



Strain Gauges BF series (GOBLET) CE



These are strain gauges designed for measurement on composite materials. They have a specially designed grid pattern to reduce the stiffening effect of the strain gauge to the measurement object. Coefficient of linear thermal expansion for temperature compensation is available in 3, 5, and $8 \times 10^{-6}/^{\circ}\text{C}$, which are applicable to ceramic, carbon or composite materials. These strain gauges are CE marked (compliant to RoHS2 Directive). They have joined to our "GOBLET" series.

Operating temperature range -30~+200°C	Applicable adhesives CN-E -30~+120°C
Temperature compensation range +10~+80°C	NP-50B -30~+200°C EB-2 -30~+200°C

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

BFLAB -2 -3 -3LJC-F

↑ Gauge series name ↑ Gauge length ↑ Objective material for temperature compensation ↑ Length in meter and type of integral leadwire CE compliant leadwire

Objective material for temperature compensation (coefficient of linear thermal expansion $\times 10^{-6}/^{\circ}\text{C}$)
-3, -5, -8: Composite material (marked on the backing)

Note: The backing color of BF series gauges are the same for every material for temperature compensation.

Gauge pattern	Type	Gauge size(mm)		Backing size(mm)		Resistance Ω
		Length	Width	Length	Width	
● Single axis Coefficient of linear thermal expansion of objective material (3,5,8)	Single axis					
	BFLAB-2	2	0.9	7.6	2.5	120
	BFLAB-5	5	1.5	12.3	3.3	120
● 0°/90° 2-axis Plane type BFCAB-2 BFCAB-5	0°/90° 2-axis					
	BFCAB-2	2	1.3	8	8	120
	BFCAB-5	5	1.5	11.5	11.5	120
● 0°/45°/90° 3-axis Plane type BFRAB-2 BFRAB-5	0°/45°/90° 3-axis					
	BFRAB-2	2	1.3	8	8	120
	BFRAB-5	5	1.5	11.5	11.5	120

Important point

Composite materials made of plastics reinforced with glass fibers (GFRP), carbon fibers (CFRP) or aramid fibers (AFRP) have different elastic modulus and coefficient of linear thermal expansion depending on the direction of the fibers. When measuring strain on composite materials, pay enough attention to its components and the direction of the fibers.

Minimum order quantity is 10 strain gauges.
These strain gauges are available with integral leadwires attached. (made to order)

Dedicated leadwires recommendable for BF 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 32 to 40 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-F	-20~+80	BFLAB-2-3-3 LJC-F
General purpose	3-wire parallel vinyl leadwire LJCT-F	-20~+80	BFLAB-2-3-3 LJCT-F
Medium high temperature	3-wire parallel special vinyl leadwire LXT-F	-20~+150	BFLAB-2-3-3 LXT-F
High temperature	3-wire twisted FEP leadwire 6FA □ LT-F 3-wire twisted FEP single-core leadwire 6FB □ LT-F	-269~+200	BFLAB-2-3-6 FA3LT-F BFLAB-2-3-6 FB3LT-F

NB: □ shows the lead wire length in meter