

# Weldable Strain Gage

For Static/Dynamic Strain Measurement at up to 750°C



## 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 5mm
- ◆ Gage resistance is 120Ω
- ◆ Gage factor of approximately 1.2 or higher is insured even at 750°C
- ◆ Half-Bridge structure ensures temperature compensation
- ◆ Bridge adapter enables easy and error-free connection to an amplifier
- ◆ Compression fitting option enables easy wiring into a vessel, etc.

# Specifications

**Model: KHCR-5-120-G16**

**Gage Type:** Uniaxial half-bridge temperature-compensation type

**Resistive Element:** Heat-resistant special alloy

**Gage Length:** 5mm

**Flange and Sheath Tube:** NCF 600

**Gage Resistance:** Approx. 120Ω

**Leadwire Cable:**

*MI Cable:* 3-Conductor (Ni) cable, 1.0mm diameter by 2m length (std.), NCF 600 sheath

*Soft Cable:* 3-Conductor ETFE-coated shielded cable, 1.7mm diameter by 0.5m length (std.)

**Operating Temperature Range:** 25° to 750°C

**Applicable Linear Expansion Coefficient:** 11, 13, 16 x 10<sup>-6</sup>/°C

**Gage Factor (Sensing Part):**

Approx. 1.5 at 25°C

Approx. 1.2 at 750°C

**Thermally-Induced Apparent Strain:** Estimated curve is shown in the Test Data Sheet

**Compensated Temperature Range:** 25° to 750°C

**Drift:** Within ±20 x 10<sup>-6</sup>/h (750°C)

**Strain Limit:** 10000μm/m (750°C)

**Fatigue Life:** 1 x 10<sup>6</sup> times (750°C)

**Maximum Allowable Current:** 50mA

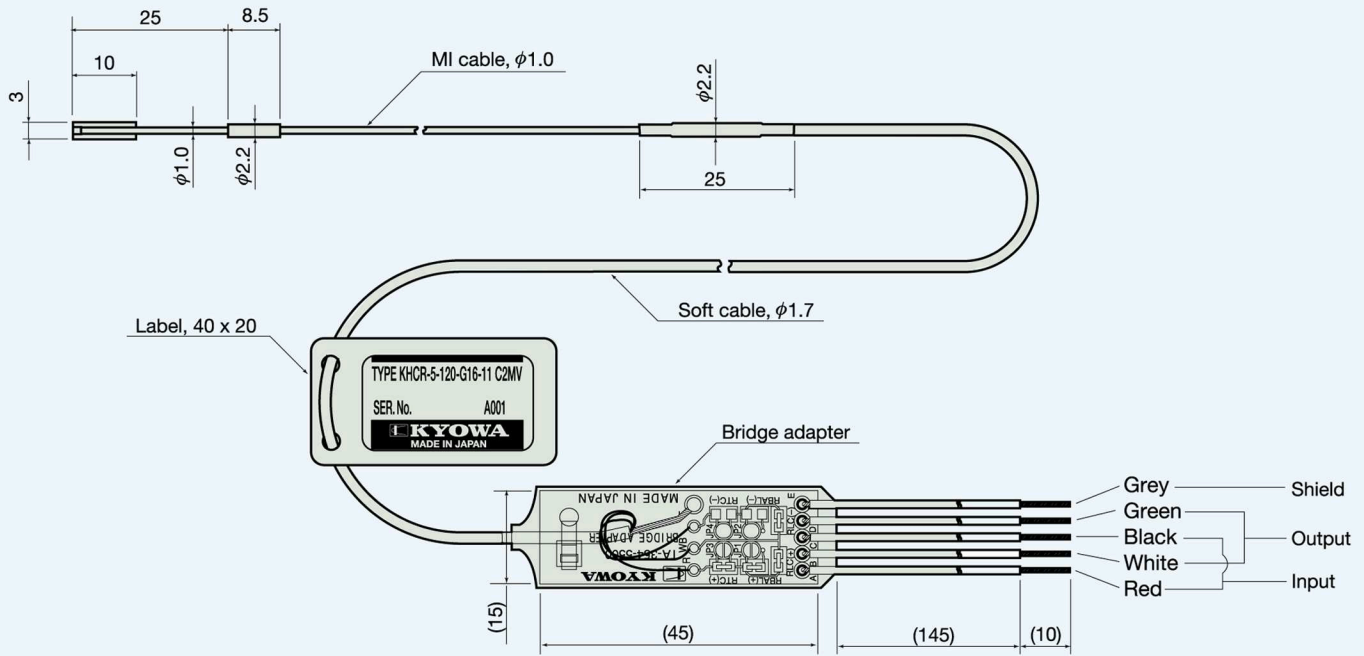
**Insulation Resistance:** 1000 MΩ or more (25°C)

**Minimum Mountable Curvature Radius:** 15mm

**Mounting Method:** Spot welding

**Options:** Bridge Adapter, Compression Fitting

# Dimensions



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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.

For Additional Information: