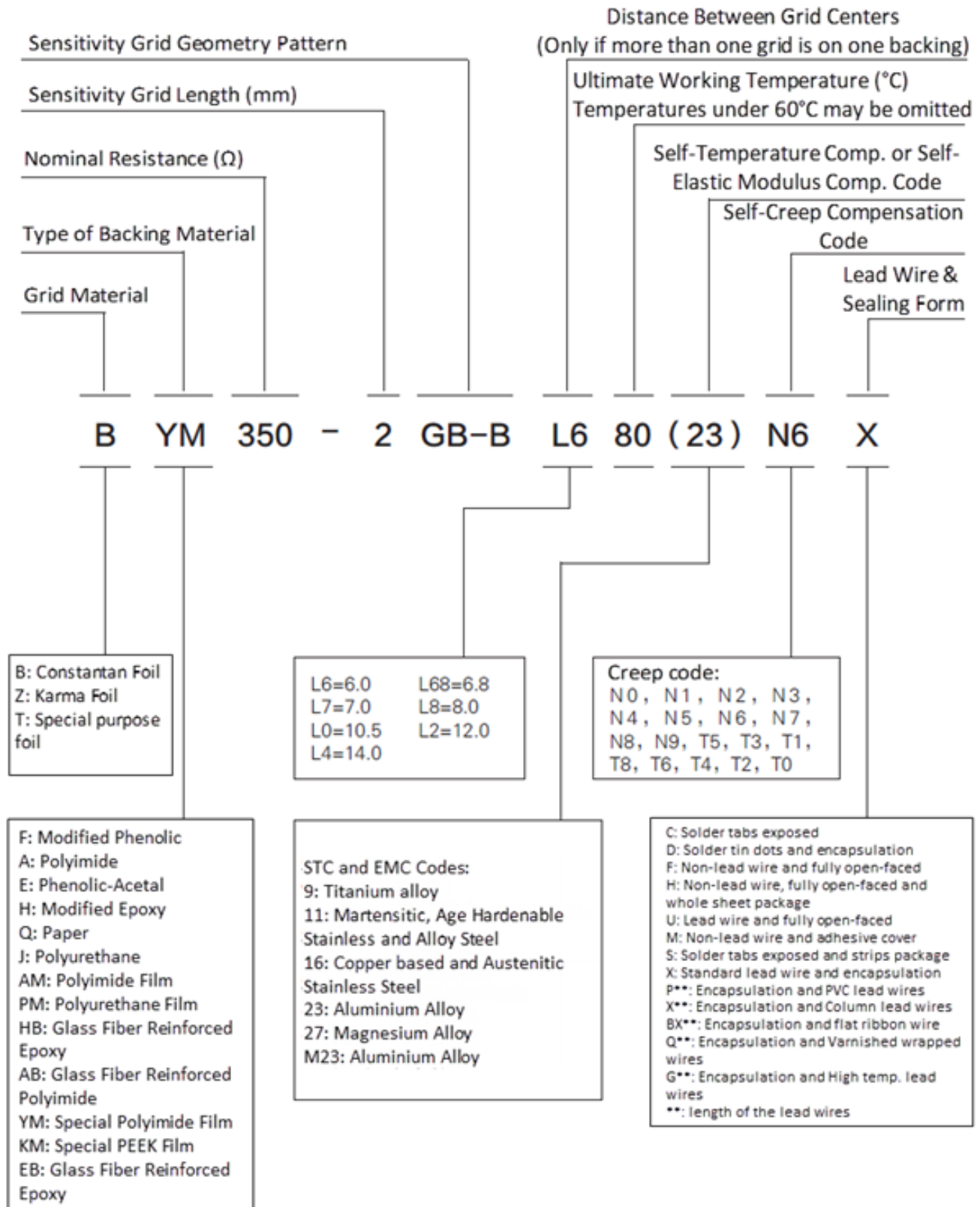


Strain gauge

Strain gauge designation system



Strain gauge

Strain Gauge Series Features and Specifications

BF Series

Fully encapsulated Constantan foil strain gauges with modified Phenolic backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has high accuracy and excellent stability but only at room temperature. Especially suitable for accuracy class 3 transducers. Easy to use and available in a resistance range of 60 up to 1000Ω.

