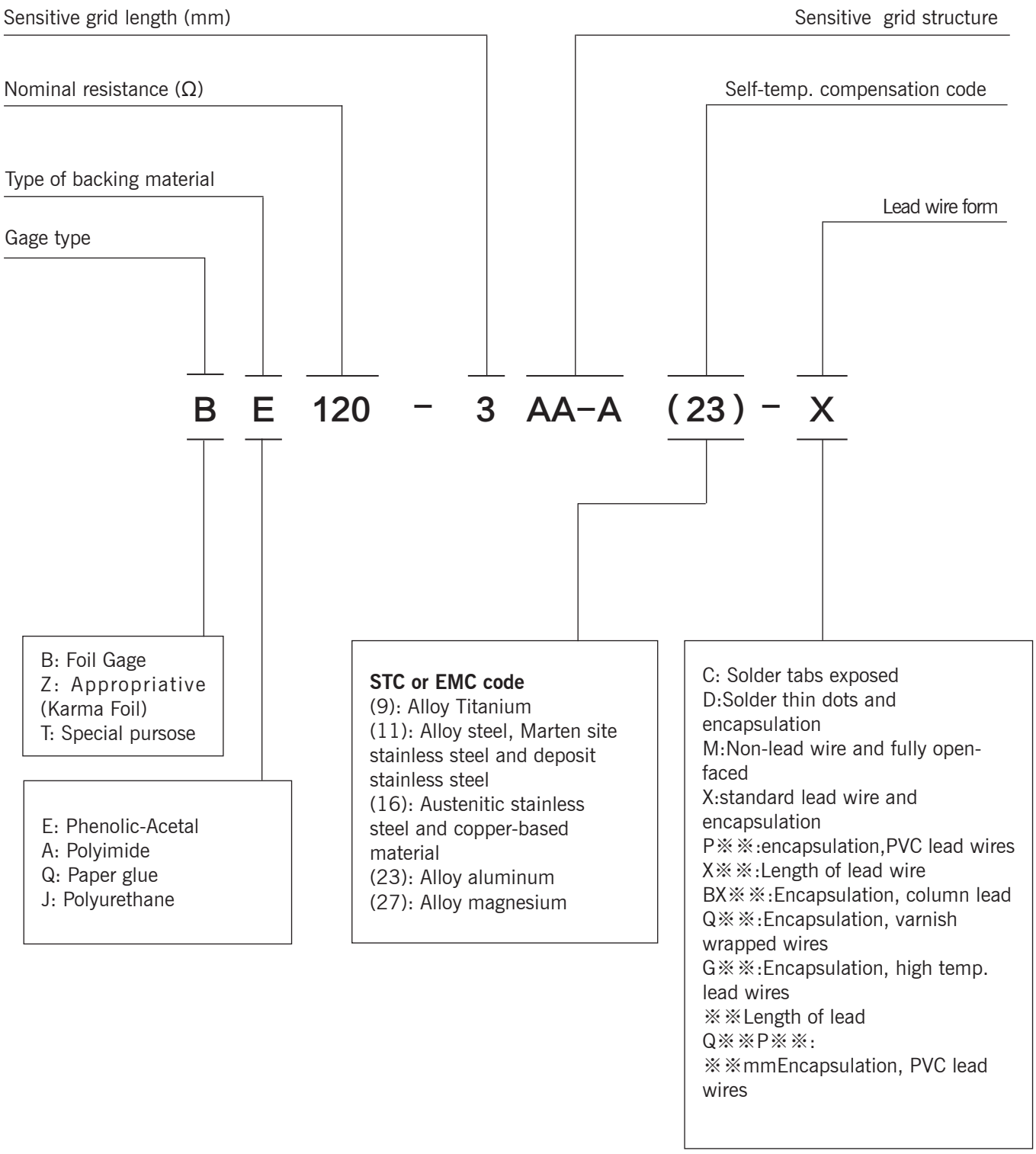
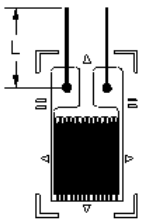
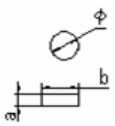
Stress Analysis Strain Gage

Designation system for Strain gage



Stress Analysis Strain Gage

Common lead specifications (size unit: mm)

Schematic	Lead Section	Standard Lead	P**	X**	BX**	Q**	G**
		Copper belt: L=30±3 a=0.075 b=0.2 Copper wire: L=30±3 Φ=0.15	L=unlimited inner core exposed diameter Φ=0.09 Quantity=7 Lead outside diameter: Φ=0.9 Temperature: -40~+105℃	L=unlimited Φ=0.15	L=unlimited a=0.075 b=0.2	L≤1000 Φ=0.15 Temperature: -40~+150℃	L≤1000 inner core exposed diameter: Φ=0.15 Lead outside diameter: Φ=0.47 Temperature: -80~ 250℃
lead material		Silver-plated copper / flat belt	PVC lead	Silver-plated copper	Silver plated copper belt	Enameled wire	High temperature lead

