

Weldable Strain Gage

For Static/Dynamic Strain Measurement at up to 950°C



KHCX

Typical Applications

Grasping of physical properties of:

- High-temperature gas turbine blades
- Aircraft jet engine turbines
- Incinerators & heat treat furnaces
- Petrochemical reactors
- Heat-resistant alloys, etc.

- ◆ Encapsulated design enables easy installation by spot-welding.
- ◆ Immediate measurement upon installation is possible; no curing or coating required.
- ◆ Gage length is 10 mm.
- ◆ Gage resistance is 120 Ω.
- ◆ Gage factor of approximately 1.5 is ensured even at 950°C.
- ◆ Half-bridge structure ensures temperature compensation.
- ◆ Bridge adapter enables easy and error-free connection to an amplifier.

Specifications

Model: KHCX-10-120-G13

Gage Type: Uniaxial half-bridge temperature-compensation type (encapsulated)

Resistive Element: Heat-resistant special alloy

Gage Length: 10 mm

Flange and Sheath Tube: NCF 600

Gage Resistance: Approx. 120 Ω

Leadwire Cable

MI Cable: Ni conductor cable, 1.6 mm diameter by 2 m long, NCF 600 sheath

Soft Cable: 1.7 mm diameter by 0.5 m long

Operating Temperature Range: -196° to 950°C (for both static strain and dynamic strain)

Applicable Linear Expansion Coefficient: 11, 13 x10⁻⁶/°C or user specified

Gage Factor:

Approx. 1.7 at 25°C

Approx. 1.5 at 950°C

Thermally-induced Apparent Strain: Estimated curve is shown in the Test Data Sheet.

Compensated Temperature Range: 25° to 950°C

Drift: Within ±20 x10⁻⁶/h (950°C)

Strain Limit: 10000 μm/m (950°C)

Fatigue Life: 1 x10⁶ times (950°C, load strain: ±100 μm/m, load frequency: 6 Hz)

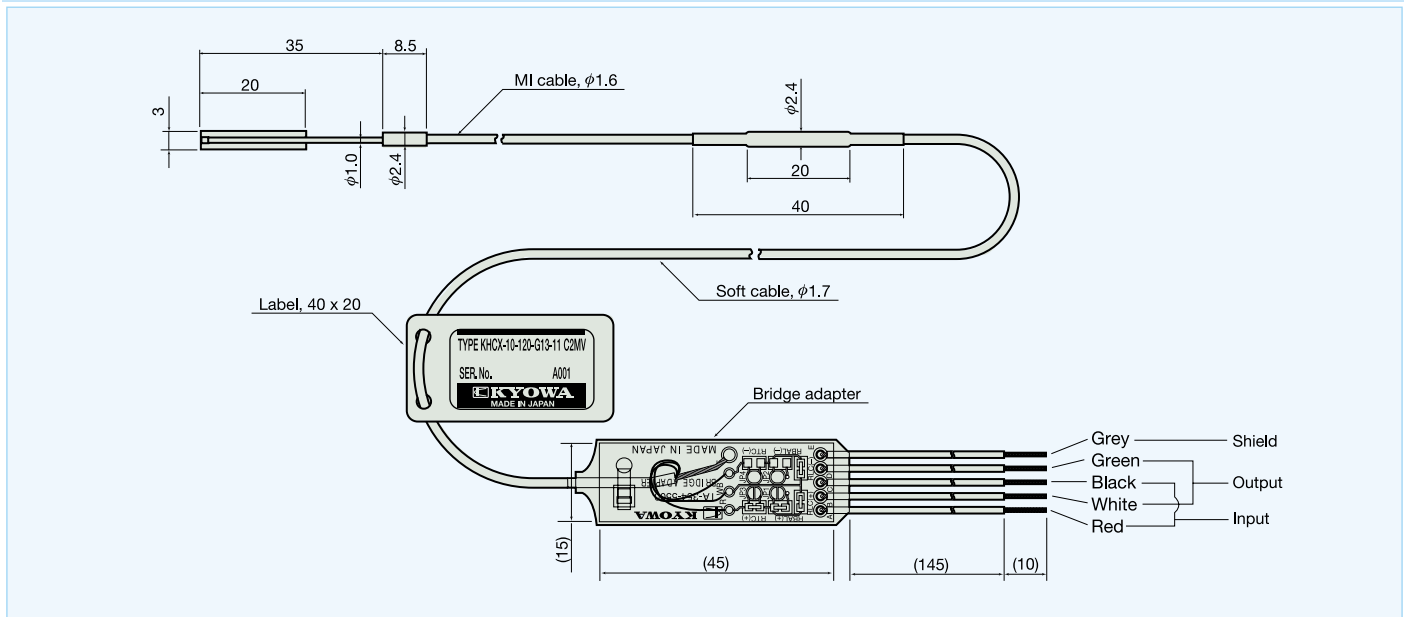
Maximum Allowable Current: 50 mA

Insulation Resistance: 1000 MΩ (25°C)

Minimum Mountable Curvature Radius: 75 mm (20 mm in the case of the model delivered with the flange bent at the factory)

Mounting Method: Spot welding

Dimensions



JQA-0821
JQA-EM4824

Specifications are subject to change without notice for improvement.



Safety precautions

Be sure to observe the safety precautions given in the instruction manual, in order to ensure correct and safe operation.

Reliability through integration



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