



# Cryogenic Temperature Strain Gauges CF series



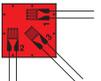
These are foil strain gauges with epoxy backing designed for measurement under cryogenic conditions. They are available in single element, rectangular 2-element and rectangular 3-element configurations with 350Ω resistance. The specially selected and heat treated grid of the gauges shows very small zero shift under cryogenic temperature compared to conventional strain gauges.

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

**CFLA -6 -350 -11 -6FA3LT-F**

Objective material for temperature compensation (coefficient of linear thermal expansion  $\times 10^{-6}/^{\circ}\text{C}$ )  
 .11: Mild steel ■ .17: Stainless steel ■ .23: Aluminium ■

Operating temperature range -269 ~ +80°C	Applicable adhesives EA-2A -269 ~ +50°C CN -196 ~ +80°C C-1 -269 ~ +80°C
Temperature compensation range (approx.) -196 ~ +80°C	

Gauge pattern	Type	Gauge size(mm)		Backing size(mm)		Resistance Ω
		Length	Width	Length	Width	
<p>● Single axis</p>  <p>CFLA-1-350  (x3)</p>  <p>CFLA-1-350</p>  <p>CFLA-6-350</p>	CFLA-1-350	1	1.6	5.4	3.2	350
	CFLA-3-350	3	1.7	8.8	3.5	350
	CFLA-6-350	6	2.2	12.5	4.3	350
<p>● 0° /90° 2-axis Plane type</p>  <p>CFCA-1-350</p>	CFCA-1-350	1	1.3	7.2	7.2	350
	CFCA-3-350	3	1.7	11	11	350
<p>● 0° /45° /90° 3-axis Plane type</p>  <p>CFRA-1-350</p>	CFRA-1-350	1	1.3	7.2	7.2	350
	CFRA-3-350	3	1.7	11	11	350

Minimum order quantity is 10 strain gauges.

## Dedicated leadwire recommended for CF series strain gauges (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 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
Cryogenic	3-wire twisted FEP leadwire 6FA □ LT-F	-269 ~ +200	CFLA-1-350-11-6FA3LT-F
	3-wire twisted FEP single-core leadwire 6FB □ LT-F		CFLA-1-350-11-6FB3LT-F
	3-wire twisted fluorinated resin (PTFE) leadwire 4FA □ LT-F	-269 ~ +260	CFLA-1-350-11-4FA3LT-F
3-wire twisted fluorinated resin (PTFE) single-core leadwire 4FB □ LT-F	CFLA-1-350-11-4FB3LT-F		

NB: □ shows the lead wire length in meter