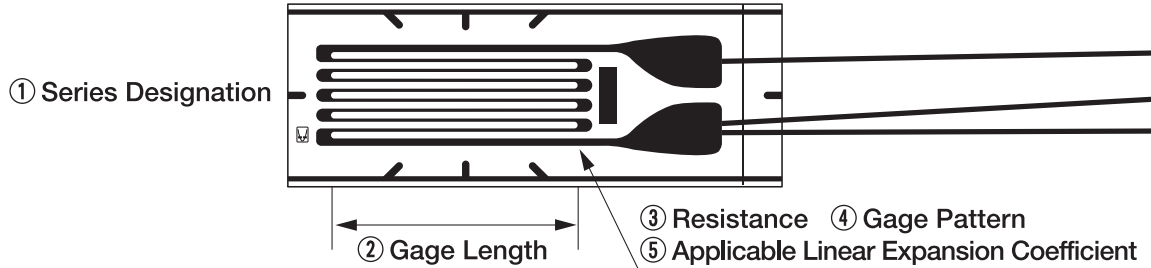


Strain Gage Model Number Coding System



KFG - 2 - 120 - C1 -

① Series Designation

KFG: General-purpose foil strain gage
 KFGT: Foil strain gage with temp. sensor
 KFR: Foil strain gage
 KFW: Waterproof foil strain gage
 KFWS: Small waterproof foil strain gage
 KCW: Weldable waterproof foil strain gage
 KC: Wire strain gage
 KM: Embedded foil strain gage for concrete
 KMC: Embedded wire strain gage for concrete
 KFRP: Foil strain gage for composite materials
 KFRS: Foil strain gage for printed boards
 KFP: Foil strain gage for plastics
 KFML: Foil strain gage for low-elasticity materials
 KSP: Semiconductor strain gage
 KSN: Self-temperature-compensation semiconductor strain gage
 KSPH: High-output semiconductor strain gage
 KSPL: Ultralinear semiconductor strain gage
 KHGX: Encapsulated strain gage
 KHCV: Encapsulated strain gage
 KHCR: Encapsulated strain gage
 KHCS: Encapsulated strain gage
 KHCM: Encapsulated strain gage
 KHC: Encapsulated strain gage
 KFU: High-temperature foil strain gage
 KH: Weldable high-temp. foil strain gage
 KFH: High-temperature foil strain gage
 KFL: Low-temperature foil strain gage
 KFEM: Ultrahigh-elongation foil strain gage
 KFEL: High-elongation foil strain gage
 KFN: Noninductive foil strain gage
 KFS: Shielded foil strain gage
 KFF: Foil bending strain gage
 KCH: Foil strain gage with protector
 KMP: Embedded foil strain gage for plastics
 KV: Crack gage

② Gage Length

015: 0.15 mm
 02N: 0.2 mm
 02: 0.2 mm
 03: 0.3 mm
 05: 0.5 mm
 1N: 1 mm
 1: 1 mm
 1.5: 1.5 mm
 2N: 2 mm
 2: 2 mm
 3: 3 mm
 4N: 4 mm
 4: 4 mm
 5: 5 mm
 6: 6 mm
 7: 7 mm
 9: 9 mm
 10: 10 mm
 20: 20 mm
 30: 30 mm
 60: 60 mm
 70: 70 mm
 80: 80 mm
 120: 120 mm

Suffix N denotes narrow gage base.

