## Strain Gage Model Number Coding System

### 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
- **KC**: Weldable waterproof foil strain gage
- **KCI**: Wire strain gage
- **KM**: Embedded foil strain gage for concrete
- **KCM**: 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
- **KFMG**: 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
- **KHC**: Encapsulated strain gage
- **KHCC**: Encapsulated strain gage
- **KHCN**: Encapsulated strain gage
- **KHC**: Encapsulated strain gage
- **KFU**: High-temperature foil strain gage
- **KHF**: High-temperature foil strain gage
- **KH**: Weldable high-temp. foil strain gage
- **KFL**: Low-temperature foil strain gage
- **KLM**: Ultrahigh-elongation wire strain gage
- **KFLG**: High-elongation foil strain gage
- **KFN**: Noninductive foil strain gage
- **KFS**: Shielded foil strain gage
- **KFC**: Foil bending strain gage
- **KCH**: Foil strain gage with protector
- **KMP**: Embedded foil strain gage for plastics
- **KTB**: Temperature gage
- **KV**: Crack gage

### 2 Gage Length
- 015: 0.15mm
- 02N: 0.2mm
- 02: 0.2mm
- 03: 0.3mm
- 05: 0.5mm
- 1N: 1mm
- 1: 1mm
- 1.5: 1.5mm
- 2N: 2mm
- 2: 2mm
- 3: 3mm
- 4N: 4mm
- 4: 4mm
- 5: 5mm
- 6: 6mm
- 7: 7mm
- 9: 9mm
- 10: 10mm
- 20: 20mm
- 30: 30mm
- 40: 40mm
- 60: 60mm
- 70: 70mm
- 80: 80mm
- 120: 120mm

### 3 Resistance
- 50: 50Ω
- 60: 60Ω
- 120: 120Ω
- 200: 200Ω
- 350: 350Ω
- 500: 500Ω
- 1K: 1000Ω
- 2K: 2000Ω
- 10K: 10000Ω

### 4 Gage Pattern
- A1: Uniaxial, leads at one end (KH, KTB gage)
- A9: Uniaxial, leads at one end (KLM gage)
- C1: Uniaxial, leads at one end (foil gage)
- C2: Uniaxial 90°, lead at both ends
- C5: Uniaxial 0°, lead at both ends
- C9: Uniaxial, leads at one end (KFN gage)
- C11: Uniaxial, 2-element, 1mm thick (KFG gage)
- C12: Uniaxial, 2-element, 2mm thick (KFG 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: Quadraxial 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 (115°/80°), 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)
- 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 KH)
- G9: Uniaxial active/dummy 2-element, SUS (for KH)
- G10: Uniaxial (for KCM)
- G11: Uniaxial (for KCH)
- G12: Uniaxial active/dummy 2-element (for KCS)
- G13: Uniaxial active/dummy 2-element (for KHCS)
- G14: Biaxial 0°/90° (for KCS)
- G15: Uniaxial active/dummy 2-element (for KHC)
- H1: Uniaxial (for KM-30)
- H2: Uniaxial (for KM-120)
- H3: Uniaxial (for KMP)
- H4: Uniaxial with T thermocouple (for KMC)
- J1: Uniaxial (for KFS)

### Expansion Coefficient
- Triaxial 0°
- Biaxial 0°
- Uniaxial 0°
- Uniaxial, leads at a side, plane arrangement
- Triaxial 0°
- Biaxial 0°
- Uniaxial, leads at both ends
- Triaxial 0°
- Biaxial 0°
- Uniaxial 0°