ZF Series

Fully encapsulated Karma foil strain gauges with modified Phenolic backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has high accuracy and excellent stability over a wide temperature range. Especially suitable for accuracy class 0.02 transducers. Especially suitable for usage with DC/AC electronic weighing instruments.

BA Series

Fully encapsulated Constantan foil strain gauges with a polyimide backing. Offers Self-Temperature compensation. Has a high elongation rate and excellent heat resistance on a wide temperature range. Primarily intended for both stress analysis and normal accuracy transducers with usage of temperatures up to 150°C .

BAM Series

Fully encapsulated Constantan foil strain gauges with thin polyimide film backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has a high elongation rate and excellent heat resistance on a wide temperature range and low hygroscopicity. Shows good specifications for creep and zero-return. The strain gauges are primarily intended for high accuracy transducers at class 3 or better.

BHB Series

Fully encapsulated Constantan foil strain gauges with glass fibre reinforced epoxy backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has high accuracy and excellent stability over a wide temperature range and high moisture resistant capability. Has a low hygroscopicity and shows good specifications for creep and zero return. The strain gauges are primarily intended for high accuracy transducers at class 3 or better.

ZAM Series

Fully encapsulated Karma foil strain gauges with thin polyimide film backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has high accuracy and excellent stability over a wide temperature range and high moisture resistant capability. Has a low hygroscopicity and shows good specifications for creep and zero return. The strain gauges are primarily intended for high accuracy transducers at class 3 or better.

Strain gauge

BB (BAB) 250°C Series

Karma foil strain gauges with Glass Fibre Reinforced Polyimide Backing. Offers an excellent heat resistance, good insulation and high stability. The strain gauges are primarily used for both high precision stress analysis and accurate transducers with a usage temperature up to 250°C .

BYM Series

Fully encapsulated Constantan foil strain gauges with a special thin polyimide film backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has a high elongation rate and excellent heat resistance on a wide temperature range and low hygroscopicity. Shows good specifications for creep and zero-return. The strain gauges are primarily intended for high accuracy transducers at class 3 or better.

ZYM Series

Fully encapsulated Karma foil strain gauges with a special thin polyimide film backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has high accuracy and excellent stability over a wide temperature range and high moisture resistant capability. Has a low hygroscopicity and shows good specifications for creep and zero return. In addition it can realise high resistances with small size strain gauges which makes it excellent for usage in low power devices. The strain gauges are primarily intended for high accuracy transducers at class 3 or better.

BKM Series

Fully encapsulation Constantan foil strain gauge with a special PEEK film backing. Offers both Self-Temperature (or elastic modulus) and creep compensation simultaneously. Has high accuracy excellent stability and high moisture resistant capability. Shows good specifications for creep and zero return. The special PEEK film backing has an exceptional high toughness. The strain gauges are primarily intended for high accuracy transducers at class 3 or better.

BEB Series

Fully encapsulation Constantan foil strain gauge with a Glass fibre reinforced epoxy backing. Offers both Self-Temperature and creep compensation simultaneously. Has an elastic modulus compensated backing. Has an excellent creep and zero return, responds quickly to applied load and recovers directly to zero. In addition it has a high thermal stability and is used for high precision transducers and high precision aluminium scales.

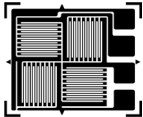
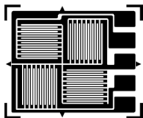
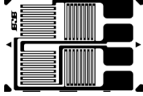
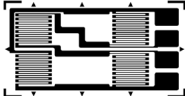
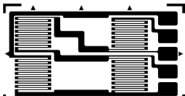
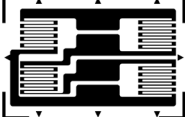
Strain gauge