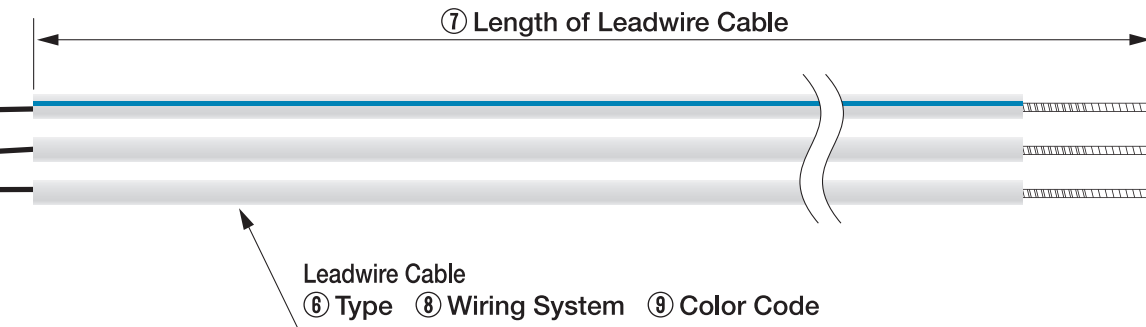
③ Resistance

60: 60 Ω
 120: 120 Ω
 350: 350 Ω
 500: 500 Ω
 1K: 1000 Ω
 2K: 2000 Ω
 10K: 10000 Ω

④ Gage Pattern

A1: Uniaxial, leads at one end (KC, KTB gages)
 C1: Uniaxial, leads at one end (foil gage)
 C2: Uniaxial 90°, lead at both ends
 C3: Uniaxial 0°, lead at both ends
 C9: Uniaxial, leads at one end (KFN gage)
 C11: Uniaxial, 2-element, 1mm thick (KFF gage)
 C12: Uniaxial, 2-element, 2mm thick (KFF gage)
 C15: Uniaxial right 45°, for shearing strain, leads at one end
 C16: Uniaxial left 45°, for shearing strain, leads at one end
 C20: Uniaxial, leads at a side (for bolt axial tension)
 D1: Biaxial 0°/90°, lead at both ends
 D2: Biaxial 0°/90°, lead at both ends (for torque)
 D3: Triaxial 0°/90°/45°, lead at both ends, plane arrangement
 D4: Triaxial 0°/120°/240°, plane arrangement
 D6: Quadaxial 0°/30°/90°/150°
 D9: Uniaxial 5-element 90°
 D16: Biaxial 0°/90° stacked rosette, round base
 D17: Triaxial 0°/90°/45° stacked rosette, round base
 D19: Uniaxial 5-element 0°
 D20: Biaxial 0°/90° (KFN gage)
 D22: Triaxial 0°/90°/45°, plane arrangement
 D25: Triaxial 0°/90°/45°, plane arrangement
 D28: Triaxial 0°/135°/90°, plane arrangement (for boring)
 D29: Biaxial 0°/90°, leads at one end, plane arrangement
 D30: Triaxial 0°/90°/45°, leads at one end, plane arrangement
 D31: Biaxial 0°/90°, leads at one end (for torque)
 D34: Biaxial 0°/90°, plane arrangement
 D35: Triaxial 0°/90°/45°, plane arrangement
 D39: Biaxial 5-element 0°/90°
 E3: Uniaxial, lead at both ends (semiconductor gage)
 E4: Uniaxial, leads at one end (semiconductor gage)
 E5: Uniaxial, lead at both ends with no base (semiconductor gage)
 F2: Uniaxial 2-element (semiconductor gage)
 F3: Biaxial 0°/90° (semiconductor gage)
 G4: Uniaxial, leads at one end (KH-G4)
 G8: Uniaxial active/dummy 2-element, Inconel (for KHC)
 G9: Uniaxial active/dummy 2-element, SUS (for KHC)
 G10: Uniaxial (for KCW)
 G12: Uniaxial active/dummy 2-element (for KHCS)
 G13: Uniaxial active/dummy 2-element (for KHGX)
 G15: Uniaxial active/dummy 2-element (for KHCM)
 G16: Uniaxial active/dummy 2-element (for KHCR)
 G17: Uniaxial (for KHCV)
 H1: Uniaxial (for KM-30)
 H2: Uniaxial (for KM-120)
 H3: Uniaxial (for KMC)
 H4: Uniaxial with T thermocouple (for KMC)
 J1: Uniaxial (for KFS)

To select the most suitable strain gage and related products, refer to Pages 18 to 29.