### Color Code
- Red
- Blue
- Green
- Yellow
- Black
- White

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

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To select the most suitable strain gage and related products, refer to Pages 18 to 31.
<table>
<thead>
<tr>
<th>Applicable Linear Expansion Coefficient</th>
<th>Leadwire Cable</th>
<th>Wiring System</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: CFRP, etc. for composite materials</td>
<td>B: Glass-coated cable</td>
<td>2: 2-wire system</td>
<td>Color codes are available for only vinyl-coated flat leadwire cables.</td>
</tr>
<tr>
<td>Amber (1.1)</td>
<td>of 3 Ni-clad copper wires</td>
<td>3: 3-wire system in the case of encapsulated gage</td>
<td></td>
</tr>
<tr>
<td>Diamond (1.2)</td>
<td>C: MI cable (for KHC, KHCDB, KHCMD, KHCMS and KHCX gages)</td>
<td>Number: Length of soft cable</td>
<td></td>
</tr>
<tr>
<td>3: GFRP, etc. for composite materials</td>
<td>D: Glass-coated cable</td>
<td>V: With bridge adapter</td>
<td></td>
</tr>
<tr>
<td>Silicon (2.3)</td>
<td>of 3 FeNi-clad copper wires</td>
<td>F: With compression fitting</td>
<td></td>
</tr>
<tr>
<td>Sulfur (2.7)</td>
<td>E: Fluorescent-coated high/low temp.</td>
<td></td>
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</tr>
<tr>
<td>5: GFRP, etc. for composite materials</td>
<td>3: 3-wire cable (equiv. to L-3 leadwire cable)</td>
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<td></td>
</tr>
<tr>
<td>Tungsten (4.5)</td>
<td>F: 3-wire cable (equiv. to L-17 leadwire cable)</td>
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<td></td>
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<tr>
<td>Lumber (5.0)</td>
<td>G: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
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</tr>
<tr>
<td>Molybdenum (5.2)</td>
<td>H: Vinyl-coated flat 2 or 3-wire cable (L-6, L-7, L-9 or L-10)</td>
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<td></td>
</tr>
<tr>
<td>Zirconium (5.4)</td>
<td>I: Polyester-coated copper wire cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kobar (5.9)</td>
<td>J: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6: GFRP, etc. for composite materials</td>
<td>K: Glass-coated cable</td>
<td>R: Red</td>
<td></td>
</tr>
<tr>
<td>28 Tantalum (6.6)</td>
<td>of 3 Ni-clad copper wires</td>
<td>W: White*</td>
<td></td>
</tr>
<tr>
<td>9: CFRP, GFRP, etc. for composite</td>
<td>E: Fluorescent-coated high/low temp. 3-wire cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>materials</td>
<td>F: 3-wire cable (equiv. to L-17 leadwire cable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium alloy (8.5)</td>
<td>G: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
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<td></td>
</tr>
<tr>
<td>Platinum (8.9)</td>
<td>H: Vinyl-coated flat 2 or 3-wire cable (L-6, L-7, L-9 or L-10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soda-lime glass (9.2)</td>
<td>I: Polyester-coated copper wire cable</td>
<td>R: Red</td>
<td></td>
</tr>
<tr>
<td>11: Common steel (11.7)</td>
<td>J: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
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<td></td>
</tr>
<tr>
<td>SUS631 (10.3)</td>
<td>K: Glass-coated cable</td>
<td>W: White*</td>
<td></td>
</tr>
<tr>
<td>SUS630 (10.6)</td>
<td>of 3 Ni-clad copper wires</td>
<td>Y: Yellow*</td>
<td></td>
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<tr>
<td>Cast iron (10.8)</td>
<td>E: Fluorescent-coated high/low temp. 3-wire cable</td>
<td></td>
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</tr>
<tr>
<td>Nickel-molybdenum steel (11.3)</td>
<td>F: 3-wire cable (equiv. to L-17 leadwire cable)</td>
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<td></td>
</tr>
<tr>
<td>Beryllium (11.5)</td>
<td>G: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
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</tr>
<tr>
<td>Inconel X (12.1)</td>
<td>H: Vinyl-coated flat 2 or 3-wire cable (L-6, L-7, L-9 or L-10)</td>
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</tr>
<tr>
<td>13: NCF, etc. for corrosion and heat</td>
<td>I: Polyester-coated copper wire cable</td>
<td>R: Red</td>
<td></td>
</tr>
<tr>
<td>resistant alloys</td>
<td>J: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel (13.3)</td>
<td>K: Glass-coated cable</td>
<td>W: White*</td>
<td></td>
</tr>
<tr>
<td>Printed board (13.0)</td>
<td>of 3 Ni-clad copper wires</td>
<td>Y: Yellow*</td>
<td></td>
</tr>
<tr>
<td>16: Stainless steel SUS304 (16.2)</td>
<td>E: Fluorescent-coated high/low temp. 3-wire cable</td>
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</tr>
<tr>
<td>Beryllium steel (16.7)</td>
<td>F: 3-wire cable (equiv. to L-17 leadwire cable)</td>
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<td></td>
</tr>
<tr>
<td>Copper (16.7)</td>
<td>G: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
<td></td>
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</tr>
<tr>
<td>23: 2014-T4 aluminum (23.4)</td>
<td>H: Vinyl-coated flat 2 or 3-wire cable (L-6, L-7, L-9 or L-10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brass (21.0)</td>
<td>I: Polyester-coated copper wire cable</td>
<td>R: Red</td>
<td></td>
</tr>
<tr>
<td>Tin (23.0)</td>
<td>J: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024-T4 aluminum (23.2)</td>
<td>K: Glass-coated cable</td>
<td>W: White*</td>
<td></td>
</tr>
<tr>
<td>27: Magnesium alloy (27.0)</td>
<td>of 3 Ni-clad copper wires</td>
<td>Y: Yellow*</td>
<td></td>
</tr>
<tr>
<td>Composite material GFRP (35.0)</td>
<td>E: Fluorescent-coated high/low temp. 3-wire cable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65: Acrylic resin (65.0)</td>
<td>F: 3-wire cable (equiv. to L-17 leadwire cable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycarbonate (66.6)</td>
<td>G: Vinyl-coated normal temp. low-noise 3-wire cable (equiv. to L-13 leadwire cable)</td>
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<td></td>
</tr>
</tbody>
</table>

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.