High-elongation Gages KFEM & KFEL

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

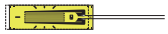
●KFEM Series High-elongation Foil Strain Gages

When ordering, suffix the lead wire cable code (See table at the right) to the model number with a space in between.

E.g.
KFEM-5-120-C1 L10M2R
for the gage with a vinyl-coated flat 2-wire cable 10 m long pre-attached
If no lead wire cable code is suffixed, the gage is delivered with gage leads only (Silver-clad copper wires 25 mm long each).

*Strain limit of 20% to 30% is ensured for simple tension applied to the gage bonded on stainless steel (SUS 304) or aluminum alloy (A1050) at normal temperature.
*Strain limit will be down under the following conditions.
- In case of bonding to hard-to bond materials such as aluminum alloy (A7075) and plastics(polypropylene)
- In case of the targets have discontinuous distortion, or any crack on its surface
- In case of measurement at High/low temperature.

Uniaxial
Resistance: 120 Ω
Gage factor: Approx. 2.0



KFEM series ultrahigh-elongation foil gages can measure strain in elastic to plastic region on structures and are suitable for large strain measurement or rupture tests of metals (Steel, stainless steel, aluminum) and plastics (polyethylene, polypropylene).

- Measurement of 20% to 30% material deformation possible
- Laminate protruded from the tip of gage base ensures improved adhesive property, making the gages hard to peel off.
- Foil material has an improved elongation property and is hard to disconnect.

Applicable Adhesive and Operating Temperature Range after Curing CC-36 –20 to 80°C

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

Types / Length	Polyester-coated 2-wire copper cable	Vinyl-coated flat 2-wire cable	Vinyl-coated flat 3-wire cable
	C1, D34, and D35	C1	
15 cm	N15C2	L15C2R	L15C3R
30 cm	N30C2	L30C2R	L30C3R
1 m	N1M2	L1M2R	L1M3R
3 m		L3M2R	L3M3R
5 m		L5M2R	L5M3R
Oprg. temp. range	-10 to 80°C	-10 to 80°C	
Remarks	Twisted for 50 cm or longer	L-6, L-9 for 6 m or longer	L-7, L-10 for 6 m or longer

＊For other lead wire cable lengths, contact us.

KFEM-10-120-C1	10.0	2.5	17.5	4.5
KFEM-5-120-C1	5.0	1.5	11.5	3.0
KFEM-2-120-C1	2.0	1.5	8.5	3.0
KFEM-1-120-C1	1.0	1.3	7.0	2.5

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

●KFEL Series High-elongation Foil Strain Gages

When ordering, suffix the lead wire cable code (See table at the right) to the model number with a space in between.

E.g.
KFEL-5-120-C1 L10M2R
for the gage with a fluororesin-coated flat 2-wire cable 10 m long pre-attached
KFEL-5-120-D35 L5M3S
for the gage with a vinyl-coated flat 3-wire cable 5 m long pre-attached
If no lead wire cable code is suffixed, the gage is delivered with gage leads only (Silver-clad copper wires 25 mm long each).

Uniaxial
Resistance: 120 Ω
Gage factor: Approx. 2.1

Developed to measure strain in elastic to plastic region on structures, the KFEL series foil gages can measure strain as large as 10% to 15% with simple tension strain.

Applicable Adhesive and Operating Temperature Range after Curing CC-36 –10 to 80°C

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

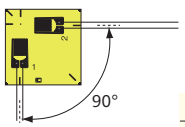
Types / Length	Polyester-coated 2-wire copper cable	Vinyl-coated flat 2-wire cable		Vinyl-coated flat 3-wire cable	
	C1, D34, and D35	C1	D34, D35	C1	D34, D35
15 cm	N15C2	L15C2R	L15C2S	L15C3R	L15C3S
30 cm	N30C2	L30C2R	L30C2S	L30C3R	L30C3S
1 m	N1M2	L1M2R	L1M2S	L1M3R	L1M3S
3 m		L3M2R	L3M2S	L3M3R	L3M3S
5 m		L5M2R	L5M2S	L5M3R	L5M3S
Oprg. temp. range	-10 to 80°C				
Remarks	Twisted for 50 cm or longer	L-6, L-9 for 6 m or longer		L-7, L-10 for 6 m or longer	

＊For other lead wire cable lengths, contact us.

Note: Besides the usual surface treatment with sandpaper, the gage bonding surface should be treated with the surface treatment agent S-9B if the gage is bonded to hard-to-bond plastics such as polyethylene and polypropylene. Then, bond the gage using the adhesive CC-36. For S-9B and bonding conditions for other special materials, contact us.

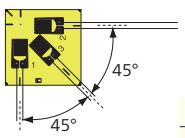
KFEL-5-120-C1	5	2.1	11	3.5
KFEL-2-120-C1	2	2.1	8	4

Biaxial, 0°/90°
Resistance: 120 Ω
Gage factor: Approx. 2.1



KFEL-5-120-D34	5	2.1	13	13
KFEL-2-120-D34	2	2.1	10	10

Triaxial, 0°/90°/45°
Resistance: 120 Ω
Gage factor: Approx. 2.1



KFEL-5-120-D35	5	2.1	13	13
KFEL-2-120-D35	2	2.1	10	10

A min. qty 10 PC.