Stress-dependent strain gauge selection method

As a strain-resistance-sensitive element in engineering stress testing, the design and application of strain gauge engineering, Stress Analysis Strain Gauge has a significant meaning in the actual stress test process, often face different measurement environment, conditions, materials, etc., a reasonable choice of resistance strain gauge structure and type in order to accurately reflect the true strain of the measured body, toget twice the result with half the effort. The method is as follows:

1. Strain gauge series selection

According to the stress analysis process accuracy, temperature, material and other conditions, choose BE, BA, BQ series of resistance strain gauges respectively, the details can refer to the follow-up general strain gauge series introduction.

2. Strain gauge sensitive grid length selection

The grid length is an important parameter for selecting the strain gage. The output of the strain gauge is the average strain in the coverage area of the sensitive grid. In the stress concentration region, the peak strain is often confined to a small area. If a strain gauge with a larger grid length is used, it will cause obvious measurement error. However, many performance of shorter grid line gauges will decline, especially strain limit creep, static measurement stability and fatigue life.

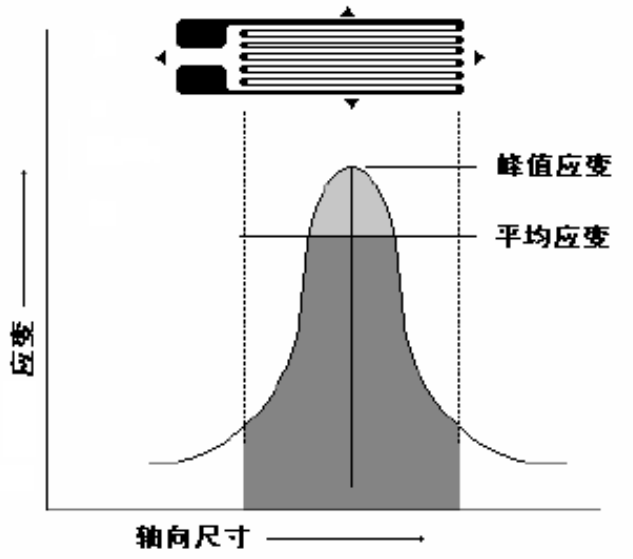


Figure 1 Strain gauge grid length on the measurement error

The output strain of the strain gage in the loaded state is the average strain of the sensitive grid section. In order to obtain the true measured value, the grid length should not be greater than the measuring area radius of 1/5 to 1/10. The longer gridline has easy to bond and wiring, heat dissipation and other advantages, the performance of the strain gauge has a certain improvement, but should be selected based on the actual measurement, for the small changed strain field measurement, we recommend Users to choose the grid length of 3~6mm strain gauges. If measure the non-uniform material, such as concrete, cast iron, cast steel, etc., should select grid length not less than the material of the uneven particle size of the strain gauge in order to more truly reflect the average strain within the structure. For strain gauges with high strain gradients and high response frequencies, strain gauges with a small length of sensitive grid (≤ 1mm) should be used as far as possible.

3. Strain gauge resistance selection

The choice of strain gauge resistance should be selected according to the heat dissipation area of the strain gauge, the influence of wire resistance, signal to noise ratio, power consumption. For the stress distribution test, stress test, static strain measurement, etc., should try to match the resistance with the instrument, generally the recommended selection of 120Ω, 350Ω strain gauges.

4. Strain gauge sensitive grid type selection

The structure of the sensitive grid includes the shape, number and direction of the sensitive grid, the size of the cross bar, the shape and distribution of the welding end, the width of the sensitive grid, etc. can be divided into single-axis strain gauges, multi-axis strain gauges and compound strain gauges.

01. The main feature of the uniaxial strain gage is that it has a single sensitive grid for measuring the strain in the direction of the sensitive grid. The structural types are "AA" and "AB". The "AA" sensitive grid is a single-axis horizontal structure type, can measure the pull, press, bending strain and displacement, etc .; "AB" for the uniaxial 45 ° sensitive grid structure type, can measure the pitch, torque, shear strain, etc.

Stress Analysis Strain Gage

02. The main feature of the double-grid strain gage is that there are two sensitive grids, which are axially interconnected at 90 ° or 0 °. In general, these strain gauges must be used to predict their stress or strain directions in advance. There are three main structural types "BB", "HA", "FB". The "HA" two grids are perpendicular to each other, the "T" strain gage, which is mainly used to test axial strain and lateral strain (also known as Poisson strain); "HA" 45 °, that is, "V" type strain gauge, mainly used to measure the shear stress, torque and other physical quantities; "FB" two grids are parallel to each other and are mainly used to measure side-by-side gradient stress or strain.