Leadwire Cable

11

⑤ Applicable Linear Expansion Coefficient
($\times 10^{-6}/^{\circ}\text{C}$)

- 1: CFRP, etc. for composite materials
Amber (1.1)
Diamond (1.2)
- 3: GFRP, etc. for composite materials
Silicon (2.3)
Sulfur (2.7)
- 5: GFRP, etc. for composite materials
Tungsten (4.5)
Lumber (5.0)
Molybdenum (5.2)
Zirconium (5.4)
Kobar (5.9)
- 6: GFRP, etc. for composite materials
28 Tantalum (6.6)
- 9: CFRP, GFRP, etc. for composite materials
Titanium alloy (8.5)
Platinum (8.9)
Soda-lime glass (9.2)
- 11: Common steel (11.7)
SUS631 (10.3)
SUS630 (10.6)
Cast iron (10.8)
Nickel-molybdenum steel (11.3)
Beryllium (11.5)
Inconel X (12.1)
- 13: NCF, etc. for corrosion and heat-resistant alloys
Nickel (13.3)
Printed board (13.0)
- 16: Stainless steel SUS304 (16.2)
Beryllium steel (16.7)
Copper (16.7)
- 23: 2014-T4 aluminum (23.4)
Brass (21.0)
Tin (23.0)
2024-T4 aluminum (23.2)
- 27: Magnesium alloy (27.0)
Composite material GFRP (35.0)
- 65: Acrylic resin (65.0)
Polycarbonate (66.6)

L

⑥ Type

- B: Glass-coated cable of 3 Ni-clad copper wires
- C: MI cable (for KHC, KHCX, KHCR, KHCS, KHCM and KHCV gages)
- D: Glass-coated cable of 3 FeNi-clad copper wires
- F: Fluoplastic-coated high/low temp. 3-wire cable (equiv. to L-3 leadwire cable)
- G: Polyethylene-coated cross-link 3-wire cable
- H: High/low temp. 3-wire cable (equiv. to L-17 leadwire cable)
- J: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)
- L: Vinyl-coated flat 2 or 3-wire cable (L-6, L-7, L-9 or L-10)
- N: Polyester-coated copper wire cable
- R: Mid-temp. 2 or 3-wire cable (L-11 or L-12)
- W: Vinyl-coated flat 3-wire cable (for KM-120)
- Y: Vinyl-coated flat 2-wire cable (for KM-30)

1M

⑦ Length

- C: Centimeter
e.g. 30C = 30 cm
- M: Meter
e.g. 3M = 3 m

3

⑧ Wiring System

- 2: 2-wire system
 - 3: 3-wire system
- In the case of encapsulated gage
Number: Length of soft cable
V: With bridge adapter
F: With compression fitting
FV: With both bridge adapter and compression fitting

R

⑨ Color Code

- Color codes are available for only vinyl-coated flat leadwire cables.
- 2-wire system
R: Red
W: White*
B: Black*
G: Green*
Y: Yellow*
*Custom-made
- S: Multi-axial gages (Standard)
- Biaxial (D16)
0° (1st axis): Red
90° (2nd axis): White
 - Triaxial (D17)
0° (1st axis): Red
45° (3rd axis): Green
90° (2nd axis): White
- 3-wire system
The insulator color is white and the stripe color code is as follows.
R: Red
L: Blue*
B: Black*
G: Green*
Y: Yellow*
*Custom-made
- S: Multi-axial gages (Standard)
- Biaxial (D16)
0° (1st axis): Red
90° (2nd axis): Yellow
 - Triaxial (D17)
0° (1st axis): Red
45° (3rd axis): Blue
90° (2nd axis): Yellow

Note: Combination of codes is limited and menu options cannot freely be selected.