



**Main features:**

- *Wireless system for strain measurements with Bluetooth 5.0*
- *Press-on strain gauge technology (quick and non-destructive mounting)*
- *Easy mounting via magnetic holding on flat and round surfaces (diameter  $\geq 45\text{mm}$ )*
- *Visualization of the measurements via the "Sensormate App" (available for Windows, Android and iOS)*
- *High performance amplifier integrated in each sensor with high resolution and fast sampling rate*
- *Integrated LiPo battery with long operating time ( $> 12\text{h}$ )*
- *Integrated accelerometer for mounting guidance*

The magnetically mounted wireless strain sensor QE2008-W measures the strain directly at the location where is mounted, providing a measurement that has the same quality and performances as with bonded strain gauges. The Sensormate press-on technology implements a strain gauge positioned under a stainless protective film. When the sensor is mounted on a metallic object, the magnets hold so strictly that frictional contact occurs and allows a reliable measurement.

The mounting of the sensor is quick, simple and non-destructive, allowing for an easy setup and increasing the daily productivity.

The integrated electronics contains a state-of-the-art processing component, which allows hi-end measurements and wireless communication via the Bluetooth 5.0 protocol. The adopted components allows for a low-energy operation, extending the battery life to several working hours.

An on-board accelerometer allows the user to check the correct mounting of the sensor and assure an accurate measurement result. The internal RAM memory helps when a fast measurement is needed, allowing to store high resolution data.

**Typical Applications:**

- *Injection-moulding machines*
  - *Tie Bar parallelism check*
  - *Bending analysis*
  - *Cavity pressure profile inspection*
  - *Tie bar cracks detection*
- *Die casting machines*
- *Presses*
- *Structural monitoring*
- *Indirect load and force measurement*

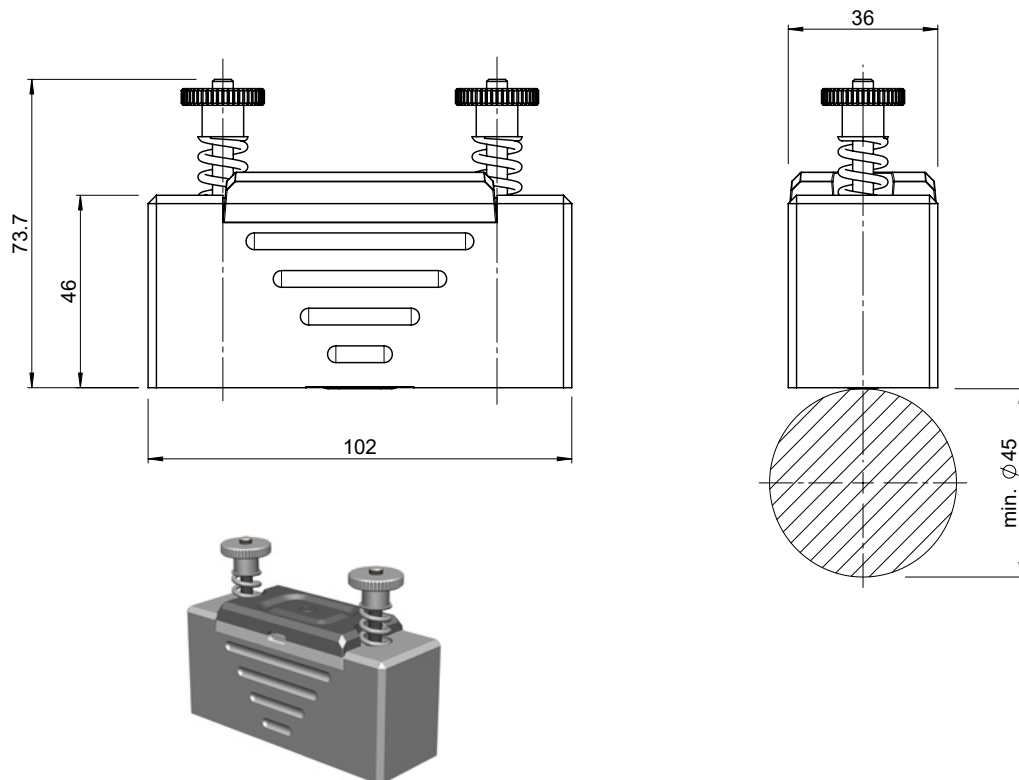
*Please check the user manual for the typical applications and mounting instructions. ([www.gefran.com](http://www.gefran.com)) (instead of hyperlink)*

## TECHNICAL DATA SENSOR

Measuring range	$\pm 800\mu\epsilon$
Output signal for radio transmission	Bluetooth 5.0
Signal range	Bluetooth specification: >100m
Resolution	$0.1\mu\epsilon$
Accuracy	$< \pm 0.5\%$ FS
Linearity	$< \pm 0.5\%$ FS
Repeatability	$< 0.2\%$ FS
On board power supply	Integrated LiPo battery 3.7V 330mAh.
Charging specification	5V, 175mA
Temperature at charging	0...45 °C
Operation temperature	-20 ...65 °C
Storage temperature	-20...45 °C ( 0 ... 30 °C recommended in case of storage for more than 3months)
Overload capability	unlimited
Type of protection	IP40
Material: Housing	Aluminium
Material: Cover	Plastic
Weight	460g

