

KHC/KHCM/KHCR/KHCS/KHCV/KHCX



Encapsulated Gages

These weldable strain gages feature a hermetically sealed structure, and consist of a sensing section and cable to extract output.

They are capable of measuring strain in severe environments under extremely high temperature, high pressure, or high humidity, in fields such as power generation (including nuclear power), automobiles, and aircraft.

*The characteristics listed are merely for reference, and may vary depending on operating conditions including temperatures.

■ Operating Temperature

Operating Temperature	Model	Installation Method
-196 to 550°C	KHC	Spot welding
-196 to 650°C	KHCM	Spot welding
25 to 750°C	KHCR	Spot welding
-196 to 750°C	KHCS	Spot welding
25 to 800°C	KHCV	Spot welding
-196 to 950°C	KHCX	Spot welding

■ Models

Patterns, Gage Resistance, Gage Factor	Model	Dimensions (mm)			Remarks
		Gage length	Flange Length	Width	
KHC 550°C (Dynamic) 500°C (Static) Uniaxial, 2-element, temperature-compensation type Resistance: 120 Ω Gage factor (500°C): Approx. 1.75 for gage length 20 mm Approx. 1.5 for gage length 10 mm	KHC-20-120-G8-11	20	30	4	Material: NCF600 (Equivalent)
	KHC-20-120-G8-13	20	30	4	
	KHC-20-120-G8-16	20	30	4	
	KHC-10-120-G8-11	10	16.5	4	Material: NCF600 (Equivalent)
	KHC-10-120-G8-13	10	16.5	4	
	KHC-10-120-G8-16	10	16.5	4	



*The above picture is KHC-10-120-G8-11.

KHC 550°C (Dynamic) 500°C (Static) Uniaxial, 2-element, temperature-compensation type Resistance: 120 Ω Gage factor (500°C): Approx. 1.75 for gage length 20 mm Approx. 1.5 for gage length 10 mm	KHC-20-120-G9-11	20	30	5	Material: SUS321 (Equivalent)
	KHC-20-120-G9-13	20	30	5	
	KHC-20-120-G9-16	20	30	5	
	KHC-10-120-G9-11	10	16.5	5	Material: SUS321 (Equivalent)
	KHC-10-120-G9-13	10	16.5	5	
	KHC-10-120-G9-16	10	16.5	5	



*The above picture is KHC-10-120-G9-11.

KHCM 650°C (Static/dynamic) Uniaxial, 2-element, temperature-compensation type Resistance: 120 Ω Gage factor (650°C): Approx. 1.8 for gage length 10 mm Approx. 1.4 for gage length 5 mm	KHCM-10-120-G15-11	10	20	3	Material: NCF600 (Equivalent)
	KHCM-10-120-G15-13	10	20	3	
	KHCM-10-120-G15-16	10	20	3	
	KHCM-5-120-G15-11	5	10	3	Material: NCF600 (Equivalent)
	KHCM-5-120-G15-13	5	10	3	
	KHCM-5-120-G15-16	5	10	3	



*The above picture is KHCM-10-120-G15-11.

KHCR 750°C (Static/dynamic) Uniaxial, 2-element, temperature-compensation type Resistance: 120 Ω Gage factor (750°C): Approx. 1.2	KHCR-5-120-G16-11	5	10	3	Material: NCF600 (Equivalent)
	KHCR-5-120-G16-13	5	10	3	
	KHCR-5-120-G16-16	5	10	3	



*The above picture is KHCR-5-120-G16-11.

KHCS 750°C (Static/dynamic) Uniaxial, 2-element, temperature-compensation type Resistance: 120 Ω Gage factor (750°C): Approx. 1.7	KHCS-10-120-G12B-11	10	20	3	Material: NCF600 (Equivalent)
	KHCS-10-120-G12B-13	10	20	3	
	KHCS-10-120-G12B-16	10	20	3	



*The above picture is KHCS-10-120-G12B-11.