03. Three-grid strain is mainly measured in the direction of the principal stress unknown surface stress or point stress. Under normal circumstances, in the need to determine the stress on the material, bond the strain gauge to measure the stress or strain in three directions, through a specific formula to calculate the stress and stress direction, the three axles are 45 °, Or 120 ° and so on. The main structural types are "BA", "CA", "CC", "BC" and "CB". Among them, "BA", "CA" and "CC" are used to measure the plane stress, "BC", "CB "used to measure point stress.

04. The compound strain gage is a plurality of sensitive grid arranged on the same substrate into a desired shape and connected into a circuit which is mainly used for sensor manufacturing. Stress test process generally use the KA series of products on the pressure, intensity of pressure measurement.

05. Multi-axis strain gauges, also known as rose strain, which have two or more sensitive grids arranged in different directions on the same substrate for measuring the principal and principal stress directions of the measuring points. The strain gauges of multiple sensitive grids arranged in the same direction are called strain chains and are used to determine the stress distribution in the stress concentration zone. The main structural types are "FD" and "GD".

5. Selection of Temperature Self - Compensation Code for Strain Gauge

A strain gauge mounted on a specimen without any external force, unrestricted, the resistance value will change (indicating strain) when the ambient temperature changes, known as the thermal output. The thermal output is due to the difference in the coefficient of temperature between the resistance temperature coefficient of the strain gage sensitive grid material and the linear expansion coefficient between the sensitive grid material and the material of the test piece. The result of the superposition can be expressed by the following formula:

$$\varepsilon_t = [(\alpha_g / K) + (\beta_s - \beta_g)] \triangle t$$

Where αg and βg are the resistance temperature coefficient and the linear expansion coefficient of the strain gage sensitive grid material, K is the sensitivity coefficient of the strain gage, βs is the linear expansion coefficient of the specimen, and Δt is the relative temperature change from the reference temperature. Note that the thermal output is not directly proportional to the amount of temperature change, where the coefficients are a function of temperature; the heat output is only practical if the sensitive grid material and the specimen material have clear significance.

Stress Analysis Strain Gage

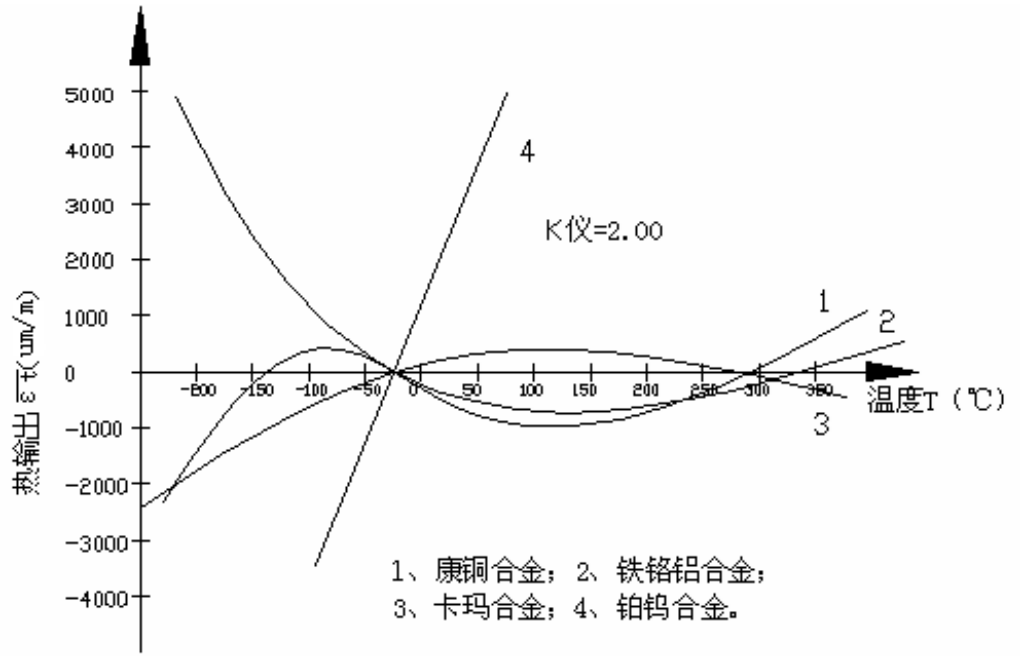


Figure 2 Strain gauge thermal output curves for different materials on steel specimens

Figure 2 shows the typical thermal output curves of several strain alloy materials for steel specimens. As can be seen from the figure, when the temperature deviation from the reference temperature, thermal output error becomes large, for static strain precision measurement must correct or compensate error. Since the thermal output is the largest source of error in static strain measurement, and the thermal output dispersion increases as the thermal output value increases.

This difference is greater when there is a temperature gradient or transient in the test environment. Therefore, it is desirable that the thermal output value of the strain gage tends to zero. And the strain gauge that satisfies this requirement is called a temperature self-compensating strain gauge.

