Strain Gauges For Stress Analysis

BE series

phenolic acetyl resin backing, constantan alloy, encapsulated gauges with temperature conpensation, good flexibility for installation, used for 0.05%FS accuracy transducers and stress analysis.

BA series

polyamide resin backing, constantan alloy, encapsulated gauges with temperature compensation, higher elongation, good humidity resistance & electric insulation performance, wide application temperature range, suitable for precision stress analysis within 150℃.

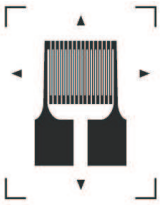
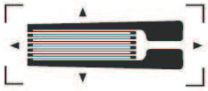
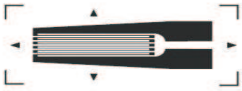
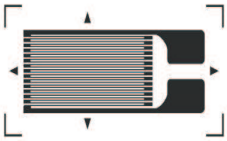
BQ series

paper-based acetyl resin backing, constantan alloy, open-faced gauges. thinner and soft backing make the gauges easy to be bonded, suitable for general stress analysis, especially for stress analysis of composed material or concrete material.

specification	BE series	BA series	BQ series
nominal resistance(Ω)	60,120,350,650	120,350	120
tolerance of resistance	<±0.1%	<±0.1%	<±0.1%
gauge factor	2.00~2.20	1.86~2.20	1.86~2.40
gauge factor resistance	<±1%	<±1%	<±1%
strain limit	2.0%	2.0%	2.0%
fatigue life	$>10^7$	$>10^7$	$>10^7$
metal foil	constantan alloy	constantan alloy	constantan alloy
backing material	phenolic acetyl resin	polyamide resin	paper-based acetyl resin
cover material, or surface protection	phenolic acetyl cover	phenolic acetyl cover	acetyl-resin surface protective coating
working temperature range	-30~+80℃	-30~+80℃, -80~+150℃	-30~+80℃
temperature compensation	titanium(9), mild steel(11), stainless steel(16), aluminum(23), magnesium(27)		not available
curing temperature	135℃(curing process)	165℃(post curing process)	
bonding adhesives	H-610,X-602,502	H-610	H-610, X-714, 502
solder pad finishing	X, C,D,F,U,X**,BX**		C, X,D,F,U,X**, BX**,Q**,G**
standard lead types	1. for strain gauges of BQ, BA, ZF series and patter of KA,BA,CA,BC,CB, CC,FD,AA-W,HA-W, the lead wire is round lead wire & length is 30±3mm. 2. for strain gauges of BE, BF, RNF, RBF series (except HA patter type), the lead wire is flat ribbon wire, and length is 30±3mm(for HA patter type,the wire length is 30±3mm). 3. if the user has special request for wire types and length, please indicate the code of wire type by referring to the ordering system.		

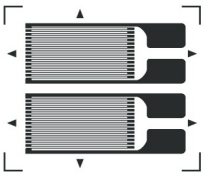
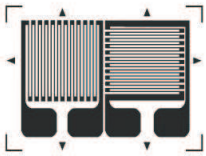
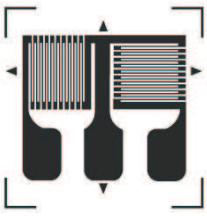
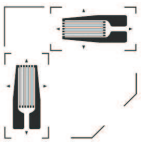
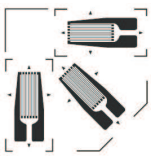
Xi'an UTOP Measurement Instrument Co., Ltd.
Tel.: +86-29-6299 1698 Fax: +86-29-6299 1526
Website: www.utopsensor.com
Email: sales@utopsensor.com

