

Force sensor elements in thin film technology – for welding in

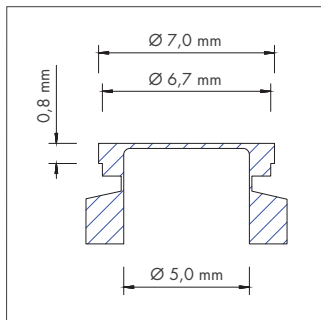
Series SGI

Features

- For dynamic and static measurements
- Thin film strain gauge direct sputtered on stainless steel
- Basic sensing element to be welded into a strain beam
- High precision and low TC due to a Wheatstone bridge
- Small sensitivity on environmental influences
- RoHS – compliant

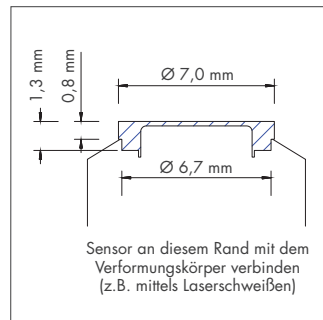
Standard Design

Typical Dimensions



Under regular conditions, the sensor is shipped with the handling edge which is removed by the client.

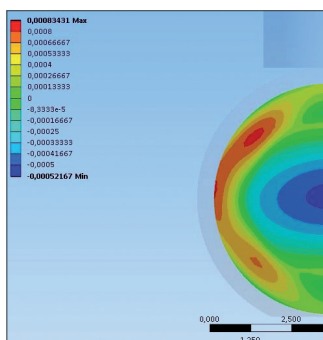
Sensor ready for welding

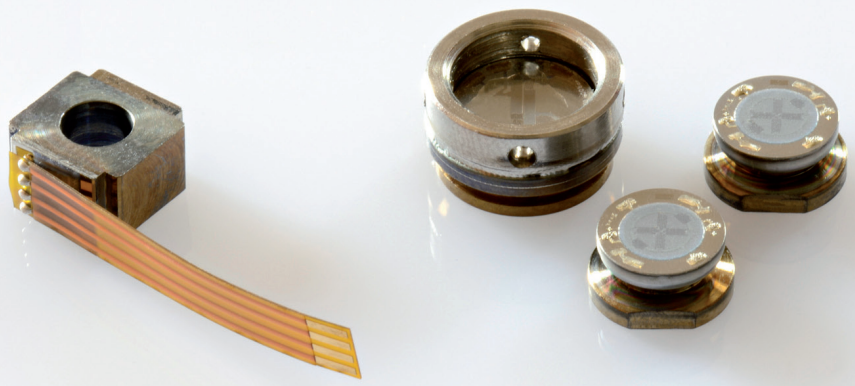


Welding area
(e.g.: Laser welding)

Sensor an diesem Rand mit dem Verformungskörper verbinden (z.B. mittels Laserschweißen)

FEM Simulation





Technical Data

Feature	Unit	Value
Material	-	Stainless steel
Diameter (outer)	mm	7
Type of sensor	-	Full-bridge
Nominal span @ 0,1% stretching ¹⁾	mV/V	1.8
Range of span	mV/V	1.3 ... 2.1
TC span ²⁾	% FS/K	0.01 ... 0.03
Zero signal	mV/V	< ± 0.2
TC zero ²⁾	% FS/K	< ± 0.035
Bridge resistance	kΩ	4 ... 7
TC of bridge resistance	ppm/K	< ± 25
Isolating resistance (@ 100 VDC)	Ω	> 10 ⁹
Isolating voltage	VAC	125/500
Long term stability (zero signal): 72 h/125 °C 1,000 h/125 °C 100 h/85 °C, 85 % r.H., 5 VDC	% FS	< ± 0.15 < ± 0.3 < ± 0.6
Operating temperature range	°C	-40 ... +125
Max. supply voltage	VDC	10

The specified data only apply to the sensor element, i.e. without strain beam.

1) The nominal span applies to a deformation of the sensor element of ± 0,1%.

2) Temperature according to the TC of Young's modules matching between sensor element and strain beam.

Ordering Information

- Dimensions
- Bridge resistance
- TC compensation of span (Yes/No)
- TC compensation of zero signal (Yes/No)
- Temperature sensor (Yes/No)
- Special requirements
- Quantity
- Delivery form

Sales and Development

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