The internal crystal structure of the sensitive grid material can be recombined and the resistance temperature coefficient can be changed by adjusting the alloy composition ratio of the sensitive grid material of the strain gage, changing the compression ratio of the cold rolling molding and the appropriate heat treatment, so as to realize the elasticity or test the temperature of the material from the compensation function to meet the requirements of high-precision stress analysis. Our company currently offers the following temperature self-compensation coefficient strain gauge:

Compensation coefficient	Applicable material	Linear expansion coefficient typical value
9	Alloy Titanium	8.8×10^{-6}/℃
11	Alloy steel, martensitic stainless steel and precipitation hardening stainless steel	11.3×10^{-6}/℃
16	Austenitic stainless steel and copper base material	16.0×10^{-6}/℃
23	Alloy aluminum	23.2×10^{-6}/℃
27	Alloy magnesium	26.1×10^{-6}/℃

Stress Analysis Strain Gage

01. When the temperature self-compensating strain gauge matches the specimen material, it is not necessary to correct the thermal output within the compensation temperature range.
02. When the temperature self-compensating strain gage required to use the material linear expansion coefficient and the specimen material is slightly different, should use two or four strain gauges composed of half bridge or full bridge to eliminate the impact of thermal output.
03. When using the 1/4 bridge for high-precision stress measurement, install the same strain gage as the compensation sheet on the same compensation block as the test piece material except for the work strain gauge installed on the surface of the specimen. In the same environmental conditions, the two strain gauges shall be connected to the adjacent arms of the Wheatstone bridge to eliminate the effect of the thermal output. In order to reduce the impact of the lead on the strain gauge, you can take three-wire or four-wire connection, while the use of stranded or shielded wire.

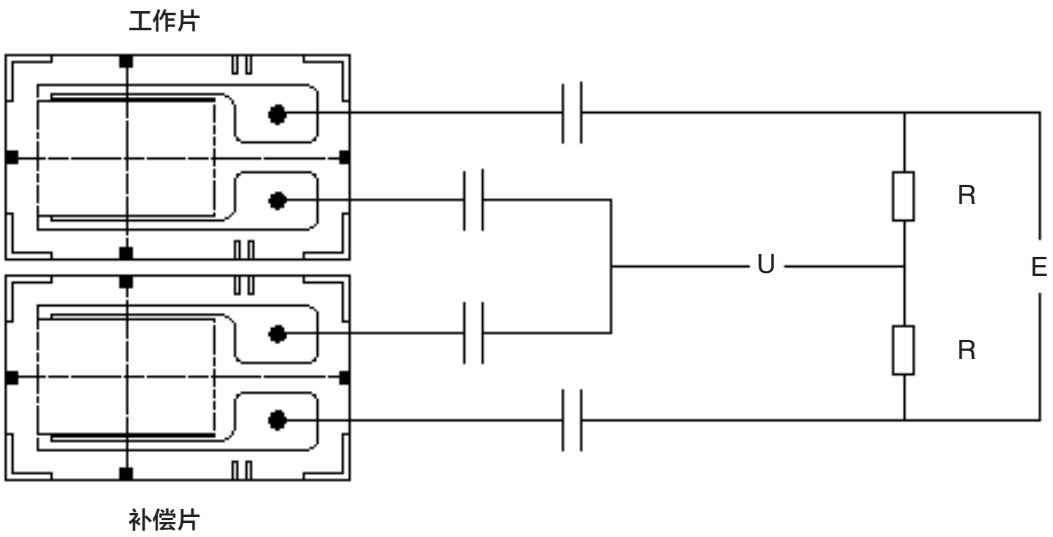


图 3　半桥桥路接法

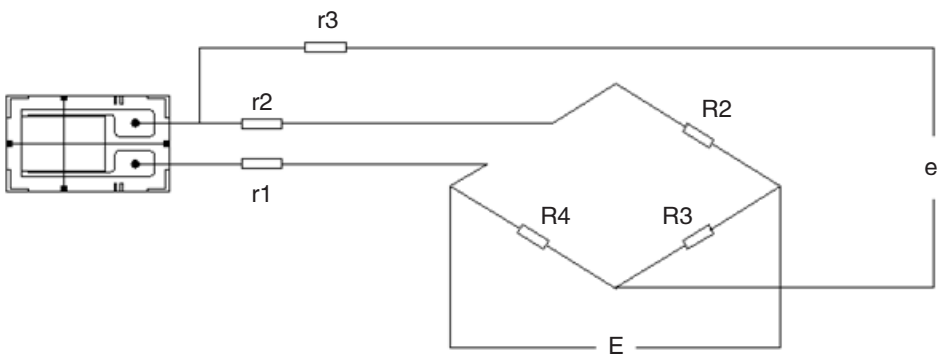


图 4　三线制接法

6. Wiring options

User reference model naming rules inside the introduction of lead, combined with the actual application needs, select the appropriate wiring, can also be customized according to user requirements.

