Centered Force Sensor KZ-011-0400-50N-E1-K0-G0



Force range: 50 N - Application of force: Rivet on top side - Contacting: Tinned solder pads only - Housing: None

With this compact force sensor, the force is applied to a round-head rivet in the center. The sensor can be mounted very easily in a blind hole with a diameter of 12 mm (0.472 in) and a clearance. Flexible contacting and housing options make this sensor suitable for a wide variety of applications.

Product Name: KZ-011-0400-50N-E1-K0-G0
Force range: 50 N
Application of force: Rivet on top side
Electrical contacting: Tinned solder pads only
Housing: None
Allowable overload: 75 N
Sensitivity: 61 µV/V/N
Supply voltage: 0...15 V DC
Supply current: 1.5 .... 2.5 mA at 10 V supply voltage
Output signal span: 0 .... 3.0 mV/V
Bridge resistance: 4.0 .... 6.0 kΩ
Zero offset: -0.1 .... 0.1 mV/V
Zero repeatability: ±0.02 %FS
Sensitivity tolerance: ±10 %
Sensitivity repeatability: ±0.3 %
Linearity error: ±0.2 %FS
Thermal shift for zero: ±0.02 %FS/°C
Thermal shift for sensitivity: 0.02 .... 0.03 %/°C
Substrate material: Stainless Steel 1.4542 / X5CrNiCuNb16-4 /17-4 PH®
Modulus of elasticity: $197 \cdot 10^3$ MPa ($28.5 \cdot 10^{-6}$ ksi)
Substrate thickness: 0.8 mm
Dimensions (LxWxH): 10.5 x 9.0 x 1.2 mm
Operating temperature range: -20 .... 125 °C
Ambient humidity: 0 .... 95 %RH non-condensing
Ingress protection: IP44
Packaging: Plastic bag and label with individual calibration data
Product code: 155898

Product details

Centered Force Sensors Nesthorn KZ-011-400

The centered force sensor Nesthorn KZ-011-0400 can be inserted into a blind hole with a diameter of 12 mm. The force application point is right in the middle. Due to the many available force ranges between 18 and 300 N, the possibility of applying force on both sides and the three contact variants, the sensor is suitable for a wide range of applications. It can be used, for example, in medical devices, measuring and testing

devices or industrial plants. Versions with a laser-welded metal housing are also available for particularly easy installation and mechanical protection.

> View data sheet Nesthorn KZ-011-0400

> Download brochure

Outstanding sensor properties thanks to thin-film technology

Senstech force sensors are manufactured using thin-film technology. This makes them particularly reliable and long-term stable because the measuring element is applied directly to the metal using sputtering technology. Unlike bonded strain gauges, there are no adhesives and no creeping layers which reflects in the typical technical properties:

- Best long-term stability with drift < 0.03%/year
- High temperature stability even without temperature compensation (typically < 0.01%/°C)
- Very good linearity with correctly designed measuring bodies
- Excellent miniaturization possibilities
- Simple signal processing

Senstech is a pioneer in thin-film based sensor technology. The broad knowledge and experience flows into all of their products.

The perfect fit for your application

Thanks to Senstech's flexible manufacturing processes, it quickly pays off to adapt a sensor to your individual requirements. All essential parameters can be customized:

- Geometry and material of the sensor
- Layout of the thin film elements
- Mechanical and electrical interfaces
- Signal processing

The first prototypes can usually be delivered within a few weeks. Didn't find the right sensor in the webshop? Contact Senstech for an individual offer

Contact your specialist for force sensors (senstech.ch)

The online shop

Quantity (pieces)	Price (per piece)
1-9	CHF 80.00
10-19	CHF 60.00
20-50	CHF 45.00

Stock: **20**