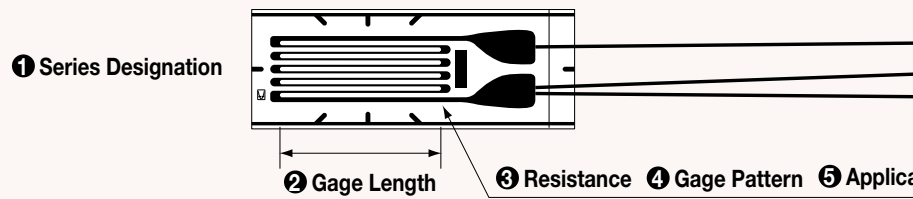


# Strain Gage Model Number Coding System



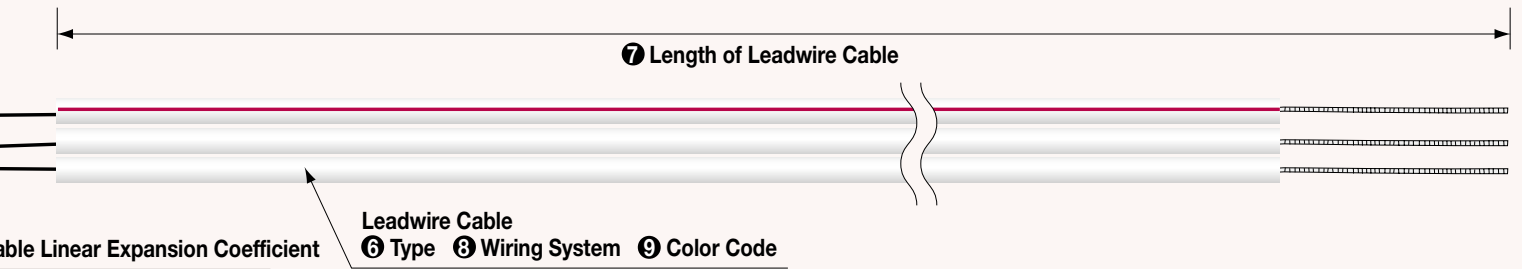
**KFG - 2 - 120 - C1**

① Series Designation	② Gage Length	③ Resistance	④ Gage Pattern
<p>KFG: General-purpose foil strain gage</p> <p>KFGT: Foil strain gage with temp. sensor</p> <p>KFR: Foil strain gage</p> <p>KFW: Waterproof foil strain gage</p> <p>KFWS: Small waterproof foil strain gage</p> <p>KCW: Weldable waterproof foil strain gage</p> <p>KC: Wire strain gage</p> <p>KM: Embedded foil strain gage for concrete</p> <p>KMC: Embedded wire strain gage for concrete</p> <p>KFRP: Foil strain gage for composite materials</p> <p>KFRS: Foil strain gage for printed boards</p> <p>KFP: Foil strain gage for plastics</p> <p>KFML: Foil strain gage for low-elasticity materials</p> <p>KSP: Semiconductor strain gage</p> <p>KSN: Self-temperature-compensation semiconductor strain gage</p> <p>KSPH: High-output semiconductor strain gage</p> <p>KSPL: Ultralinear semiconductor strain gage</p> <p>KHCX: Encapsulated strain gage</p> <p>KHCD: Encapsulated strain gage</p> <p>KHCS: Encapsulated strain gage</p> <p>KHCM: Encapsulated strain gage</p> <p>KHC: Encapsulated strain gage</p> <p>KFU: High-temperature foil strain gage</p> <p>KH: Weldable high-temp. foil strain gage</p> <p>KFH: High-temperature foil strain gage</p> <p>KFL: Low-temperature foil strain gage</p> <p>KLM: Ultrahigh-elongation wire strain gage</p> <p>KFEL: High-elongation foil strain gage</p> <p>KFN: Noninductive foil strain gage</p> <p>KFS: Shielded foil strain gage</p> <p>KFF: Foil bending strain gage</p> <p>KCH: Foil strain gage with protector</p> <p>KMP: Embedded foil strain gage for plastics</p> <p>KTB: Temperature gage</p> <p>KV: Crack gage</p>	<p>015: 0.15mm</p> <p>02N: 0.2mm</p> <p>02: 0.2mm</p> <p>03: 0.3mm</p> <p>05: 0.5mm</p> <p>1N: 1mm</p> <p>1: 1mm</p> <p>1.5: 1.5mm</p> <p>2N: 2mm</p> <p>2: 2mm</p> <p>3: 3mm</p> <p>4N: 4mm</p> <p>4: 4mm</p> <p>5: 5mm</p> <p>6: 6mm</p> <p>7: 7mm</p> <p>9: 9mm</p> <p>10: 10mm</p> <p>20: 20mm</p> <p>30: 30mm</p> <p>60: 60mm</p> <p>70: 70mm</p> <p>80: 80mm</p> <p>120: 120mm</p>	<p>50: 50Ω</p> <p>60: 60Ω</p> <p>120: 120Ω</p> <p>200: 200Ω</p> <p>350: 350Ω</p> <p>500: 500Ω</p> <p>1K: 1000Ω</p> <p>2K: 2000Ω</p> <p>10K: 10000Ω</p>	<p>A1: Uniaxial, leads at one end (KC, KTB gages)</p> <p>A9: Uniaxial, leads at one end (KLM gage)</p> <p>C1: