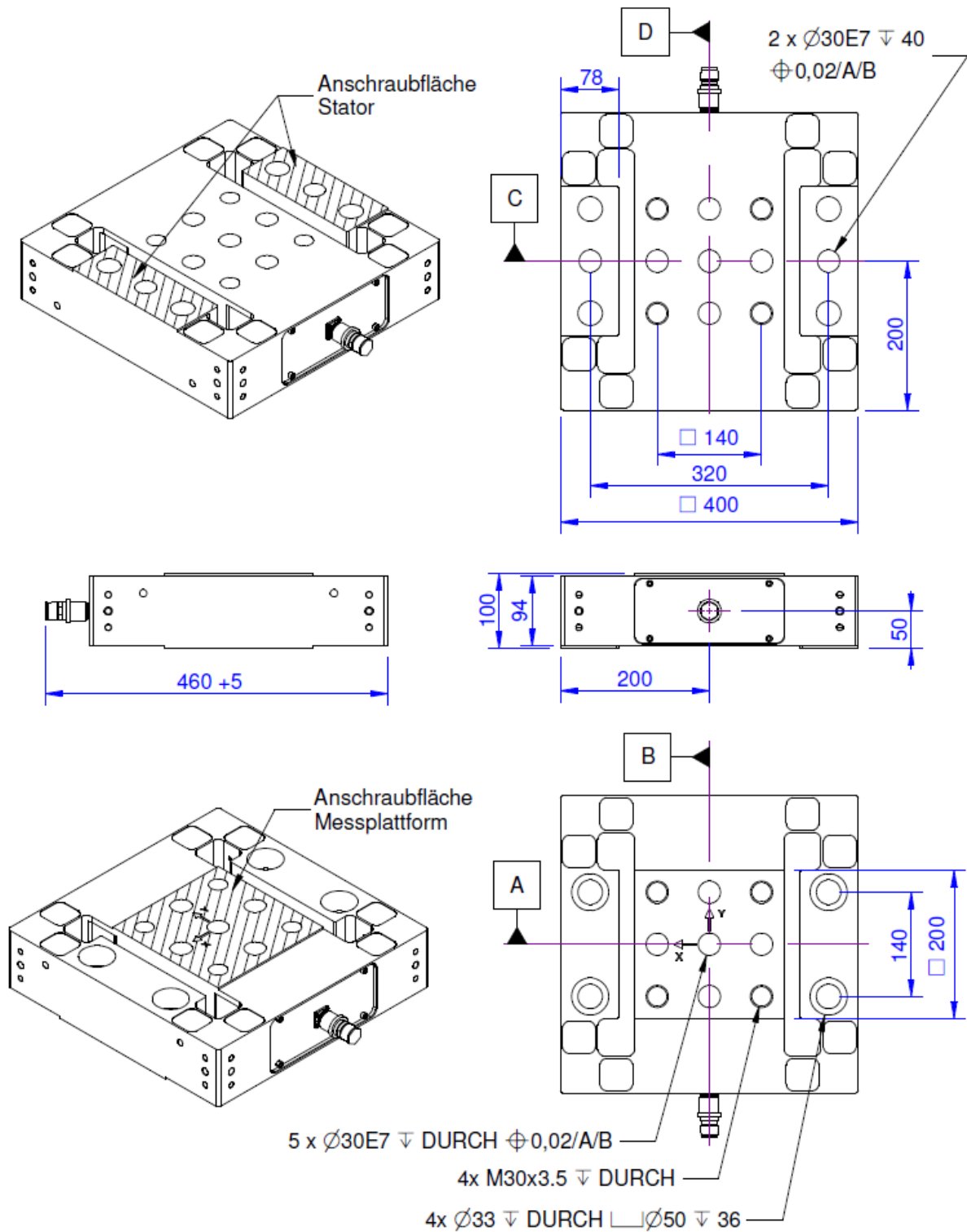
Variant: $\pm 500\text{kN}$



Description

The 3-axis sensor K3D400 is suitable for measuring force in three perpendicular axes. Force is applied onto the 200mm x 200mm platform. A test-specimen can be installed on this surface with four M30 screws. The bottom of the sensor is fixed to the bottom with four M30 screws. The screw-mounting surfaces must end flush with the sensor.

Dimensions





Technical Data

Kraftsensoren

Type	3-axis force sensor
Rated force Fx	500 kN
Rated force Fy	500 kN
Rated force Fz	500 kN
Force introduction	Inner thread
Dimension 1	4xM30x3,5
Sensor Fastening	Through bore
Dimension 2	4xØ33
Operating force	150 %FS
Material	Tool steel
Surface	electrogalvanized
Height	100 mm
Length or Diameter	400 mm

Elektrische Daten

Zero signal	0.05 mV/V
Rated range of excitation voltage f	2.5 ... 5 V
Operating range of excitation voltage f	1 ... 10 V
Input resistance x-axis	350 Ohm
Output resistance x-axis	350 Ohm
Input resistance y-axis	350 Ohm
Output resistance y-axis	350 Ohm
Input resistance z-axis	350 Ohm
Output resistance z-axis	350 Ohm
Insulation resistance	5x10 ⁹ Ohm
Tolerance input resistance	5 Ohm
Tolerance output resistance	5 Ohm

Precision

Accuracy class	1%
Relative linearity error	0.2 %FS
Relative zero signal hysteresis	0.02 %FS
Temperature effect on zero signal	0.02 %FS/K
Temperature effect on characteristic value	0.02 %RD/K



Relative creep 0.1 %FS

Connection Data

Connection type	12 conductor open
Name of the connection	Unitronic FD CP (TP) Plus 6 x 2 x 0,14
Cable length	5 m

Temperature

Rated temperature range f	-10 ... 70 °C
Operating temperature range f	-10 ... 85 °C
Storage temperature range f	-10 ... 85 °C

Exzentrizität und Übersprechen

Influence of eccentric load to FS	1 %FS/100mm
Crosstalk from x to y at rated load	1 %FS
Crosstalk from y to x at rated load	1 %FS
Crosstalk from z to x/y at rated load	1 %FS
Crosstalk from x/y to z at rated load	5

Abbreviation : RD: „Reading“; FS: „Full Scale“;




1. The exact nominal sensitivity is indicated in the test report;
tightening torque: 1500Nm



Pin Configuration

Channel	Symbol	Description	Wire colour	PIN
X-Axis	+Us	sensor supply	brown	2
	-Us	sensor supply	white	1
	+Ud	bridge output	green	3
	-Ud	bridge output	yellow	4
Y-Axis	+Us	sensor supply	pink	6
	-Us	sensor supply	grey	5
	+Ud	bridge output	blue	7
	-Ud	bridge output	red	8
Z-Axis	+Us	sensor supply	purple	10
	-Us	sensor supply	black	9
	+Ud	bridge output	grey / pink	11
	-Ud	bridge output	red / blue	12

accessories

	Description	Description
	Calibration Certificate	Factory calibration certificate for force from 201 kN to 1000 MN in accordance with DIN EN ISO / IEC 17025 for test materials monitoring according to DIN ISO 9001: 2008 with 5 load kn/1000/5/K3D 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