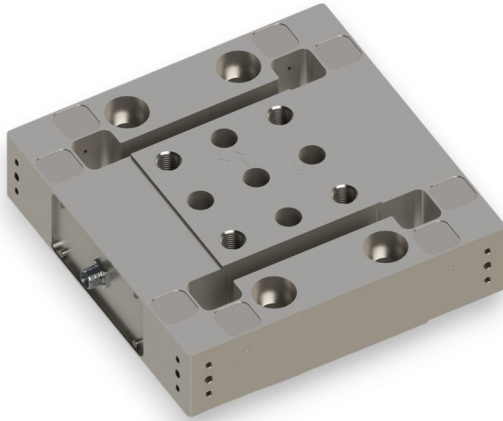


3-Axis Force Sensor K3D400 500kN

Item number: 5532



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.

Technical Data

Basic Data		Unit
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	Internal thread	
Dimension 1	4xM30x3,5	
Sensor Fastening	Through-hole	
Dimension 2	4xØ33	
Operating force	150	%FS
Rated displacement	0.3	mm
Material	tool steel	
Surface	Galvanisch verzinkt	
Natural frequency fx	10	kHz
Dimensions	400 x 400 x 100	mm
Height	100	mm
Length or Diameter	400	mm
Torque limit	15	kNm
Bending moment limit	15	kNm

Electrical Data		Unit
Zero signal	0.05	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	740	Ohm
Output resistance x-axis	700	Ohm
Input resistance y-axis	740	Ohm
Output resistance y-axis	700	Ohm
Input resistance z-axis	740	Ohm
Output resistance z-axis	700	Ohm
Insulation resistance	5×10^9	Ohm
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 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.