Series	Nominal Resistance (Ω)	Resistance Tolerance to average resistance	Gauge Factor	Dispersion of Gauge Factor	Strain Limit	Fatigue Life	STC Codes	Working temperature Range (°C)	
BF Series	350, 650, 1000	≤ ± 0.1%	2.00 ~ 2.20	≤ ± 1%	2%	≥ 10 ⁷ (± 1000)	9, 11, 16, 23, 27	−30 ~ +80	
BAM Series									
BHB Series									
BA Series							−86 ~ +150		
ZF Series	350, 1000, 2000		1.86 ~ 2.20		9, 11, 16, 23, 27, M23		−20 ~ +80		
ZAM Series									
BB (BAB) 250°C Series	120, 350	≤ ± 0.15%	1.86 ~ 1.98		1.5%		9, 11, 16, 23, 27	−269 ~ +250	
BYM Series	350, 650, 1000	≤ ± 0.1%	2.00 ~ 2.20		2%			−20 ~ +100	
BKM Series									
BEB Series							11, 23	−20 ~ +80	
ZYM Series	350, 1000, 3000						1.80 ~ 2.20	9, 11, 16, 23, 27	−20 ~ +100

Strain Gauge Backing Material comparison chart

Series	Backing thickness(μm)	Protective layer thickness (μm)	Hydrothermal stability		Absorption rate		Insulation resistance (MΩ)
			25°C resistance change rate (ppm)	50°C resistance change rate (ppm)	Room temperature	50°C	
Normal Strain Gauges	45 ~ 55	15 ~ 22	62	64	3.0%	4.0%	10 ⁵
BYM/ZYM	30 ~ 31	13 ~ 15	28	29	0.6%	0.7%	10 ⁶
BKM	30 ~ 31	25 ~ 27	23	25	0.3%	0.4%	10 ⁶
BEB	30 ~ 40	20 ~ 30	33	36	0.5%	0.8%	10 ⁵

ZYM

Product Geometry	Product code	Grid size Length (L) × Width (W) (mm)	Backing size Length (L) × Width (W) (mm)	Available creep codes	Pitch (mm)
	ZYM350-2EB(**)N*	1.8 × 2.2	7.4 × 8.5	N2	
	ZYM1000-2EB(**)N*	2.3 × 2.7	8.6 × 7.2	N2	
	ZYM1000-3EB(**)N*	2.7 × 3.2	9.8 × 8.4	N2	
	ZYM350-2EB-A(**)N*	1.8 × 2.3	7.4 × 8.4	N2	
	ZYM1000-2EB-A(**)N*	2.3 × 2.7	8.6 × 7.5	N2	
	ZYM1000-2EB-BT(**)N*	1.8 × 1.8	7.9 × 5.2	T6	
	ZYM1200-2EB-BT(**)N*	1.8 × 1.8	7.9 × 5.2	T6	
	ZYM350-1FG-L0(**)N*	1.5 × 2.0	16.0 × 6.2	T0	
	ZYM350-2FG-L7(**)N*	2.0 × 1.9	13.4 × 6.4	T1	
	ZYM350-2FG-L8(**)N*	2.0 × 1.9	14.3 × 6.4	T0	
	ZYM1000-3FG-L0(**)N*	3.0 × 2.5	17.4 × 6.4	N6、T8	
	ZYM1000-3FG-L12(**)N*	3.1 × 2.3	18.6 × 6.8	N0、T8	
	ZYM350-2FG-AL6(**)N*	2.0 × 2.2	11.9 × 7.1	T0、N4、N6、 N8、T4	6.0
	ZYM350-3FG-AL0(**)N*	3.0 × 2.0	17.2 × 6.6	N6	10.5
	ZYM1000-2FG-AL0(**)N*	2.1 × 2.6	16.9 × 7.4	T1、T6、T8	10.5
	ZYM1000-3FG-AL0(**)N*	3.1 × 3.2	17.9 × 8.4	N2、N6、T0、 T2、T4、T6	10.5
	ZYM1000-3FG-AL14(**)N*	3.0 × 2.1	20.5 × 6.8	N6、T1、T6、T0	14.0
	ZYM1000-3FG-AL12(**)N *	3.1 × 2.9	19.4 × 8.4	T8	12.0
	ZYM350-1FG-BL6(**)N*	1.5 × 2.2	9.3 × 6.1	T0、N4	6.0
	ZYM350-1FG-BL0(**)N*	1.5 × 2.5	13.9 × 6.4	N0、T0、T8	10.5