## DIMENSIONS SENSOR

QE2008-W



Dimensions in mm

## TECHNICAL DATA WIRELESS PROTOCOL

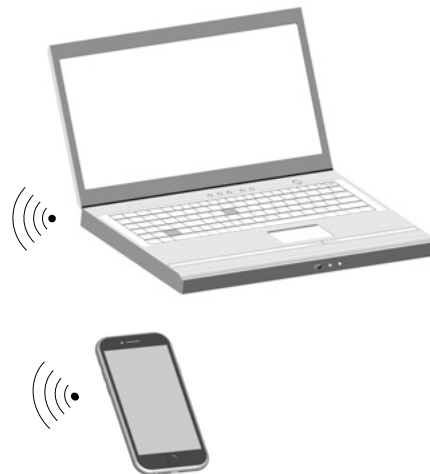
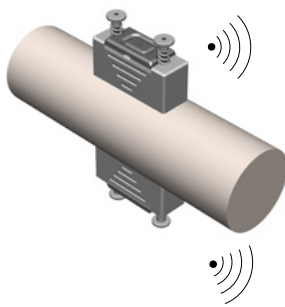
Frequency	2.4000-2.4835 GHz (ISM-Band)
Protocol transceiver to end device	Bluetooth 5 (low energy)
End device compatibility	Sensormate App: <ul style="list-style-type: none"><li>– Windows 10 or newer</li><li>– Android 6.0 or newer</li><li>– IOS 8.0 or newer</li></ul>
TX-power	8dBm
Range	Bluetooth 5, theoretical up to 300m (Typ. 30 m) "

## SYSTEM CONTENT

### QE2008-W-SET

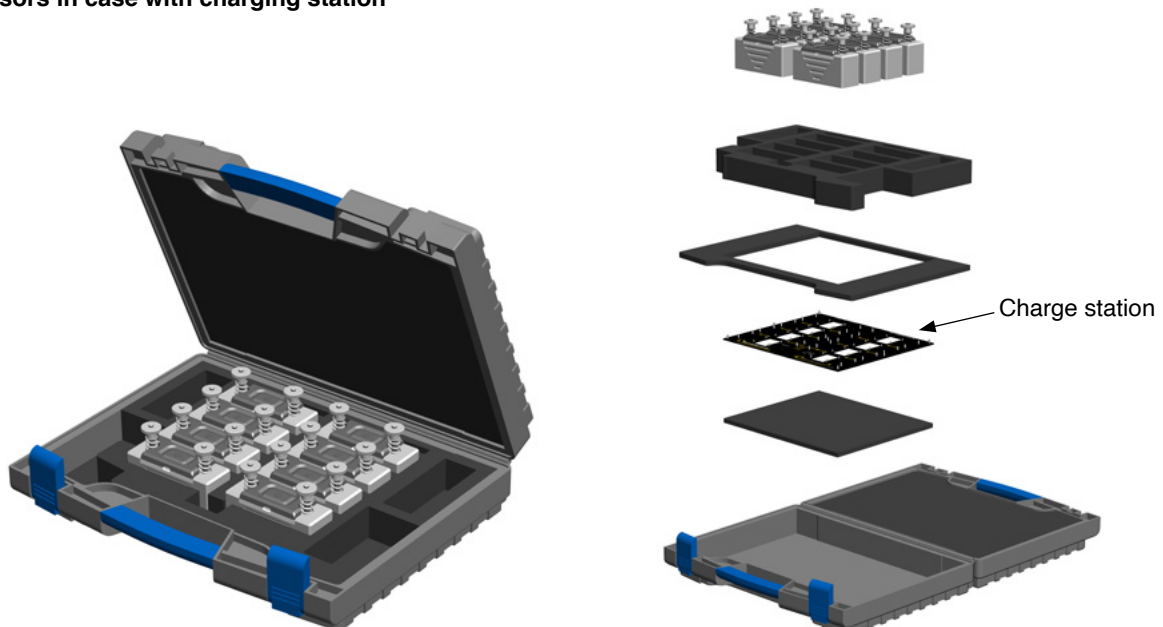
#### Content

- Magnetically mounted wireless sensors QE2008-W
- Charging station, USB-C cable (1 m) and USB wall adapter
- Carrying case with inserts, manual



External dimensions of carrying case	340 x 280 x 130 mm
Weight approx.	ca. 5.3 kg (8 sensor system)

### Sensors in case with charging station



## ORDER CODE

Magnet mount strain sensor  
complete system

**QE2008**






Connection	
Wireless	<b>W</b>

Number of sensors	
2 pieces	<b>02</b>
8 pieces	<b>08</b>
9 pieces	<b>09</b>
10 pieces	<b>10</b>

Example: QE2008-W-08-000

Magnet-mount strain sensor QE2008, wireless, number of sensors = 8 pieces

## ADDITIONAL ACCESSORIES

Description	Order code	Code
Magnet-mount strain sensor	QE2008-W	F089015
USB-C power supply kit		F092416

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



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