Stress Analysis Resistance Strain Gauge Series Features and Technical Indexes

BE series

Phenolic-acetal base, corrugated or kamara foil, fully sealed structure; temperature can be self-compensated; good flexibility, easy to bond, stable performance, suitable for general precision sensor (0.05) and stress analysis.

BA series

Polyimide base, made of carbon or karma foil, fully sealed structure; temperature can be self-compensated; high elongation, good resistance to heat, electrical insulation performance, the use of a wide temperature range for 150℃ within the precision Stress Analysis.

BQ series

Paper impregnated base, made of corrosive foil, the substrate is thin and soft, easy to use, easy to bond, is the general stress analysis, especially the common structure of concrete components.

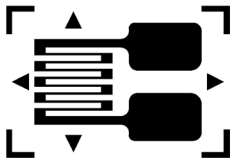
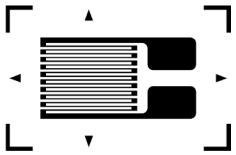
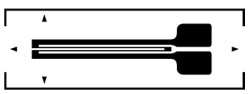
General Resistance Strain Gauge Specifications			
Typical technical data	BE Series	BA Series	BQ Series
Backing material	Phenolic-acetal	Polyimide	paper dipped
Sensitive grid material	Constantan	Constantan or Karma	Constantan
Typical resistance (Ω)	60, 120, 350, 650	120, 350	120
Tolerance to average resistance	≤±0.1%		
Typical Sensitivity Coefficient	2.00~2.20	1.86~2.20	2.00~2.20
Sensitive coefficient is scattered	≤±1%		
Strain limit	2.0%		
Fatigue life	$\geq 10^7$		
Operating temperature range (℃)	-30~+80	-30~+80 -80~+150	-30~+60
Temperature self-compensation coefficient	9、11、16、23、27		

Description:

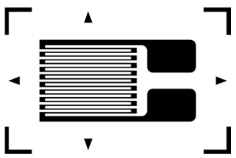
If you have special requirements for wet heat resistance, response and accuracy, it is recommended to use BYM (special polyimide film substrate), BKM (special PEEK film substrate) high-precision strain gauges, the specific circumstances can refer to our company "sensor resistance strain "Or direct inquiries.

Stress Analysis Strain Gage

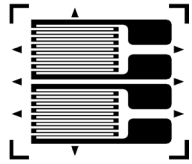
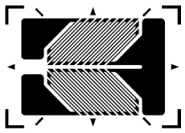
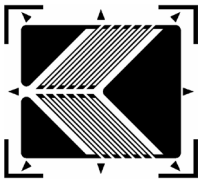
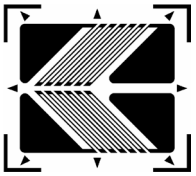
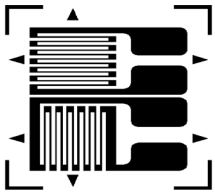
Stress Analysis Resistance Series Strain Gauge

Product form	Product Model	Sensitive grid size Long (L) × Width (W) (mm)	Backing size Long (L) × Width (W) (mm)
	BE(BA)60-02AA(**)	0.2×1.1	3.6×3.0
	BE(BA)60-03AA(**)	0.3×1.0	3.6×3.0
	BE(BA)60-05AA(**)	0.5×0.5	3.6×3.0
	BE(BA)120-02AA(**)	0.2×2.0	4.0×3.6
	BE(BA)120-03AA(**)	0.3×1.8	2.7×2.7
	BE(BA)120-03AA-A(**)	0.3×1.8	2.5×3.5
	BE(BA)120-05AA(**)	0.5×1.2	3.0×2.6
	BE(BA)120-05AA-A(**)	0.5×0.9	2.2×1.5
	BQ200-05AA-A(**)	0.5×5.2	5.0×7.0
	BQ100-3AA-D(**)	3.0×2.6	6.4×3.4
	BA100-3AA-A(**)	3.0×2.6	8.3×4.7
	BA100-5AA-A(**)	5.0×3.6	11.8×5.9
	BQ100-10AA-A(**)	10.0×2.8	18.5×5.9
	BE(BA)120-1AA(**)	1.0×1.9	4.3×3.5
	BE(BA)120-1AA-B(**)	1.0×3.1	4.5×4.2
	BE(BA、BQ)120-2AA(**)	2.0×1.7	5.4×3.2
	BE(BA、BQ)120-2AA-A(**)	1.9×2.3	6.3×3.4
	BE(BA、BQ)120-3AA(**)	2.8×2.0	6.4×3.5
	BE(BA、BQ)120-4AA(**)	4.2×1.9	8.2×3.6
	BE(BA、BQ)120-5AA(**)	5.0×2.0	10.1×4.0
	BA120-5.1AA-B(**)	5.0×2.4	11.0×4.0
	BE(BA、BQ)120-6AA(**)	5.9×2.7	9.8×4.3
	BE(BA、BQ)120-8AA(**)	7.8×2.6	12.2×4.3
	BE(BA、BQ)120-10AA(**)	9.8×3.0	15.0×5.0
	BQ10-30AA-B(**)	30.0×1.2	36.0×2.2
	BQ10-50AA-B(**)	50.0×1.2	54.5×2.2
	BQ10-70AA-B(**)	70.0×2.0	78.0×2.3
	BQ100-20AA-A(**)	20.0×3.4	29.5×4.7
	BE(BA、BQ)120-20AA(**)	20.0×3.0	26.8×5.9
	BE(BA、BQ)120-30AA(**)	30.0×2.3	36.0×5.7
	BE(BA、BQ)120-40AA(**)	41.0×2.5	51.0×7.0
	BE(BA、BQ)120-60AA(**)	57.0×2.2	67.0×6.7
	BE(BA、BQ)120-80AA(**)	80.0×2.5	90.0×7.0
	BE(BA、BQ)120-100AA(**)	100.0×3.7	110.0×7.0
	BQ200-20AA-A(**)	20.0×2.7	29.5×4.7

