

# General-purpose Foil Strain Gages (KFGS)

1  
-20

STRAIN GAGES



Strain Gages

Outline

Lead-wire cable

General

Waterproof

Concrete

Composite material  
PCB  
Plastics

Ultra-small strain  
High temp.  
Low temp.

High elongation

Non-  
magnetoiresistive

Hydrogen gas  
Bending

With protector  
Embedded

Crack

Adhesive  
Coating agent

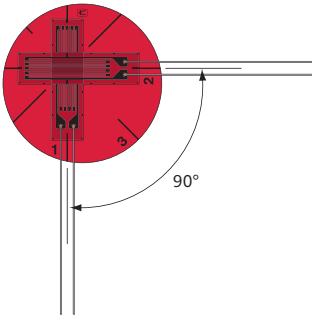
Custom-  
designed

| Patterns<br>Gage Resistance, Gage Factors | Models | Base<br>Color | Dimensions (mm) |       |        |       | Remarks |
|-------------------------------------------|--------|---------------|-----------------|-------|--------|-------|---------|
|                                           |        |               | Gage (Grid)     |       | Base   |       |         |
|                                           |        |               | Length          | Width | Length | Width |         |

### Biaxial, 0°/90° stacked rosette

Resistance: 120 Ω  
Gage factor: Approx. 2.1

RoHS\*



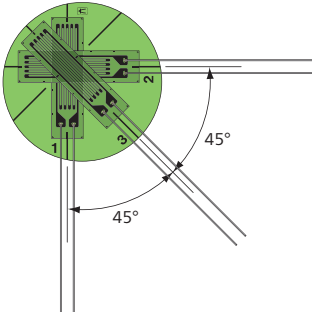
|                    |   |    |     |     |  |
|--------------------|---|----|-----|-----|--|
| KFGS-10-120-D16-11 | ● | 10 | 3   | φ21 |  |
| KFGS-10-120-D16-16 | ● |    |     |     |  |
| KFGS-10-120-D16-23 | ● |    |     |     |  |
| KFGS-10-120-D16-27 | ● |    |     |     |  |
| KFGS-5-120-D16-11  | ● | 5  | 1.4 | φ11 |  |
| KFGS-5-120-D16-16  | ● |    |     |     |  |
| KFGS-5-120-D16-23  | ● |    |     |     |  |
| KFGS-5-120-D16-27  | ● |    |     |     |  |
| KFGS-3-120-D16-11  | ● | 3  | 1.3 | φ10 |  |
| KFGS-3-120-D16-16  | ● |    |     |     |  |
| KFGS-3-120-D16-23  | ● |    |     |     |  |
| KFGS-3-120-D16-27  | ● |    |     |     |  |
| KFGS-2-120-D16-11  | ● | 2  | 1.2 | φ8  |  |
| KFGS-2-120-D16-16  | ● |    |     |     |  |
| KFGS-2-120-D16-23  | ● |    |     |     |  |
| KFGS-2-120-D16-27  | ● |    |     |     |  |
| KFGS-1-120-D16-11  | ● | 1  | 1.1 | φ5  |  |
| KFGS-1-120-D16-16  | ● |    |     |     |  |
| KFGS-1-120-D16-23  | ● |    |     |     |  |
| KFGS-1-120-D16-27  | ● |    |     |     |  |

\*The above picture is KFGS-10-120-D16-11.

### Triaxial, 0°/90°/45° stacked rosette (For stress analysis)

Resistance: 120 Ω  
Gage factor: Approx. 2.1

RoHS\*



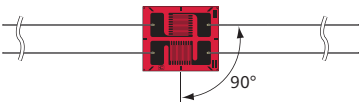
|                    |   |    |     |     |  |
|--------------------|---|----|-----|-----|--|
| KFGS-10-120-D17-11 | ● | 10 | 3   | φ21 |  |
| KFGS-10-120-D17-16 | ● |    |     |     |  |
| KFGS-10-120-D17-23 | ● |    |     |     |  |
| KFGS-10-120-D17-27 | ● |    |     |     |  |
| KFGS-5-120-D17-11  | ● | 5  | 1.4 | φ11 |  |
| KFGS-5-120-D17-16  | ● |    |     |     |  |
| KFGS-5-120-D17-23  | ● |    |     |     |  |
| KFGS-5-120-D17-27  | ● |    |     |     |  |
| KFGS-3-120-D17-11  | ● | 3  | 1.3 | φ10 |  |
| KFGS-3-120-D17-16  | ● |    |     |     |  |
| KFGS-3-120-D17-23  | ● |    |     |     |  |
| KFGS-3-120-D17-27  | ● |    |     |     |  |
| KFGS-2-120-D17-11  | ● | 2  | 1.2 | φ8  |  |
| KFGS-2-120-D17-16  | ● |    |     |     |  |
| KFGS-2-120-D17-23  | ● |    |     |     |  |
| KFGS-2-120-D17-27  | ● |    |     |     |  |
| KFGS-1-120-D17-11  | ● | 1  | 1.1 | φ5  |  |
| KFGS-1-120-D17-16  | ● |    |     |     |  |
| KFGS-1-120-D17-23  | ● |    |     |     |  |
| KFGS-1-120-D17-27  | ● |    |     |     |  |