Strain Gauges For Stress Analysis

Gauge Pattern	Gauge Model	Gauge Grid(mm) Dimensions(L×M)	Gauge Backing(mm) Dimensions(L×M)
	BE(BA)60-02AA(**)	0.2×1.1	3.6×3.0
	BE(BA)120-02AA(**)	0.2×2.0	4.0×3.5
	BE(BA)120-1AA(**)	1.0×2.0	4.3×3.5
	BE60-03AA(**)	0.3×1.0	3.6×3.0
	BE60-05AA(**)	0.5×0.5	3.6×3.0
	BE120-03AA(**)	0.3×1.8	2.7×2.7
	BE120-05AA(**)	0.5×1.2	3.0×2.6
	BE(BA,BQ)120-2AA(**)	2.0×1.7	5.4×3.2
	ZF350-1AA(11)-W-X	1.0×2.0	3.0×2.0
	ZF350-2AA(11)-W-X	2.0×1.0	3.8×2.0
	BE(BA)120-2AA-A(**)	1.9×2.2	6.2×3.4
	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	10.0×4.0
	BE(BA,BQ)120-6AA(**)	5.8×2.7	9.7×4.2
	BE(BA,BQ)120-8AA(**)	7.8×2.6	12.2×4.3
	BE(BA,BQ)120-10AA(**)	9.8×3.0	15.5×5.0
	BQ120-20AA(**)	20.0×3.0	28.9×7.2
	BQ120-40AA(**)	42.0×2.4	52.0×7.2
	BQ120-60AA(**)	60.0×2.2	68.0×6.8
	BQ120-80AA(**)	80.0×2.5	90.0×7.0
	BQ120-100AA(**)	100.0×3.6	110.0×7.0
	BE(BA)200-4AA(**)	4.2×2.2	9.0×4.0
	BE(BA)200-6AA(**)	6.0×2.3	10.7×4.8
	BE200-8AA(**)	7.8×3.0	11.0×6.0
	BE(BA)350-2AA(**)	2.4×3.3	6.4×4.7
	BE350-2AA-A(**)	2.2×3.0	4.5×4.0
	BE(BA)350-3AA(**)	3.1×3.5	7.4×4.9
	BE(BA)350-4AA(**)N	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
	BE350-8AA(**)	7.5×5.4	11.2×7.4
	BE350-10AA(**)	10.0×4.8	13.8×6.6
	BE500-4AA(**)	4.0×3.3	7.9×4.6
	BE500-6AA(**)	6.0×3.3	11.6×5.3
	BE650-4AA(**)	4.2×4.5	8.9×5.9
	BE650-5AA(**)	5.0×3.9	9.0×5.6
	BE650-6AA(**)	6.2×4.2	10.6×5.7
	BE1000-3AA(**)	3.2×4.8	7.4×7.4
	BE1000-6AA(**)	6.0×5.0	10.0×6.3

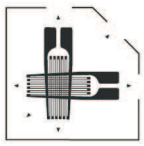
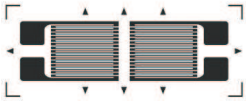
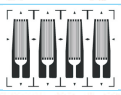
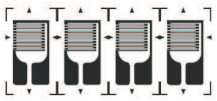
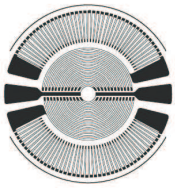
Xi'an UTOP Measurement Instrument Co., Ltd.
Tel.: +86-29-6299 1698 Fax: +86-29-6299 1526
Website: www.utopsensor.com
Email: sales@utopsensor.com

Strain Gauges For Stress Analysis

Gauge Pattern	Gauge Model	Gauge Grid(mm) Dimensions(L×M)	Gauge Backing(mm) Dimensions(L×M)
	BE(BA)350-3AB(**)	4.5×3.7	8.2×5.9
	BE(BA)350-4AB(**)	5.5×4.8	10.0×7.0
	BE(BA)350-6AB(**)	8.5×6.8	12.1×10.0
	BE(BA)350-8AB(**)	11.2×8.8	15.0×11.0
	BE(BA)120-2FB(**)	2.0×2.0	5.2×5.6
	BE(BA)120-3FB(**)	2.7×1.7	6.5×6.0
	BE(BA)120-4FB(**)	4.0×2.2	8.2×6.4
	BE(BA)350-2FB(**)	2.0×2.8	6.4×7.6
	BE(BA)350-3FB(**)	3.1×3.0	7.4×7.6
	BE(BA)350-4FB(**)	4.0×2.4	8.2×6.8
	BE350-6FB(**)	5.9×2.8	9.8×7.3
	BE(BA)120-2HA-D(**)	2.0×3.8	5.8×7.0
	BE(BA)350-2HA-D(**)	2.0×3.8	8.8×5.6
	BE(BA)350-3HA-D(**)	3.0×5.2	8.8×6.8
	BE(BA)350-4HA-D(**)	4.2×6.9	8.2×8.2
	BE350-6HA-D(**)	6.0×10.0	11.0×10.5
	BE(BA)120-2HA-E(**)	2.0×3.8	5.8×7.0
	BE(BA)350-2HA-E(**)	2.0×3.8	8.8×5.6
	BE(BA)350-3HA-E(**)	3.0×5.2	8.8×6.8
	BE(BA)350-4HA-E(**)	4.2×6.9	8.2×8.2
	BE(BA)350-6HA-E(**)	6.0×10.0	11.0×10.5
	BE(BA)120-2BB(**)	2.0×2.4	5.6×7.2
	BE(BA)120-3BB(**)	2.8×3.3	6.5×8.5
	BE(BA)120-4BB(**)	4.0×4.5	8.0×11.0
	BE(BA)350-2BB(**)	2.2×3.3	6.0×7.5
	BE(BA)350-3BB(**)	3.1×3.7	6.6×8.9
	BE(BA)350-4BB(**)	4.0×4.0	7.8×10.0
	BE350-6BB(**)	6.1×6.0	10.0×14.4
	BE(BA)120-2BB-A(**)	1.9×2.3	5.6×6.6
	BE(BA)120-3BB-A(**)	3.0×2.8	8.8×6.6
	BE(BA)120-4BB-A(**)	4.0×4.0	10.0×7.6
	BE(BA)350-2BB-A(**)	2.2×3.3	7.8×6.2
	BE(BA)350-3BB-A(**)	3.0×3.4	9.8×6.8
	BE(BA)350-4BB-A(**)	4.0×4.2	10.0×7.8
	BE350-6BB-A(**)	6.0×6.1	14.0×10.0
	BE(BA,BQ)120-2BA(**)	2.0×1.5	9.3×9.3
	BE(BA,BQ)120-3BA(**)	3.1×1.8	11.1×11.1
	BE(BA,BQ)120-4BA(**)	3.8×1.7	11.6×11.6
	BE(BQ)120-6BA(**)	5.9×3.1	15.4×15.4
	BE(BA,BQ)120-2CA(**)	2.0×1.5	9.3×9.3
	BE(BA,BQ)120-3CA(**)	3.1×1.8	11.1×11.1
	BE(BA,BQ)120-4CA(**)	3.8×1.7	11.6×11.6