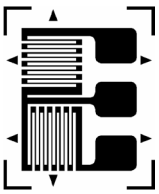
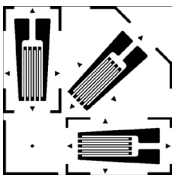
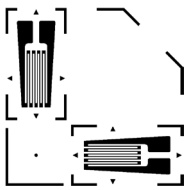
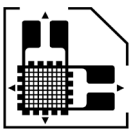
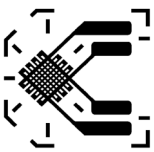
Stress Analysis Strain Gage

Product form	Product Model	Sensitive grid size Long (L) × width (W) (mm)	Backing size Long (L) × width (W) (mm)
	BQ200-3AA-A(**)	3.0×2.3	8.3×4.7
	BE(BA)200-4AA(**)	4.0×2.2	9.0×4.0
	BQ(BA)200-5AA-A(**)	5.0×2.2	11.8×5.9
	BE(BA)200-6AA(**)	6.0×2.2	10.4×4.5
	BQ200-10AA-A(**)	10.0×3.4	18.5×7.4
	BA300-1AA(**)	1.5×2.6	4.6×3.6
	BQ350-1.5AA(**)	1.5×4.0	4.9×4.8
	BE(BA)350-2AA(**)	2.0×2.1	5.2×3.4
	BE(BA)350-2AA-A(**)	2.1×2.7	4.5×4.0
	BE(BA)350-3AA(**)	3.1×3.5	7.4×4.9
	BE(BA)350-4AA(**)	4.0×2.8	8.2×4.6
	BE(BA)350-5AA(**)	4.8×3.4	9.4×5.0
	BE(BA)350-6AA(**)	6.4×3.8	11.0×5.4
	BE(BA)350-10AA(**)	9.4×4.1	15.4×6.1
	BQ400-5AA-A(**)	5.0×2.7	11.8×5.9
	BQ400-10AA-A(**)	10.0×4.1	18.5×8.1
	BE(BA)500-4AA(**)	4.0×3.3	7.9×4.6
	BE(BA)500-6AA(**)	6.0×3.3	11.6×5.3
	BE(BA)650-4AA(**)	4.2×4.5	8.9×5.9
	BE(BA)650-5AA(**)	5.0×3.9	9.0×5.6
	BE(BA)650-6AA(**)	6.2×4.2	10.6×5.7
	BE700-4AA(**)	4.0×4.4	8.6×6.0
	BQ700-5AA(**)	5.0×3.9	9.0×5.6
	BE(BA)1000-3AA(**)	3.2×4.8	7.4×7.4
	BE(BA)1000-6AA(**)	6.0×4.0	9.9×5.4
	BE(BA)1000-10AA(**)	10.0×4.2	14.8×6.0
	BE(BA)60-3AB(**)	3.0×3.0	8.2×5.1
	BE120-3AB(**)	3.0×3.0	8.4×4.8
	BE(BA)120-6AB(**)	5.8×5.8	9.7×7.4
	BE(BA)350-3AB(**)	3.0×3.0	8.2×5.1
	BE(BA)350-4AB(**)	4.0×4.0	9.1×5.8
	BE(BA)350-6AB(**)	5.9×5.9	12.0×8.3
	BE(BA)350-8AB(**)	7.9×7.9	13.3×10.0

