

3-Axis Force Sensor K3D300

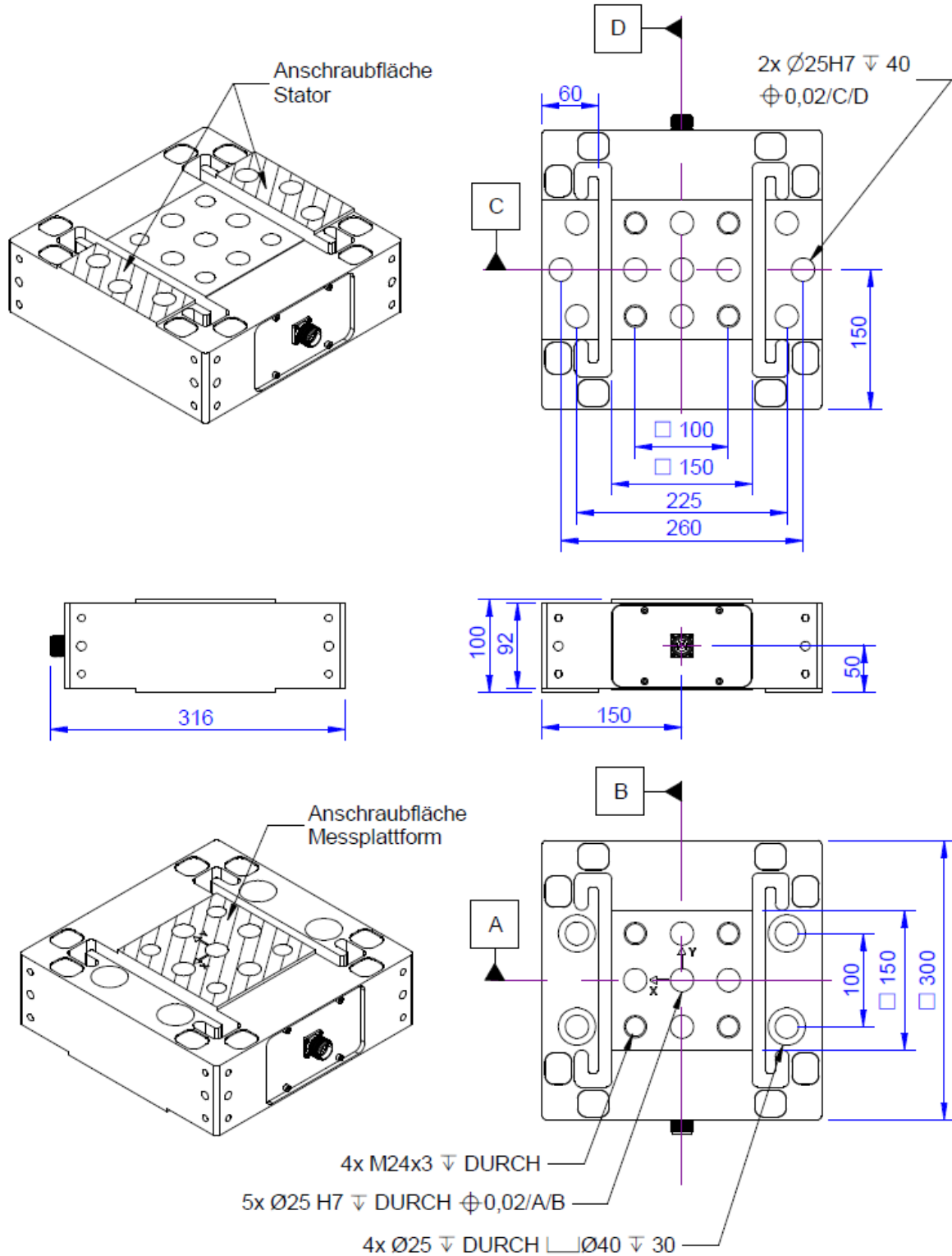
Variant: $\pm 50\text{kN}$, $\pm 100\text{kN}$, $\pm 200\text{kN}$



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 introduction	Inner thread
Dimension 1	4xM24x3
Sensor Fastening	Through bore
Dimension 2	4xØ25
Operating force	150 %FS
Material	Tool steel
Surface	electrogalvanized
Height	100 mm
Length or Diameter	300 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
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 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	10

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.



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
