

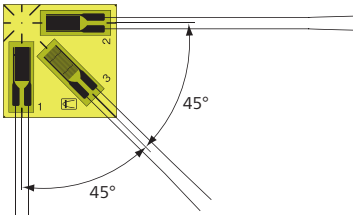
Gages for Composite Materials & Plastic (KFRPB & KFRS)

Patterns, Gage Resistance, Gage Factor	Models	Dimensions (mm)				Remarks
		Gage (Grid)		Base		
		Length	Width	Length	Width	

Triaxial, 0°/90°/45° plane arrangement

Resistance: 350 Ω

Gage factor: Approx. 2.1



Each of 3 axis may be given a different linear expansion coefficient if requested.

KFRPB-5-350-D22-1	5	1.5	19	19
KFRPB-5-350-D22-3				
KFRPB-5-350-D22-6				
KFRPB-5-350-D22-9				
KFRPB-2-350-D22-1	2	2.2	15	15
KFRPB-2-350-D22-3				
KFRPB-2-350-D22-6				
KFRPB-2-350-D22-9				

Patterns, Gage Resistance, Gage Factor	Models	Dimensions (mm)				Remarks
		Gage (Grid)		Base		
		Length	Width	Length	Width	

●KFRS Series Foil Strain Gages for Printed Boards

RoHS

When ordering, suffix the lead-wire cable code (see table below) to the model number with a space in between.

E.g.

For the gage with 3 polyester-coated copper wires 10-cm long pre-attached

→ [KFRS-02-120-C1-13 N10C3](#)

For the gage with a vinyl-coated flat 3-wire cable 5 m long pre-attached

→ [KFRS-05-120-D35-13 L5M3S](#)

PCB are used for varieties of products including cellular phones, car navigation systems and digital cameras. The gages are the self-temperature-compensation gages (SELCOM gages) for evaluating them.

- Dimensions of gage base (bondable space to mounted components and narrow parts) 1.2 mm long by 1.1 mm wide (uniaxial), 2.5 mm long by 2.5 mm wide (Biaxial or triaxial)
- Linear expansion coefficient of $13 \times 10^{-6}/^{\circ}\text{C}$, suitable for component-mounted board
- Self-temperature-compensation range is made as wide as -30 to 120°C to satisfy thermal cyclic tests of PCB.

Applicable Adhesives

	Operating Temp. after Curing the Adhesive
CC-33A	-196 to 120°C
CC-36	-30 to 100°C
PC-600	-196 to 150°C

■Types, lengths and codes of lead-wire cables pre-attached to KFRS gages

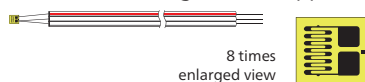
Type	2 polyester-coated copper wires	3 polyester-coated copper wires	Vinyl-coated flat 2-wire cable		Vinyl-coated flat 3-wire cable		Mid-temperature 2-wire cable	Mid-temperature 3-wire cable
Length	C1, D34, and D35		C1	D34, D35	C1	D34, D35	C1, D34, and D35	
10 cm	N10C2	N10C3	—	—	—	—	—	—
30 cm	N30C2	N30C3	L30C2R	L30C2S	L30C3R	L30C3S	R30C2	R30C3
1 m	N1M2	N1M3	L1M2R	L1M2S	L1M3R	L1M3S	R1M2	R1M3
3 m	—	—	L3M2R	L3M2S	L3M3R	L3M3S	R3M2	R3M3
5 m	—	—	L5M2R	L5M2S	L5M3R	L5M3S	R5M2	R5M3
Operating temp.	-196 to 150°C		-10 to 80°C				-100 to 150°C	
Remark	Twisted for ≥ 50 cm		L-6		L-7		L-11	L-12

* For other lead-wire cable lengths, contact us.

Uniaxial

Resistance: 120 Ω

Gage factor: Approx. 2.0



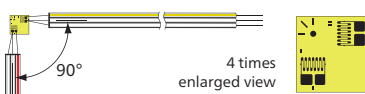
The following models are delivered with a vinyl-coated flat 3-wire cable 1 m long pre-attached.

KFRS-1-120-C1-13 L1M3R	1	0.65	4	1.4
KFRS-02-120-C1-13 L1M3R	0.2	0.8	1.2	1.1

Biaxial, 0°/90° plane arrangement

Resistance: 120 Ω

Gage factor: Approx. 2.0



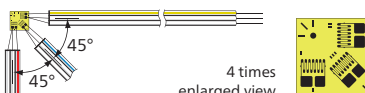
The following model is delivered with a vinyl-coated flat 3-wire cable 1 m long pre-attached.

KFRS-02-120-D34-13 L1M3S	0.2	0.8	2.5	2.5	5 gages/ pkg
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Triaxial, 0°/90°/45° plane arrangement

Resistance: 120 Ω

Gage factor: Approx. 2.0



The following model is delivered with a vinyl-coated flat 3-wire cable 1 m long pre-attached.

KFRS-02-120-D35-13 L1M3S	0.2	0.8	2.5	2.5	5 gages/ pkg
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10 gages/ pkg unless otherwise specified.