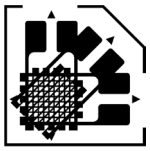
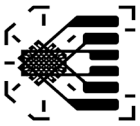
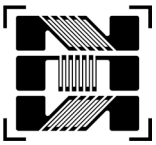
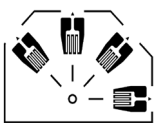
Stress Analysis Strain Gage

Product form	Product Model	Sensitive grid size Long (L) × width (W) (mm)	Backing size Long (L) × width (W) (mm)
	BE(BA)120-2FB(**)	2.0×2.0	5.6×5.2
	BE(BA)120-3FB(**)	2.7×2.0	6.5×6.0
	BE(BA)120-3FB-B(**)	3.0×1.4	6.0×5.4
	BE120-4FB(**)	4.0×2.0	7.3×5.5
	BE(BA)350-2FB(**)	2.1×2.8	6.4×7.6
	BE(BA)350-3FB(**)	3.2×2.8	7.4×7.4
	BE(BA)350-4FB(**)	4.0×2.4	7.8×6.2
	BE(BA)350-6FB(**)	5.9×2.8	9.8×7.3
	BE500-6FB(**)	5.9×2.8	9.8×7.3
	BA175-2HA(**)	2.0×4.2	9.0×5.6
	BA350-1HA(**)	1.2×2.7	8.0×4.0
	BE(BA)120-1HA-D(**)	1.1×2.0	5.3×4.5
	BE(BA)120-2HA-D(**)	2.0×2.6	7.0×5.8
	BE(BA)120-4HA-D(**)	4.1×2.9	8.3×8.3
	BE(BA)350-2HA-D(**)	2.1×4.3	8.9×5.7
	BE(BA)350-3HA-D(**)	2.9×4.0	8.8×6.8
	BE(BA)350-4HA-D(**)	4.2×2.8	8.3×8.3
	BE(BA)350-6HA-D(**)	5.9×3.7	10.5×11.1
	BE(BA)120-2HA-E(**)	2.0×2.6	7.0×5.8
	BE(BA)350-2HA-E(**)	2.0×4.3	8.9×5.7
	BE(BA)350-3HA-E(**)	3.0×3.9	8.8×6.8
	BE(BA)350-4HA-E(**)	4.2×2.8	8.3×8.3
	BE(BA)350-6HA-E(**)	5.9×3.7	10.6×11.1
	BA120-08BB(**)	0.8×1.1	4.0×3.0
	BE(BA、BQ)120-2BB(**)	2.0×2.4	7.2×5.6
	BE(BA)120-3BB(**)	2.8×3.3	8.5×6.5
	BE(BA)120-4BB(**)	4.0×4.5	11.0×8.0
	BE(BA)350-2BB(**)	2.2×3.2	7.6×6.0
	BE(BA)350-3BB(**)	3.1×3.4	8.8×6.6
	BE(BA)350-4BB(**)	4.0×4.1	9.7×7.7
	BE(BA)350-6BB(**)	6.0×6.0	13.8×9.7
	BE650-4BB(**)	4.0×4.4	10.3×7.9

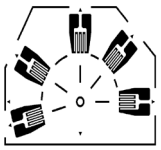
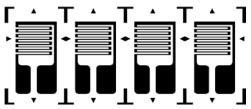
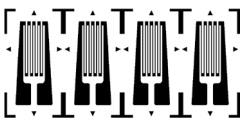
Stress Analysis Strain Gage

Product form	Product Model	Sensitive grid size Long (L) × width (W) (mm)	Backing size Long (L) × width (W) (mm)
	BE(BA)120-2BB-A(**)	1.9×2.3	6.6×5.6
	BE(BA)120-3BB-A(**)	2.8×3.3	8.5×6.5
	BE(BA)120-4BB-A(**)	4.0×4.4	10.3×7.5
	BE(BA)350-2BB-A(**)	2.2×3.3	7.9×6.2
	BE(BA)350-3BB-A(**)	3.0×3.4	9.8×6.8
	BE(BA)350-4BB-A(**)	4.0×4.1	9.7×7.7
	BE(BA)350-6BB-A(**)	5.9×6.3	14.3×9.6
	BQ400-3BB-B(**)	3.0×3.4	14.3×7.3
	BE(BA、BQ)120-1CA(**)	1.3×1.5	7.6×7.6
	BE(BA、BQ)120-2CA(**)	2.0×1.5	9.3×9.3
	BE(BA、BQ)120-2CA-B(**)	1.5×1.9	9.5×9.5
	BE(BA、BQ)120-3CA(**)	3.1×1.8	11.1×11.1
	BE(BA、BQ)120-4CA(**)	3.7×1.6	11.4×11.4
	BE(BA、BQ)120-6CA(**)	5.9×3.1	15.0×15.0
	BE(BA)350-2CA(**)	2.1×2.8	10.4×10.4
	BE(BA)350-3CA(**)	3.2×2.7	10.9×10.9
	BE350-4CA(**)	4.0×2.4	11.7×11.7
	BE(BA)120-1BA(**)	1.0×1.0	6.0×6.0
	BE(BA、BQ)120-2BA(**)	2.1×1.5	9.3×9.3
	BE(BA、BQ)120-2BA-A(**)	2.0×1.5	8.4×8.4
	BE(BA、BQ)120-2BA-K(**)	2.0×1.4	9.1×9.1
	BE(BA、BQ)120-3BA(**)	3.1×1.8	11.1×11.1
	BE(BA、BQ)120-4BA(**)	3.8×1.7	11.7×11.7
	BE120-5BA(**)	5.0×2.4	12.8×12.8
	BE(BA、BQ)120-6BA(**)	5.9×3.1	15.0×15.0
	BE350-2BA(**)	2.1×2.8	10.4×10.4
	BE(BA、BQ)350-3BA(**)	3.2×2.8	11.0×11.0
	BA120-1BC(**)	1.0×1.1	5.7×5.7
	BE120-2BC(**)	2.0×2.0	7.8×7.8
	BE120-3BC(**)	2.0×2.0	7.8×7.8
	BE120-4BC(**)	2.8×1.7	7.7×7.7
	BE(BA)350-2BC(**)	2.5×2.3	7.5×7.5
	BA120-1BC-A(**)	1.2×1.0	4.0×4.0
	BE120-5BC-A(**)	4.8×2.2	11.0×11.0

