Strain Gauges GF series CE

GOBLET

These strain gauges are suited to the measurement on materials such as plastics, which have low elastic modulus compared to metal. Our original specially-designed grid lowers the rigidity of the strain gauge and reduces the stiffening effect to the specimen material.
These strain gauges are CE marked (compliant to RoHS2 Directive) and have joined to our "GOBLET" series.

Operating temperature range	Applicable adhesives
−30～+80℃	CN −30～+80℃
Temperature compensation range	
+10～+80℃	

Please specify the type number as shown in the example below.

GFLAB -3 (-350) -50 -3LJC-F

- GFLAB: Gauge series name
- -3: Gauge length
- (-350): Gauge resistance (blank for 120Ω)
- -50: Objective material for temperature compensation
- -3LJC-F: Length in meter and type of integral leadwire CE compliant leadwire

Objective material for temperature compensation
(coefficient of linear thermal expansion ×10^{-6}/°C)
−50: Epoxy resin　　−70: Acrylic resin, ABS resin

Gauge pattern	Type	Gauge size(mm) Length	Gauge size(mm) Width	Backing size(mm) Length	Backing size(mm) Width	Resistance Ω
●Single axis						
	GFLAB-3	3	2.3	9.5	4	120
	GFLAB-6	6	2.5	14	5	120
	GFLAB-3-350	3	2.9	9.5	5	350
	GFLAB-6-350	6	2.7	14	5	350
●0° /90° 2-axis Plane type						
GFCAB-3	GFCAB-3	3	1.4	10.5	10.5	120
GFCAB-3-350	GFCAB-3-350	3	2.9	14.5	14.5	350
●0° /45° /90° 3-axis Plane type						
GFRAB-3	GFRAB-3	3	1.4	10.5	10.5	120
GFRAB-3-350	GFRAB-3-350	3	2.9	14.5	14.5	350

Minimum order quantity is 10 strain gauges.

Dedicated leadwires recommendable for GF series strain gauge (made to order)

We supply various leadwires dedicated to strain gauges so as to meet our customers' requirements. Please refer to page 30 to 38 for the details of combination of a strain gauge and a leadwire. For CE marked GOBLET series strain gauges, only the leadwires using lead-free solder are available.

Type and designation of leadwires

Usage	Leadwire name	Operating temperature range of leadwire (°C)	Type number example
General purpose (without temperature change)	Parallel vinyl leadwire LJC / LJC-F	−20～+80	GFLAB-3-50-3LJC-F
General purpose	3-wire parallel vinyl leadwire LJCT / LJCT-F	−20～+80	GFLAB-3-50-3LJCT-F
1-Gauge 4-Wire measurement	Polypropyrene 4-wire paralleled LQM / LQM-F	−20～+80	GFLAB-3-50-3LQM-F (modular plug attached)

Important point

●Influence of elastic modulus

A strain gauge bonded on a material having low elastic modulus such as plastics may disturb the stress distribution of the material around the area where the strain gauge is bonded. It may cause an apparent lowering of the gauge factor of the strain gauge. This is called a stiffening effect of strain gauge. The lower the elastic modulus is, the larger the stiffening effect becomes. The gauge factor correction is necessary if the elastic modulus of the test object is approx. 2.9 GPa (300 kgf/mm^2) or lower.

●Effect of Joule heat

The strain gauge of this series has a specially designed grid to reduce the effect of Joule heat in the strain gauge. The allowable current for a strain gauge is 30 mA when it is bonded on a metal. However, if the strain gauge is bonded on plastics, it is recommended to keep the current at 10 mA or less.