Strain Gages for Measuring Axial Tension of Bolts

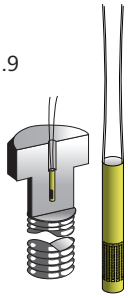
Patterns Gage Resistance, Gage Factors	Models	Dimensions (mm) Gage (Grid) Length	Gage (Grid) Width	Base Length	Base Width	Remarks

●KFB Strain Gages for Measuring Axial Tension of Bolts

RoHS

Uniaxial

Resistance: 120 Ω
Gage factor: Approx. 1.9



If it is difficult to bond a strain gage to the surface of a bolt for measuring the tightening stress, these gages enable measurement by embedding them into a hole, 2 mm diameter, bored from the top head of the bolt.

ϕ0.14 Polyester-coated copper cable 5 cm long

Length from the tip of base to the center of grid

KFB-3: 2.7 mm
KFB-1.5: 1.75 mm

Applicable Adhesives

	Operating Temp. after Curing the Adhesive
EP-370	Normal Temp. to 50°C

5 gages/pkg

Optional Accessories Dedicated gage terminal

Model	Dimensions	Base material	Conductor material	Remarks
T-F29	Outer: ϕ6 Inner: ϕ2.5	Glass epoxy	Copper foil	For bolt gages

T-F29

KFB-3-120-C20-11 N5C2	3	Approx. 6	11.5	ϕ1.9	Bore diameter 2
KFB-1.5-120-C20-11 N5C2	1.5	Approx. 6	5	ϕ1.9	Bore diameter 2

General-purpose Foil Strain Gages (KFGT)

Patterns Gage Resistance, Gage Factors	Models	Dimensions (mm) Gage (Grid) Length	Gage (Grid) Width	Base Length	Base Width	Remarks

●KFGT Series Foil Strain Gages with a Temperature Sensor

RoHS

Uniaxial 3-wire system

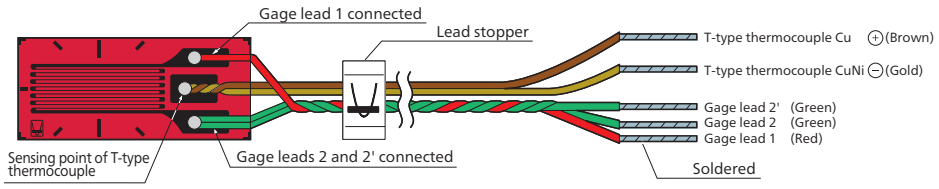
Polyester-coated copper lead wire
1 m long each
Resistance: 120 Ω
Gage factor: Approx. 2.1
Temperature sensor: T-type thermocouple
Accuracy: Within ±1.5 °C

The KFGT gages are foil strain gages incorporating a T-type thermocouple for simultaneous measurement of strain and temperature. They ensure efficient strain measurement under environments where temperature change or temperature gradient requires simultaneous measurement of strain and temperature. They also provide highly precise compensation of thermally-induced apparent strain. It is recommended to use Kyowa data logger UCAM-60C M14 as a measuring instrument.

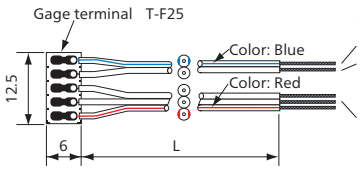
Applicable Adhesives

	Operating temp. after Curing the Adhesive
CC-33A	−10 to 120°C
CC-36	−10 to 100°C
CC-35	−10 to 120°C
EP-340	−10 to 120°C

KFGT-5-120-C1-11 N1M3	5	2.1	10	4.5	Standard accessories: Lead-wire stopper to prevent damage to the gage Pre-attached lead wire 1-m long 5 gages/ pkg
KFGT-5-120-C1-16 N1M3					
KFGT-5-120-C1-23 N1M3					
KFGT-5-120-C1-27 N1M3					
KFGT-2-120-C1-11 N1M3	2	1.8	7	4.5	
KFGT-2-120-C1-16 N1M3					
KFGT-2-120-C1-23 N1M3					
KFGT-2-120-C1-27 N1M3					



*The above picture is KFGT-5-120-C1-11 N1M3.



T-type thermocouple
ϕ0.2, cross-linking polyethylene-coated copper wire
ϕ0.2, cross-linking polyethylene-coated constantan wire

Lead-wire cable
ϕ0.08, cross-linking polyethylene-coated wire
(Resistance/wire: Approx. 0.22Ω/m)

Optional Accessories Extension lead-wire cables

Models	Dimensions (mm) Length	Operating Temperature	Remarks
NT-1M	1000	-10 to 120°C	5 gages/pkg
NT-2M	2000		
NT-4M	4000		