Stress Analysis Strain Gage

Product form	Product Model	Sensitive grid size Long (L) × width (W) (mm)	Backing size Long (L) × width (W) (mm)
	BE(BA)120-1CB(**)	1.0×1.1	5.7×5.7
	BE120-2CB(**)	2.0×2.0	7.8×7.8
	BE(BA)120-3CB(**)	2.8×1.7	7.7×7.7
	BE120-4CB(**)	4.1×1.9	9.5×9.5
	BE350-2CB(**)	2.5×2.3	7.5×7.5
	BE120-1CB-A	1.2×1.0	4.0×4.0
	BE120-1CC(**)	1.0×1.4	6.7×6.7
	BE(BQ)120-2CC(**)	2.2×1.9	8.5×8.5
	BE120-3CC(**)	3.0×1.4	10.0×10.0
	BE120-4CC(**)	4.0×1.8	11.5×11.5
	BA100-5CD-A(**)	Φ5.0	12.0×12.0
	BE120-2CD-A(**)	1.5×1.4	11.0×11.0
	BE(BA)120-2CD-K(**)	2.1×2.1	8.9×8.9
	BE120-3CD-K(**)	3.1×1.8	11.6×11.6
	BE350-2CD-K(**)	3.1×1.8	10.4×10.4
	BE350-3CD-K(**)	3.2×2.7	11.6×11.6
	BE120-2CE(**)	3.1×1.8	11.6×11.6
	BE120-3CE(**)	3.0×3.4	11.0×11.0
	BE120-6CE(**)	5.4×2.3	17.2×11.2
	BE350-3DB(**)	3.0×1.8	14.7×9.1

Stress Analysis Strain Gage

Product form	Product Model	Sensitive grid size Long (L) × width (W) (mm)	Backing size Long (L) × width (W) (mm)
	BA120-1EA(**)	1.0×1.6	11.0×8.0
	BA120-1EA-A(**)	1.0×1.6	11.0×8.5
	BE(BA)120-1GD(**)	1.0×1.8	8.2×4.0
	BE(BA)120-2GD(**)	2.0×2.2	15.4×6.2
	BA350-1GD(**)	1.0×2.5	13.3×3.9
	BE(BA)350-2GD(**)	2.0×3.8	20.0×5.0
	BE(BA)120-4FD(**)	3.8×1.5	11.0×8.0
	BE(BA)120-10KA(**)	Φ8.9	Φ10.0
	BA350-6KA-B(**)	Φ5.6	Φ6.0
	BA350-(9.9)KA (**)	Φ9.4	Φ10.0
	BE(BA)350-10KA(**)	Φ9.0	Φ10.0
	BE(BA)350-15KA(**)	Φ14.0	Φ15.0
	BE(BA)350-20KA(**)	Φ18.6	Φ20.0

Description:

1. BA series of strain at room temperature (within 80℃ or less) and the mid-temperature (150℃ or less) two categories, please specify when ordering. For example, room temperature BA350-3HA (11), the temperature BA350-3HA150 (11).
2. BE, BQ series strain rate self-compensation and non-temperature self-compensation. Such as temperature self-compensating BE120-3AA (11), non-temperature self-compensating BE120-3AA.
3. For sealed strain gauges with a sensitive grid structure of "HA-D" and "HA-E", only the form of welded leads is provided.
4. In addition to the models listed in the table, according to user requirements, to map or sample design and mass production of arbitrary shape and size of the resistance strain gauge.