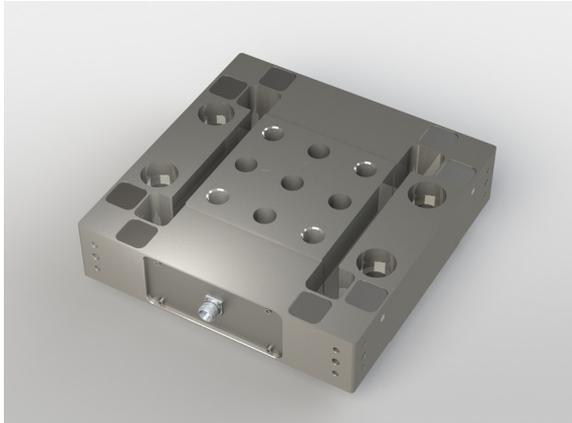


3-Axis Force Sensor K3D400 500kN

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 | Durchgangsbohrung | |
| Dimension 2 | 4xØ33 | |
| Operating force | 150 | %FS |
| Rated displacement | 0.3 | mm |
| Material | tool steel | |
| Surface | Galvanisch verzinkt | |
| Natural frequency | 10 | kHz |
| Dimensions | 400 x 400 x 100 | |
| 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 |
| ausgangswiderstandXAchse | 700 | Ohm |
| Input resistance y-axis | 740 | Ohm |
| ausgangswiderstandYAchse | 700 | Ohm |
| Input resistance z-axis | 740 | Ohm |
| ausgangswiderstandZAchse | 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.