

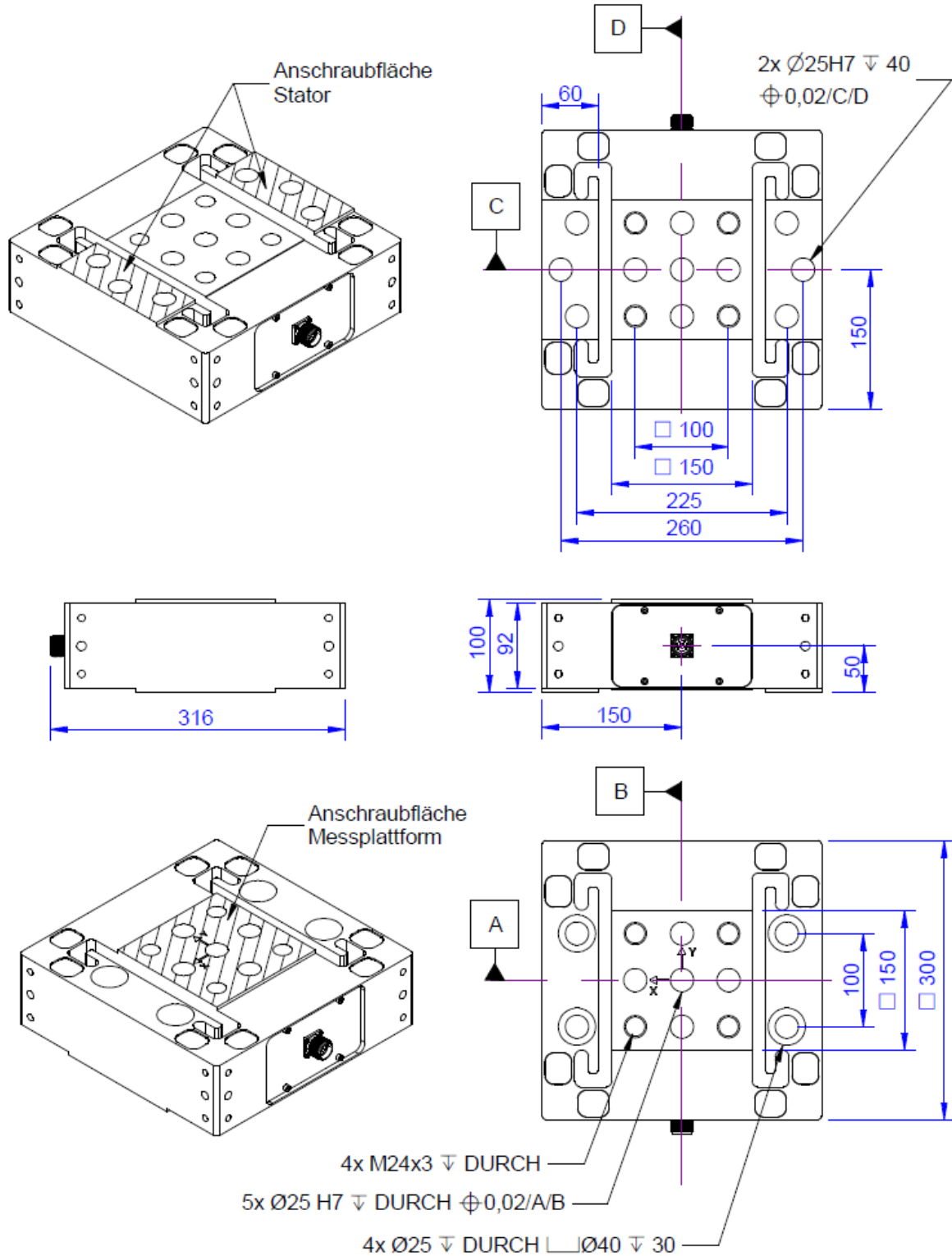
## K3D300 $\pm 50\text{kN}$ , $\pm 100\text{kN}$ , $\pm 200\text{kN}$



### Description

The 3-axis sensor K3D300 is suitable for measuring force in three mutually perpendicular axes. Force is applied from the 150 mm x 150 mm recess. A component can be installed on this surface with four M24 screws. The bottom of the sensor is fixed to the bottom with four M24 screws. The screw-mounting surfaces must end flush with the sensor.

## Dimensions





## Technical Data

### Kraftsensoren

Type	3-axis force sensor
Force direction	Tension / Compression
Force introduction	Inner thread
Dimension 1	4xM24x3
Sensor Fastening	Through bore
Dimension 2	4xØ25
Operating force	150 %FS
Rated displacement	0.2 mm
Material	Tool steel
Surface	electrogalvanized
Height	100 mm
Length or Diameter	300 mm
Torque limit	4 kNm
Bending moment limit	4 kNm

### 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
Input resistance x-axis	700 Ohm
Output resistance x-axis	700 Ohm
Input resistance y-axis	700 Ohm
Output resistance y-axis	700 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
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
Environmental protection	IP67

### Exzentrizität und Übersprechen

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 nominal 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

## accessories

	Description	Description
	Calibration Certificate kn/200/5/K3D	Factory calibration certificate for force from 21 kN to 200 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.
	K3D-Transportation-Box	High-quality transport box for the force sensor K3D300;
	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