

# HIGH TEMPERATURE ENCAPSULATED STRAIN GAUGES

## HT encapsulated strain gauges

### Technical:

- No soldering
- Easy application
- Thin flexible ,clear coating.
- Environmental protection to IP 65
- Gauge resistances 120, 350 & 1000Ω
- Gauge grid lengths; 0.17mm to 125mm
- High temperature version (up to 350°C)
- Full technical support
- High fatigue life version available.
- Installation training available



A HT encap for concrete applications



High fatigue-life version

**High temperature** encapsulated strain gauges are an easy to install option for field and test applications at elevated temperatures. Allowing strain gauge installation to substrates as hot as 250°C without requiring stress raising spot welds.

**Transparent**, flexible coating prevents any risk of gauge grid contamination still allowing easy installation with original alignment marks.

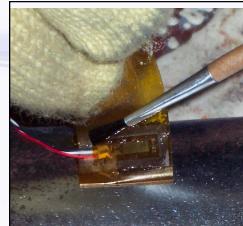
**Pre-wiring** with high temperature soldered or welded lead wires

### PG Option

High Temperature Encapsulated strain gauges are now available with a **PG option**.

A **PG option** HT strain gauge has a thin layer of high temperature strain gauge adhesive applied to the bonding face which is heat treated to  $\beta$  stage. This process makes the installation process quicker and more efficient.

**To Install** a PG option strain gauge, position the gauge, apply clamping pressure, and heat to 175°C for 2 hours.



On-site  
Installation of a  
HT  
Encapsulated  
strain gauge

## TRAINING COURSES .

### TRAINING. Strain gauge installation courses.

Learn surface preparation, alignment & bonding techniques, following the process through to protective coating and final testing.

Modules 1-4— installation of PU encapsulated, weldable and High temperature encapsulated strain gauges.

Modules 5-6 -I installation of standard strain gauges

Module 7- basic soldering and wiring techniques.

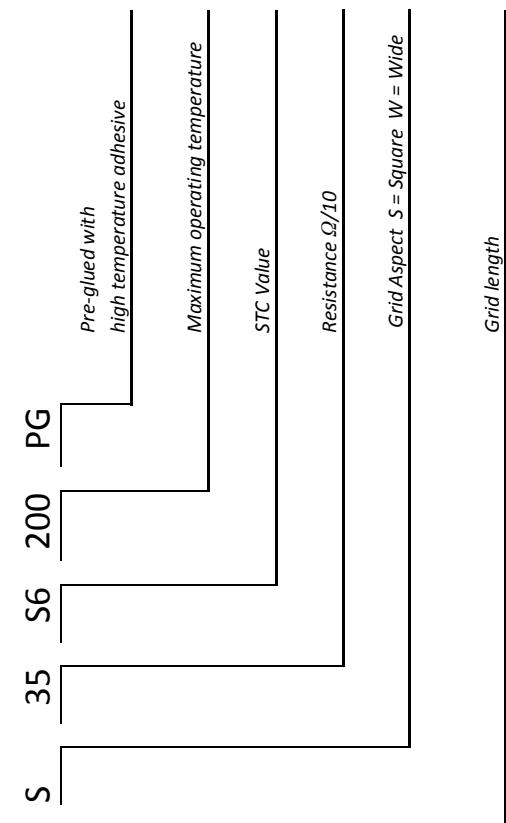
## TAILOR MADE TO SUIT YOUR NEEDS. . . .

As well as our range of HT & PU encapsulated strain gauges, Gauge Factors are able to offer Weldable and Concrete embedment gauges and tailor made full bridge sets.

Cable types and lead lengths to suit your needs.

**For more information on our full range of products & services please contact:**

Email: sales@gaugefactors.com  
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**GAUGE FACTORS LTD**  
Advanced Strain Gauge Systems

Technical Specification:Gauge Factors Ltd	
<b>High temperature encapsulated gauges</b>	
High temperature encapsulation	
Sensing alloy type	
Number of sensing elements	
Grid configuration	
T Transverse pattern	
S Chevron style shear pair or set	
D Torsion Set	
B Bending Set	
P Planar rosette	
X Stacked rosette	
[TC] Tension/compression set	

Gauge Type	A1	A2	Gauge Factors Ltd : High Temp	Temperature Strain Gauges	XP99	XP99	WDDY
Gauge Alloy	Constantan	Karma	Stabiloy	Karma	Karma	Karma	Isoelastic
Carrier Material	Laminated Polyimide	GRPE	High temp Polyimide	Laminated Polyimide	Laminated Polyimide	Laminated Polyimide	GRPE
Encap. Material	High temp polyester	Polyimide	High temp Polyimide glass	Polyimide	High temp polyester	Polyimide	Polyimide
Temp. Range Recommended Maximum	-70°C to 150°C -195°C to 175°C	-260°C to 200°C -260°C to 232°C	-269°C to 200°C -269°C to 275°C	-268°C to 315°C -268°C to 350°C	-75°C to 200°C -75°C to 205°C	-70°C to 150°C -195°C to 175°C	-260°C to 200°C -260°C to 232°C
Strain Limit >3mm	±4%	±4%	±1.5%	±2%	±2%	±2%	±0.5%
Strain Limit <3mm	±2%	±2%	±1%	±1	±1	±1	±0.5%
Fatigue Life							
±1000µε	10 <sup>7</sup>	10 <sup>7</sup>	>10 <sup>7</sup>	>10 <sup>7</sup>	>10 <sup>7</sup>	>10 <sup>7</sup>	>10 <sup>8</sup>
±2000µε	10 <sup>3</sup>	10 <sup>3</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>8</sup>
Frequency Response	100kHz <3mm	100kHz <3mm	100kHz <3mm	100kHz <3mm	100kHz <3mm	100kHz <3mm	100kHz <3mm