



### Main features

- Measure strain in any direction in seconds
- Smallest press-on sensor with magnet mounting
- Direct surface strain reading like bonded strain gages, high linearity on tension and compression
- Quick and easy mounting on magnetic structures
- Calibrated sensor ( $K=2.00$ ) for dynamic applications
- Ideal for checking FEM calculations and for stress analysis on flat steel structures
- Without amplifier (passiv)
- External amplifier recommended (e.g. MBA100; VDA, Monitor DU-1D)

The magnet-press-on strain gage QE1010 measures the surface-strain directly at the mounting location, similar to bonded strain gages.

The QE1010 is mounted in seconds and presses strain gages under the stainless protective foil that strongly onto the surface to be measured that friction replaces the bonding normally used to fix strain gages. The mounting is very fast, and the strain gage is protected.

The sensor can not be overloaded. Press-on strain sensors measures surface-strains directly at the mounting location.

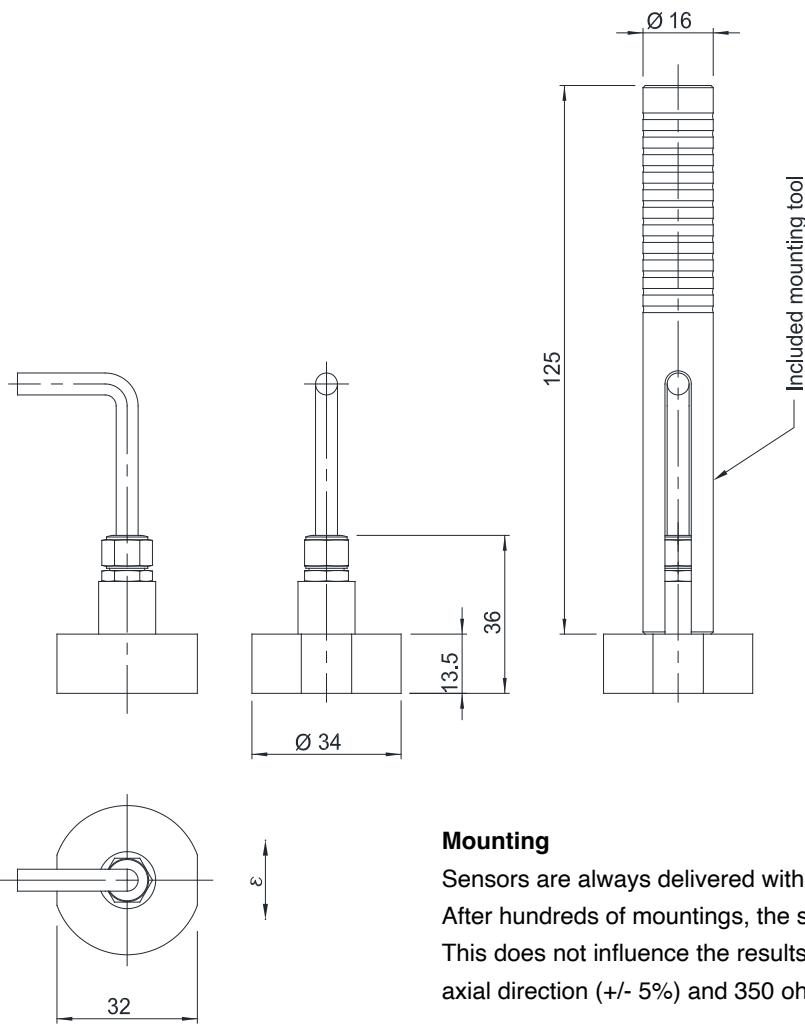
They need a cyclical reset (for cycles >5min.). Our amplifiers can handle the occurring large offset range.

The included mounting tool allows easy mounting and dismounting.

### TECHNICAL DATA

Strain gauge type	Foil (GF = 2.0)
Bridge resistance	350 $\Omega$
Measuring range	$\pm 300 \dots \pm 500 \mu\epsilon$ (depending on surface)
Sensitivity tolerance	$\pm 0.2\%$
Transverse sensitivity	$0.9 \pm 0.2\%$
Accuracy	$< \pm 0.5\%$ FS
Linearity	$< \pm 0.5\%$ FS
Hysteresis	$< \pm 0.2\%$ FS
Repeatability	$< 0.2\%$ FS
Nominal input resistance	350 $\Omega$
Supply voltage	5 VDC (max 8 VDC)
Supply current	$< 15\text{mA}$
Operating temperature range	0...50°C
Storage temperature range	0...70°C
Overload capability	indefinite (offset occurs)
Protection class	IP54
Case material	Steel
Weigh, including cable	200 g

## MECHANICAL DIMENSIONS



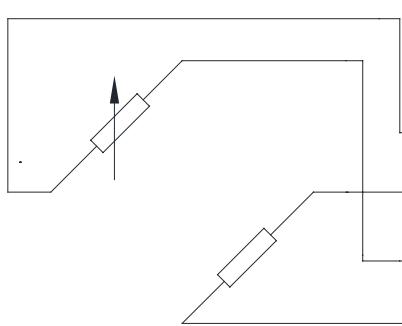
### Mounting

Sensors are always delivered with mounting tool.

After hundreds of mountings, the stainless steel foil can be ruptured.

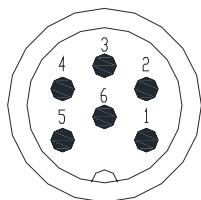
This does not influence the results as large as the strain gage is aligned in axial direction (+/- 5%) and 350 ohm can be measured at the connector.

## ELECTRICAL CONNECTIONS



OPTION C  
(CONNECTOR  
OUTPUT)

Strain gauge 1	1
Resistor	4
Strain gauge 1	2
Resistor	5



1 x /4 bridge = active

1 x  $R_c = 350 \Omega$  resistor

Supplementar resistor inside the connector

## ORDER CODE

The magnet strain gage

**QE1010 -** 

Cable length	
0,5 m	<b>005</b>
3 m (standard)	<b>030</b>
5 m	<b>050</b>
10 m	<b>100</b>
Define your own length	<b>XXX</b>

Example: **QE1010 - 030**

The magnet strain gage QE-1010, 3 m cable lenght, with cable and connector (Sensors are always delivered with mounting tool).

**GEFRAN spa** reserves the right to make any kind of design or functional modification at any moment without prior notice.

# **GEFRAN**

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