Strain Gage

Load Cell

Pressure
SensorAcceleration
SensorTorque
SensorDisplacement
SensorComponent
Force
SensorAutomotive
SensorCivil
Engineering
Sensor



Strain Gage

Load Cell

Pressure Sensor

Acceleration Sensor

Torque Sensor

Displacement Sensor

Component Force Sensor

Automotive Sensor

Civil Engineering Sensor

Patterns, Gage Resistance, Gage Factor	Model	Dimensions (mm)			Remarks
		Gage length	Flange		
			Length	Width	
KHCV-800°C (Dynamic)	KHCV-5-120-G17	5	10	3	Material: NCF600 (Equivalent)

KHCV 800°C (Dynamic)**Uniaxial, 1-element**Resistance: 120 Ω

Gage factor (800°C): Approx. 1.2

**KHCX 950°C (Static/dynamic)****Uniaxial, 2-element, temperature-compensation type**Resistance: 120 Ω

Gage factor (950°C): Approx. 1.5



*The above picture is KHCX-10-120-G13-11.

MI Cable, Bridge Adapter, Compression Fitting and Codes

MI Cable		Option		
Length	Code of Length	Bridge Adapter A	Compression Fitting B	A & B
1 m	C1M	C1MV	C1MF	C1MFV
2 m (Std.)	C2M	C2MV	C2MF	C2MFV
3 m	C3M	C3MV	C3MF	C3MFV
4 m	C4M	C4MV	C4MF	C4MFV
5 m	C5M	C5MV	C5MF	C5MFV
6 m	C6M	C6MV	C6MF	C6MFV
8 m	C8M	C8MV	C8MF	C8MFV
10 m	C10M	C10MV	C10MF	C10MFV

*The length of soft cable is 50 cm.

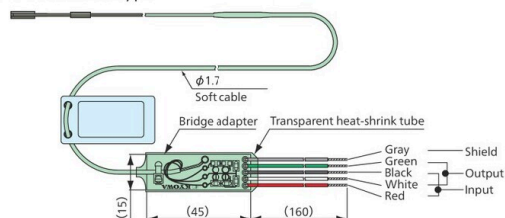
*Models with no bridge adapter require bridge box DB-120A/L (page 5-3).

*MI cable of KHCM-5, KHCR, KHCV, and KHCX: 2 m only

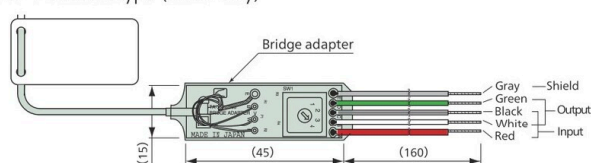
Bridge Adapter

It eliminates the need for wiring to temperature compensation resistors and it results in labor savings and improves reliability.

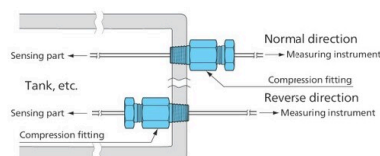
For 2-element type



For 1-element type (KHCV only)

**Compression Fitting**

For fixing MI cables. Allows a compression fitting to be installed in either inside or outside.

**How to order**

When ordering, specify the model together with code of the desired MI cable length and option code, suffixed with a space in between. The suffix may include codes of the optional bridge adapter and compression fitting. (See table above.) (For extension, contact us.)

E.g. KHCS-10-120-G12B-11 with 5 m long MI cable. → **KHCS-10-120-G12B-11 C5M**KHCS-10-120-G12B-11 with 2 m long MI cable and a bridge adapter pre-attached. → **KHCS-10-120-G12B-11 C2MV**

*To purchase an encapsulated strain gage, you must fill out the "Encapsulated Strain Gage Measurement Conditions Confirmation and Order Approval Request Form".

*1 gages/pkg