Uniaxial, leads at one end (foil gage)</p> <p>C2: Uniaxial 90°, lead at both ends</p> <p>C3: Uniaxial 0°, lead at both ends</p> <p>C9: Uniaxial, leads at one end (KFN gage)</p> <p>C11: Uniaxial, 2-element, 1mm thick (KFF gage)</p> <p>C12: Uniaxial, 2-element, 2mm thick (KFF gage)</p> <p>C15: Uniaxial right 45°, for shearing strain, leads at one end</p> <p>C16: Uniaxial left 45°, for shearing strain, leads at one end</p> <p>C20: Uniaxial, leads at a side (for bolt axial tension)</p> <p>D1: Biaxial 0°/90°, lead at both ends</p> <p>D2: Biaxial 0°/90°, lead at both ends (for torque)</p> <p>D3: Triaxial 0°/90°/45°, lead at both ends, plane arrangement</p> <p>D4: Triaxial 0°/120°/240°, plane arrangement</p> <p>D6: Quadrxial 0°/30°/90°/150°</p> <p>D9: Uniaxial 5-element 90°</p> <p>D16: Biaxial 0°/90° stacked rosette, round base</p> <p>D17: Triaxial 0°/90°/45° stacked rosette, round base</p> <p>D19: Uniaxial 5-element 0°</p> <p>D20: Biaxial 0°/90° (KFN gage)</p> <p>D22: Triaxial 0°/90°/45°, plane arrangement</p> <p>D25: Triaxial 0°/90°/45°, plane arrangement</p> <p>D28: Triaxial 0°/135°/90°, plane arrangement (for boring)</p> <p>D29: Biaxial 0°/90°, leads at one end, plane arrangement</p> <p>D30: Triaxial 0°/90°/45°, leads at one end, plane arrangement</p> <p>D31: Biaxial 0°/90°, leads at one end (for torque)</p> <p>D39: Biaxial 5-element 0°/90°</p> <p>E3: Uniaxial, lead at both ends (semiconductor gage)</p> <p>E4: Uniaxial, leads at one end (semiconductor gage)</p> <p>E5: Uniaxial, lead at both ends with no base (semiconductor gage)</p> <p>F2: Uniaxial 2-element (semiconductor gage)</p> <p>F3: Biaxial 0°/90° (semiconductor gage)</p> <p>G4: Uniaxial, leads at one end (KH-G4)</p> <p>G8: Uniaxial active/dummy 2-element, Inconel (for KHC)</p> <p>G9: Uniaxial active/dummy 2-element, SUS (for KHC)</p> <p>G10: Uniaxial (for KCW)</p> <p>G11: Uniaxial (for KHCD)</p> <p>G12: Uniaxial active/dummy 2-element (for KHCS)</p> <p>G13: Uniaxial active/dummy 2-element (for KHCS)</p> <p>G14: Full-bridge (for KCW)</p> <p>G15: Uniaxial active/dummy 2-element (for KHCM)</p> <p>H1: Uniaxial (for KM-30)</p> <p>H2: Uniaxial (for KM-120)</p> <p>H3: Uniaxial (for KMC)</p> <p>H4: Uniaxial with T thermocouple (for KMC)</p> <p>J1: Uniaxial (for KFS)</p>

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

To select the most suitable strain gage and related products, refer to Pages 18 to 31.

