

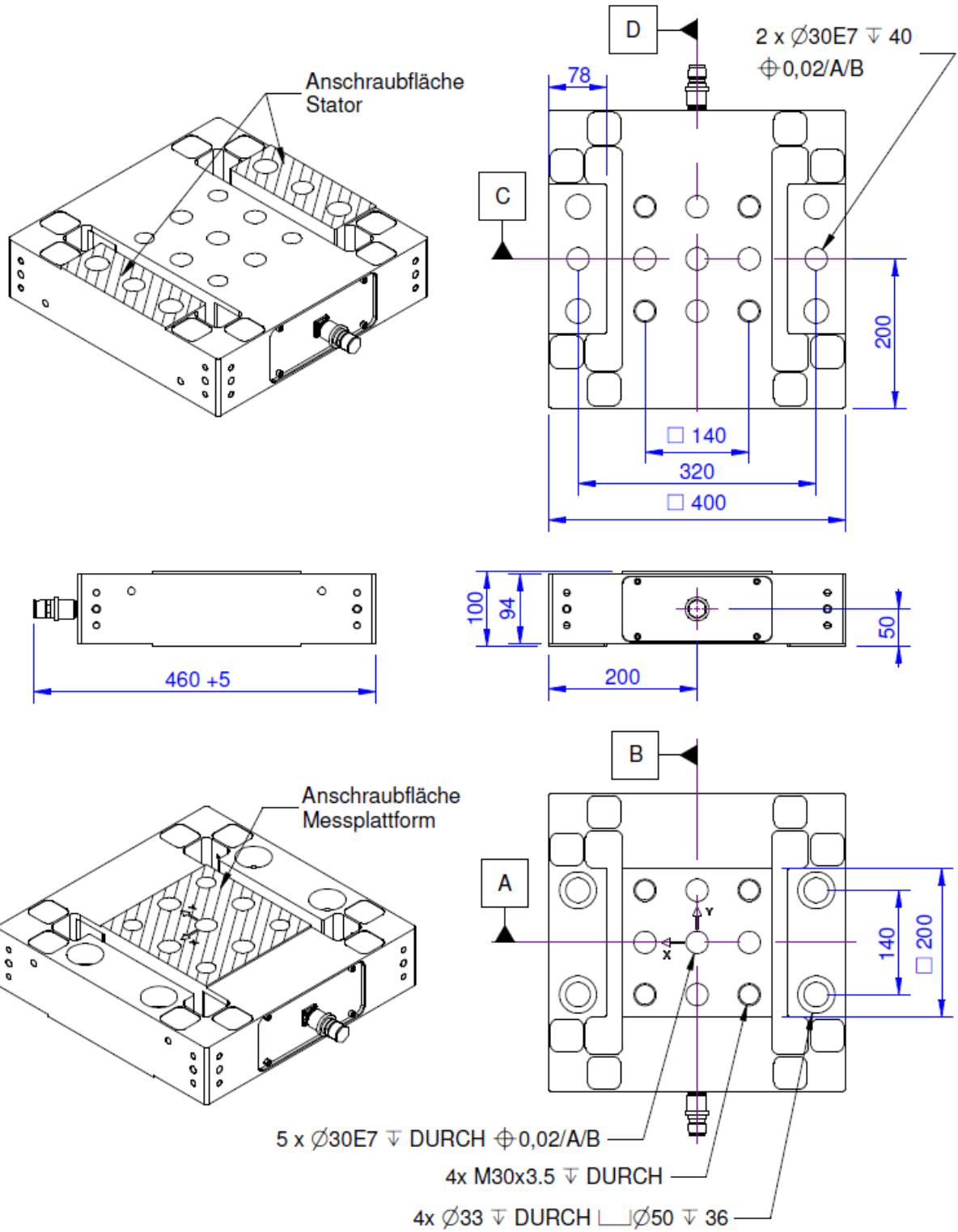
## K3D400 500kN ±500kN



### 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

### Force sensor

Type	3-axis force sensor
Force direction	Tension / Compression
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
Rated displacement	0.3 mm
Material	Tool steel
Surface	electrogalvanized
Natural frequency	10 kHz
Height	100 mm
Length or Diameter	400 mm
Torque limit	15 kNm
Bending moment limit	15 kNm

### Electrical Data

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 <sup>9</sup> 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 Unitronic FD CP (TP) Plus 6 x 2 x
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Name of the connection	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
Environmental protection	IP67

### Eccentricity and Crosstalk

Influence of eccentric load to FS	1 %FS / 500Nm
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	2

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

1. The exact sensitivity is indicated in the test report;





## 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

*Pressure load: positive output signal.*

*Shield- transparent.*

## accessories

Description	Description
	Calibration Certificate kn/1000/5/K3D 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 levels and 3 series of measurements.
	K3D-Transportation-Box High-quality transport box for the 3-axis force sensor K3D400;
	GSV-1A4 SubD37/2 4-channel strain gauge measuring amplifier for sensors with strain gauges. Adaptation of the sensor via <u>Sub-D-37 connector</u> . Output $\pm 10V$ and 4 ... 20mA via 15-pin SUB-D (female); Input sensitivity 2mV/V;
	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