


## Strain Resistance Gauge Sensor

A Strain Resistance Gauge Sensor, often simply called a strain gauge, is a precision sensing device used to measure strain (deformation or displacement) on an object's surface. It operates on the principle that the electrical resistance of a conductor changes when it is stretched or compressed. These sensors are fundamental components in load cells, pressure sensors, torque transducers, and structural testing applications.

Photos	Model	Grid Size L*W mm	Base Size L*W mm	Grid Material
	BF(BA)120-0.5AA(**)-A*	0.55*2.3	3.6*3.3	constantan
	BF(BA)120-1AA(**)-A*	1.0*2.2	4.3*3.5	
	BF(BA)120-1.5AA(**)-A*	1.5*2.4	6.5*4.7	
	BF(BA)120-2AA(**)-A*	1.8*1.8	5.2*3.2	
	BF(BA)120-2.8AA(**)-A*	2.8*2.0	6.4*3.5	
	BF(BA)120-3AA(**)-A*	3.0*2.0	6.6*3.6	
	BF(BA)120-3.4AA(**)-A*	3.4*3.3	9.1*6.1	
	BF(BA)120-4AA(**)-A*	4.0*3.3	7.9*4.6	
	BF(BA)120-5AA(**)-A*	4.8*2.0	8.6*3.6	
	BF(BA)120-6AA(**)-A*	5.8*2.0	9.6*3.6	
	BF(BA)120-8AA(**)-A*	8.0*2.0	11.9*3.6	
	BF(BA)120-10AA(**)-A*	9.8*3.0	15.0*5.0	
	BF(BA)120-20AA(**)-A*	20.0*2.6	26.3*4.0	
	BF(BA)120-20AA-P(**)-A*	20.0*4.1	26.8*5.9	
	BF(BA)350-1AA(**)-A*	1.5*2.6	4.6*3.6	
	BF(BA)350-1.2AA(**)-A*	1.2*3.8	4.8*4.6	
	BF(BA)350-1.5AA(**)-A*	1.5*4.0	4.9*4.8	
	BF(BA)350-2.5AA(**)-A*	2.5*3.3	6.4*4.5	
	BF(BA)350-2.4AA(**)-A*	2.4*3.0	4.9*4.0	
	BF(BA)350-2.2AA(**)-A*	2.2*1.8	5.1*2.4	
	BF(BA)350-2AA(**)-A*	2.1*3.8	5.6*4.6	
	BF(BA)350-2AA-P(**)-A*	2.0*2.4	5.0*3.5	
	BF(BA)350-3AA(**)-A*	3.2*3.1	6.8*4.1	
	BF(BA)350-3AA-P(**)-A*	3.2*3.1	7.4*4.4	
	BF(BA)350-4AA(**)-A*	4*3.1	8.1*4.1	
	BF(BA)350-4AA-P(**)-A*	3.8*2.2	8.2*4.2	
	BF(BA)350-5AA(**)-A*	5.0*2.9	9.3*4.5	
	BF(BA)350-6AA(**)-A*	6.1*3.1	10.4*5.4	
	BF(BA)350-10AA(**)-A*	9.4*4.1	15.4*6.1	
	BF(BA)1000-1.5AA(**)-A*	1.5*4.1	4.3*4.7	
	BF(BA)1000-2AA(**)-A*	2.0*4.0	4.9*4.8	
	BF(BA)1000-2AA-P(**)-A*	2.2*4.6	5.8*5.8	
	BF(BA)1000-3AA(**)-A*	3.0*5.3	6.7*6.5	
	BF(BA)1000-4AA(**)-A*	4.0*4.2	7.7*5.4	
	BF(BA)1000-5AA(**)-A*	5.0*4.0	8.6*5.2	
	BF(BA)1000-6AA(**)-A*	6.0*4.0	9.9*5.4	
	BF(BA)1000-6AA-T(**)-A*	6.5*3.1	11.4*5.1	
	BF(BA)1000-10AA(**)-A*	10.0*4.2	14.8*6.0	

The strain gauge consists of a thin conductive or metallic foil arranged in a fine grid pattern and bonded to a flexible backing material. When the surface to which the gauge is attached deforms under stress, the foil stretches or contracts. This change in length and cross-sectional area alters the electrical resistance of the material. The variation is usually very small, so the gauge is connected in a Wheatstone bridge circuit to precisely detect and amplify the resistance change

Parameters	BF Series	BF Series	BA Series
<b>Backing material</b>	phenolic	Modified phenolic	Polyimide
<b>Grid material</b>	constantan	Karma	constantan(Karma)
<b>Typical resistance</b>	120/350/1000	350 /1000/2000	350 / 1000
<b>Average resistance tolerance</b>	≤ ±0.1%		
<b>Typical sensitivity</b>	2.00~2.20	1.80~2.20	1.86~2.20
<b>Sensitivity coefficient dispersion</b>	≤ ±0.1%		
<b>Strain limit</b>	2%		
<b>Fatigue life</b>	≥ 10 <sup>7</sup> (±1000)		
<b>Operating temp. range</b>	-30~+80		
<b>Temp. self-compensation coefficient</b>	9, 11,16,23,27		