KYOWA can customize strain gages according to measuring purposes.



5 Applicable Linear Expansion Coefficient	Leadwire Cable			
(x10 <sup>-6</sup> /°C)	6 Type	7 Length	8 Wiring System	9 Color Code
- 11	L	1	M	3
R				
<p>1: CFRP, etc. for composite materials Amber (1.1) Diamond (1.2)</p> <p>3: GFRP, etc. for composite materials Silicon (2.3) Sulfur (2.7)</p> <p>5: GFRP, etc. for composite materials Tungsten (4.5) Lumber (5.0) Molybdenum (5.2) Zirconium (5.4) Kobar (5.9)</p> <p>6: GFRP, etc. for composite materials 28 Tantalum (6.6)</p> <p>9: CFRP, GFRP, etc. for composite materials Titanium alloy (8.5) Platinum (8.9) Soda-lime glass (9.2)</p> <p>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)</p> <p>13: NCF, etc. for corrosion and heat-resistant alloys Nickel (13.3) Printed board (13.0)</p> <p>16: Stainless steel SUS304 (16.2) Beryllium steel (16.7) Copper (16.7)</p> <p>23: 2014-T4 aluminum (23.4) Brass (21.0) Tin (23.0) 2024-T4 aluminum (23.2)</p> <p>27: Magnesium alloy (27.0) Composite material GFRP (35.0)</p> <p>65: Acrylic resin (65.0) Polycarbonate (66.6)</p>	<p>B: Glass-coated cable of 3 Ni-clad copper wires</p> <p>C: MI cable (for KHC, KHCD, KHCM, KHCS and KHCX gages)</p> <p>D: Glass-coated cable of 3 FeNi-clad copper wires</p> <p>F: Fluoplastic-coated high/low temp. 3-wire cable (equiv. to L-3 leadwire cable)</p> <p>G: Polyethylene-coated cross-link 3-wire cable</p> <p>H: High/low temp. 3-wire cable (equiv. to L-17 leadwire cable)</p> <p>J: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</p> <p>L: Vinyl-coated flat 2 or 3-wire cable (L-6, L-7, L-9 or L-10)</p> <p>N: Polyester-coated copper wire cable</p> <p>R: Mid-temp. 2 or 3-wire cable (L-11 or L-12)</p> <p>W: Vinyl-coated flat 3-wire cable (for KM-120)</p> <p>Y: Vinyl-coated flat 2-wire cable (for KM-30)</p>	<p>C: Centimeter e.g. 30C = 30cm</p> <p>M: Meter e.g. 3M = 3m</p>	<p>2: 2-wire system 3: 3-wire system</p> <p>In the case of encapsulated gage Number: Length of soft cable</p> <p>V: With bridge adapter fitting</p> <p>F: With compression fitting</p> <p>FV: With both bridge adapter and compression fitting</p>	<p>Color codes are available for only vinyl-coated flat leadwire cables.</p> <p>2-wire system</p> <p>R: Red W: White* B: Black* G: Green* Y: Yellow*</p> <p>*Custom-made</p> <p>S: Multi-axial gages (Standard)</p> <ul style="list-style-type: none"> <li>Biaxial (D16) 0° (1st axis): Red 90° (2nd axis): White</li> <li>Triaxial (D17) 0° (1st axis): Red 45° (3rd axis): Green 90° (2nd axis): White</li> </ul> <p>3-wire system</p> <p>The insulator color is white and the stripe color code is as follows.</p> <p>R: Red L: Blue* B: Black* G: Green* Y: Yellow*</p> <p>*Custom-made</p> <p>S: Multi-axial gages (Standard)</p> <ul style="list-style-type: none"> <li>Biaxial (D16) 0° (1st axis): Red 90° (2nd axis): Black</li> <li>Triaxial (D17) 0° (1st axis): Red 45° (3rd axis): Blue 90° (2nd axis): Black</li> </ul>

To select a strain gage equipped with leadwire cable, refer to Page 24.

To select a strain gage and leadwire cable separately, refer to Page 26.