



Strain Gage

Load Cell

Pressure  
SensorAcceleration  
SensorTorque  
SensorDisplacement  
SensorComponent  
Force  
SensorAutomotive  
SensorCivil  
Engineering  
Sensor

# KFLB

## Low-temperature Foil Strain Gages

These strain gages have excellent low-temperature characteristics and are suitable for measuring storage containers for low-temperature liquids such as LNG and LPG. A Ni-Cr alloy material with a low magnetic resistance effect is used as the resistive element.

### Operating Temperature

| Operating Temperature | Applicable Adhesives |
|-----------------------|----------------------|
| -269 to 30°C          | EP-270               |
| -269 to 150°C         | PC-600               |
| -196 to 120°C         | CC-33A               |

### Models

| Patterns,<br>Gage Resistance, Gage Factor                                                                                                                      | Model              | Dimensions (mm) |       |        |       | Remarks     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|-------|--------|-------|-------------|
|                                                                                                                                                                |                    | Gage (Grid)     |       | Base   |       |             |
|                                                                                                                                                                |                    | Length          | Width | Length | Width |             |
| <b>Uniaxial</b><br>Resistance: 120 Ω Gage factor: Approx. 2.0<br>             | KFLB-5-120-C1-11   | 5               | 2.5   | 10     | 3.7   | 5 gages/pkg |
|                                                                                                                                                                | KFLB-5-120-C1-16   | 5               | 2.5   | 10     | 3.7   |             |
|                                                                                                                                                                | KFLB-5-120-C1-23   | 5               | 2.5   | 10     | 3.7   |             |
|                                                                                                                                                                | KFLB-2-120-C1-11   | 2               | 2.5   | 6      | 3.7   |             |
|                                                                                                                                                                | KFLB-2-120-C1-16   | 2               | 2.5   | 6      | 3.7   |             |
|                                                                                                                                                                | KFLB-2-120-C1-23   | 2               | 2.5   | 6      | 3.7   |             |
|                                                                                                                                                                | KFLB-1-120-C1-11   | 1               | 1.5   | 4      | 2.7   |             |
|                                                                                                                                                                | KFLB-1-120-C1-16   | 1               | 1.5   | 4      | 2.7   |             |
|                                                                                                                                                                | KFLB-1-120-C1-23   | 1               | 1.5   | 4      | 2.7   |             |
|                                                                                                                                                                | KFLB-05-120-C1-11  | 0.5             | 1.4   | 3.3    | 2.7   |             |
|                                                                                                                                                                | KFLB-05-120-C1-16  | 0.5             | 1.4   | 3.3    | 2.7   |             |
|                                                                                                                                                                | KFLB-05-120-C1-23  | 0.5             | 1.4   | 3.3    | 2.7   |             |
|                                                                                                                                                                | KFLB-02-120-C1-11  | 0.2             | 1     | 2.5    | 2.2   |             |
|                                                                                                                                                                | KFLB-02-120-C1-16  | 0.2             | 1     | 2.5    | 2.2   |             |
|                                                                                                                                                                | KFLB-02-120-C1-23  | 0.2             | 1     | 2.5    | 2.2   |             |
| <b>Triaxial, 0°/90°/45°</b><br>Resistance: 120 Ω Gage factor: Approx. 2.0<br> | KFLB-1-120-D25-11  | 1               | 1.5   | φ8     |       | 5 gages/pkg |
|                                                                                                                                                                | KFLB-1-120-D25-16  | 1               | 1.5   | φ8     |       |             |
|                                                                                                                                                                | KFLB-1-120-D25-23  | 1               | 1.5   | φ8     |       |             |
|                                                                                                                                                                | KFLB-05-120-D25-11 | 0.5             | 1.4   | φ7.5   |       |             |
|                                                                                                                                                                | KFLB-05-120-D25-16 | 0.5             | 1.4   | φ7.5   |       |             |
| KFLB-05-120-D25-23                                                                                                                                             | 0.5                | 1.4             | φ7.5  |        |       |             |

\*The above picture is KFLB-5-120-C1-11.

\*The above picture is KFLB-1-120-D25-11.

### Uniaxial, 350 Ω

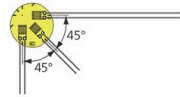
Resistance: 350 Ω Gage factor: Approx. 2.0



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

### Triaxial, 0°/90°/45° 350 Ω

Resistance: 350 Ω  
Gage factor:  
Approx. 2.0



\*The above picture is KFLB-1-350-D25-11.

### Types, lengths and codes of lead-wire cables pre-attached to KFLB

|                       | 2 polyester-coated copper wires | 3 polyester-coated copper wires | Mid-temperature 2-wire cables | Mid-temperature 3-wire cables | Fluoroplastic-coated high/low-temp. 3-wire cable |
|-----------------------|---------------------------------|---------------------------------|-------------------------------|-------------------------------|--------------------------------------------------|
|                       | C1,D25                          |                                 |                               |                               |                                                  |
| 15 cm                 | N15C2                           | N15C3                           | R15C2                         | R15C3                         | F15C3                                            |
| 30 cm                 | N30C2                           | N30C3                           | R30C2                         | R30C3                         | F30C3                                            |
| 1 m                   | N1M2                            | N1M3                            | R1M2                          | R1M3                          | F1M3                                             |
| 3 m                   | —                               | —                               | R3M2                          | R3M3                          | F3M3                                             |
| 5 m                   | —                               | —                               | R5M2                          | R5M3                          | F5M3                                             |
| Operating Temperature | -196 to 150°C                   |                                 | -100 to 150°C                 |                               | -196 to 150°C *1                                 |
| Remarks               | Twisted for ≥ 50 cm             |                                 | L-11 <sup>*2</sup>            | L-12 <sup>*2</sup>            | L-3 <sup>*2</sup>                                |

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

\*1 -196°C: Because the gage leads are polyester-coated copper wires.

\*2 The wire section of R-type and F-type are sandwiched or wrapped with the glass-cloth tape for insulation and reinforcement. (Refer to P.149)

### How to order

When ordering, specify the model of the strain gage and the code of the lead-wire cable with a space in between.

E.g. KFLB-5-120-C1-11 with a fluoroplastic-coated high/low-temperature 3-wire cable 5 m long pre-attached→  
**KFLB-5-120-C1-11 F5M3**

If no lead-wire cable code is suffixed, the gage is delivered with gage leads only. (Silver-covered copper wires 25 mm long)

\*10 gages/pkg unless otherwise specified.