\*The above picture is KFGS-10-120-D17-23.

### Biaxial, 0°/90° plane arrangement

Resistance: 120 Ω  
Gage factor: Approx. 2.1

RoHS



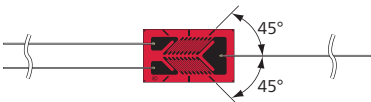
|                  |   |   |     |    |     |  |
|------------------|---|---|-----|----|-----|--|
| KFGS-2-120-D1-11 | ● | 2 | 3.2 | 10 | 8.5 |  |
| KFGS-2-120-D1-16 | ● |   |     |    |     |  |
| KFGS-2-120-D1-23 | ● |   |     |    |     |  |
| KFGS-2-120-D1-27 | ● |   |     |    |     |  |

\*The above picture is KFGS-2-120-D1-11.

### Biaxial, 0°/90° plane arrangement (For torque measurement)

Resistance: 120 Ω  
Gage factor: Approx. 2.1

RoHS



|                  |   |   |     |    |   |  |
|------------------|---|---|-----|----|---|--|
| KFGS-2-120-D2-11 | ● | 2 | 3.4 | 12 | 7 |  |
| KFGS-2-120-D2-16 | ● |   |     |    |   |  |
| KFGS-2-120-D2-23 | ● |   |     |    |   |  |
| KFGS-2-120-D2-27 | ● |   |     |    |   |  |

\*The above picture is KFGS-2-120-D2-11.

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10 gages/pkg

1-20



Strain Gages

Outline

Lead-wire cable

General

Waterproof

Concrete

Composite material  
PCB  
PlasticsUltra-small strain  
High temp.  
Low temp.

High elongation

Non-  
magnetoresistiveHydrogen gas  
BendingWith protector  
Embedded

Crack

Adhesive  
Coating agentCustom-  
designed

# General-purpose Foil Strain Gages (KFGS)

| Patterns<br>Gage Resistance, Gage Factors | Models | Base<br>Color | Dimensions (mm) |       |        |       | Remarks |
|-------------------------------------------|--------|---------------|-----------------|-------|--------|-------|---------|
|                                           |        |               | Gage (Grid)     |       | Base   |       |         |
|                                           |        |               | Length          | Width | Length | Width |         |

### Uniaxial 350Ω gages

Resistance: 350 Ω  
Gage factor: Approx. 2.1

RoHS\*



\*The above picture is KFGS-5-350-C1-11.

|                  |   |   |   |     |     |
|------------------|---|---|---|-----|-----|
| KFGS-5-350-C1-11 | ● | 5 | 2 | 9.4 | 4.2 |
| KFGS-5-350-C1-16 | ● |   |   |     |     |
| KFGS-5-350-C1-23 | ● |   |   |     |     |
| KFGS-5-350-C1-27 | ● |   |   |     |     |



\*The above picture is KFGS-3-350-C1-11.

|                  |   |   |   |     |     |
|------------------|---|---|---|-----|-----|
| KFGS-3-350-C1-11 | ● | 3 | 2 | 7.4 | 4.2 |
| KFGS-3-350-C1-16 | ● |   |   |     |     |
| KFGS-3-350-C1-23 | ● |   |   |     |     |
| KFGS-3-350-C1-27 | ● |   |   |     |     |



\*The above picture is KFGS-2-350-C1-11.

|                  |   |   |   |     |     |
|------------------|---|---|---|-----|-----|
| KFGS-2-350-C1-11 | ● | 2 | 2 | 6.3 | 4.2 |
| KFGS-2-350-C1-16 | ● |   |   |     |     |
| KFGS-2-350-C1-23 | ● |   |   |     |     |
| KFGS-2-350-C1-27 | ● |   |   |     |     |