Xi'an UTOP Measurement Instrument Co., Ltd.
Tel.: +86-29-6299 1698 Fax: +86-29-6299 1526
Website: www.utopsensor.com
Email: sales@utopsensor.com

Strain Gauges For Stress Analysis

Gauge Pattern	Gauge Model	Gauge Grid(mm) Dimensions(L×M)	Gauge Backing(mm) Dimensions(L×M)
	BE120-2BC(**)	2.0×2.0	7.8×7.8
	BE120-3BC(**)	2.8×1.7	7.7×7.7
	BE120-4BC(**)	4.1×1.8	9.4×9.4
	BE120-2CB(**)	2.0×2.0	7.8×7.8
	BE120-3CB(**)	2.8×1.7	7.7×7.7
	BE120-4CB(**)	4.1×1.8	9.4×9.4
	BE120-2GB(**)	2.1×3.0	10.8×4.4
	BE120-3GB(**)	3.1×3.0	12.6×4.4
	BE120-4GB(**)	4.0×3.7	16.0×5.8
	BE350-2GB-A(**)	2.0×3.0	10.8×4.4
	BE120-2CE(**)	2.0×2.4	8.0×8.0
	BE120-3CE(**)	3.0×3.4	11.0×11.0
	BE(BA)120-4FD(**)	3.8×1.5	8.0×11.2
	BE(BA)120-3GD(**)	2.0×2.2	15.3×6.2
	BE350-2GD(**)	2.0×3.8	20.0×5.0
	BE120-1CC(**)	1.0×1.0	6.7×6.7
	BE120-2CC(**)	2.0×1.4	7.0×7.0
	BE120-4CC(**)	4.0×1.8	11.4×11.4
	BE120-(10)KA(**)	Ø9.0	Ø10.0
	BE(BA)350-(10)KA(**)	Ø9.0	Ø10.0
	BE(BA)350-(15)KA(**)	Ø14.0	Ø15.0
	BE(BA)350-(20)KA(**)	Ø1.8.5	Ø20.2

remark:

1. BA series strain gauges have two types: one is for application in norminal temperature（ within 80℃）, another in medium temperature (within 150℃), please indicate the application temperature when ordering, for example for application in norminal temperature, the P/N is BA350-3HA(11)″, or for medium temperature, the P/N is BA350-3HA150(11)".

2. BE, EQ series strain gauges have types of with S.T.C and without S.T.C, for example, for gauge with S.T.C, the P/N is"BE120-3AA(11)",for gauges without S.T.C, the P/N is BE120-3AA.

3. for encapsulated gauges with patter types of″ HA-D",″HA-E", we only provide gauges with lead wires.

4. besides all strain gauges listed above, we can design and batch production strain gauges according to according to the user's application, or make customized gauges.

Xi'an UTOP Measurement Instrument Co., Ltd.
Tel.: +86-29-6299 1698 Fax: +86-29-6299 1526
Website: www.utopsensor.com
Email: sales@utopsensor.com