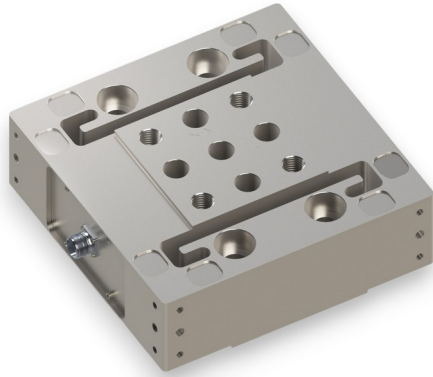


3-Axis Force Sensor K3D300 50kN

Item number: 4971



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.

Technical Data

Basic Data		Unit
Type	3-axis force sensor	
Force direction	Tension/Compression	
Rated force Fx	50	kN
Rated force Fy	50	kN
Rated force Fz	50	kN
Force introduction	Internal thread	
Dimension 1	4xM24x3	
Sensor Fastening	Through-hole	
Dimension 2	4xØ25	
Operating force	150	%FS
Rated displacement	0.2	mm
Material	tool steel	
Surface	Galvanisch verzinkt	
Natural frequency fx	5	kHz
Dimensions	300 x 300 x 100	
Height	100	mm
Length or Diameter	300	mm
Torque limit	4	kNm
Bending moment limit	4	kNm
Variants	50kN... 200kN	

Electrical Data		Unit
Zero signal	0.1	mV/V
Rated range of excitation voltage from	2.5	V
Rated range of excitation voltage to	5	V
Operating range of excitation voltage from	1	V
Operating range of excitation voltage to	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	5	GOhm
Tolerance input resistance	5	Ohm
Tolerance output resistance	5	Ohm

Eccentricity and Crosstalk		Unit
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	%FS

Accuracy Data		Unit
Accuracy class	0,5	
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

Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	70	°C
Operating temperature range from	-10	°C
Operating temperature range to	85	°C
Storage temperature range from	-10	°C
Storage temperature range to	85	°C
Environmental protection	IP67	

Abbreviation : RD: „Reading“; FS: „Full Scale“The exact nominal sensitivity is indicated in the test report

Pin Assignment

Channel	Symbol	Description	Wire color	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.