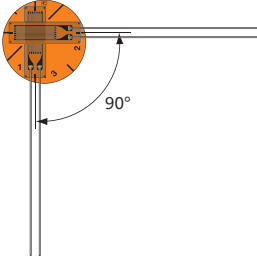
\*The above picture is KFGS-1-350-C1-11.

|                  |   |   |   |     |     |
|------------------|---|---|---|-----|-----|
| KFGS-1-350-C1-11 | ● | 1 | 2 | 4.8 | 3.4 |
| KFGS-1-350-C1-16 | ● |   |   |     |     |
| KFGS-1-350-C1-23 | ● |   |   |     |     |
| KFGS-1-350-C1-27 | ● |   |   |     |     |

### Biaxial 350Ω gages, 0°/90° stacked rosette

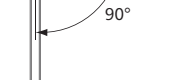
Resistance: 350 Ω  
Gage factor: Approx. 2.1

RoHS



\*The above picture is KFGS-5-350-D16-16.

|                   |   |   |   |     |
|-------------------|---|---|---|-----|
| KFGS-5-350-D16-11 | ● | 5 | 2 | φ11 |
| KFGS-5-350-D16-16 | ● |   |   |     |
| KFGS-5-350-D16-23 | ● |   |   |     |
| KFGS-5-350-D16-27 | ● |   |   |     |



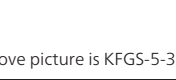
\*The above picture is KFGS-3-350-D16-16.

|                   |   |   |   |     |
|-------------------|---|---|---|-----|
| KFGS-3-350-D16-11 | ● | 3 | 2 | φ10 |
| KFGS-3-350-D16-16 | ● |   |   |     |
| KFGS-3-350-D16-23 | ● |   |   |     |
| KFGS-3-350-D16-27 | ● |   |   |     |



\*The above picture is KFGS-2-350-D16-16.

|                   |   |   |   |     |
|-------------------|---|---|---|-----|
| KFGS-2-350-D16-11 | ● | 2 | 2 | φ10 |
| KFGS-2-350-D16-16 | ● |   |   |     |
| KFGS-2-350-D16-23 | ● |   |   |     |
| KFGS-2-350-D16-27 | ● |   |   |     |



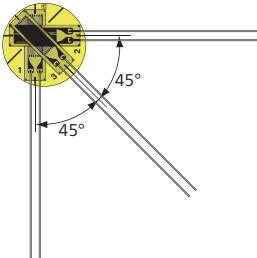
\*The above picture is KFGS-1-350-D16-16.

|                   |   |   |     |    |
|-------------------|---|---|-----|----|
| KFGS-1-350-D16-11 | ● | 1 | 1.8 | φ8 |
| KFGS-1-350-D16-16 | ● |   |     |    |
| KFGS-1-350-D16-23 | ● |   |     |    |
| KFGS-1-350-D16-27 | ● |   |     |    |

### Triaxial 350Ω gages, 0°/90°/45° stacked rosette

Resistance: 350 Ω  
Gage factor: Approx. 2.1

RoHS



\*The above picture is KFGS-5-350-D17-27.

|                   |   |   |   |     |
|-------------------|---|---|---|-----|
| KFGS-5-350-D17-11 | ● | 5 | 2 | φ11 |
| KFGS-5-350-D17-16 | ● |   |   |     |
| KFGS-5-350-D17-23 | ● |   |   |     |
| KFGS-5-350-D17-27 | ● |   |   |     |



\*The above picture is KFGS-3-350-D17-16.

|                   |   |   |   |     |
|-------------------|---|---|---|-----|
| KFGS-3-350-D17-11 | ● | 3 | 2 | φ10 |
| KFGS-3-350-D17-16 | ● |   |   |     |
| KFGS-3-350-D17-23 | ● |   |   |     |
| KFGS-3-350-D17-27 | ● |   |   |     |



\*The above picture is KFGS-2-350-D17-16.

|                   |   |   |   |     |
|-------------------|---|---|---|-----|
| KFGS-2-350-D17-11 | ● | 2 | 2 | φ10 |
| KFGS-2-350-D17-16 | ● |   |   |     |
| KFGS-2-350-D17-23 | ● |   |   |     |
| KFGS-2-350-D17-27 | ● |   |   |     |



\*The above picture is KFGS-1-350-D17-16.

|                   |   |   |     |    |
|-------------------|---|---|-----|----|
| KFGS-1-350-D17-11 | ● | 1 | 1.8 | φ8 |
| KFGS-1-350-D17-16 | ● |   |     |    |
| KFGS-1-350-D17-23 | ● |   |     |    |
| KFGS-1-350-D17-27 | ● |   |     |    |

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10 gages/pkg