Gages for Ultra-small Strain Measurement (KSPB & KSNB)

Patterns, Gage Resistance, Gage Factor	M	odels		Dimensi (Grid)	ons (mm) Bas		Remarks	
			Length	Width	Length	Width		S
SPB Series Semiconductor Strain Gages								
RoHS Applicable Adhesives								
The KSPB series gages are stable-performance semiconductor strain gages usable for general stress measurement and transducers. The F2					Operating Temp. after Curing the Adhesive			
type has a half-bridge formed with a 2- and Negative), for self-temperature cor strain measurement of steel products.	vith a 2-element structure (Positive ture compensation and is suitable for			CC-33A -50 to 12 EP-340 -50 to 15			0°C	STRAIN GAGES
Uniaxial	Resistance: 120 Ω Gage factor: Appr	ox. 125						TR
0.00	KSPB-2-120-	E3	2	0.25	5	3	4 gages/ pkg	01
Uniaxial	Resistance: 120 Ω Gage factor: Appr	ox. 125						
- · · · · · · · · · · · · · · · · · · ·	KSPB-2-120-	E4	2	0.26	7.7	4	4 gages/ pkg	
Uniaxial 350Ω gage	iaxial 350Ω gage Resistance: 350 Ω Gage factor: Approx. 125							
	KSPB-6-350-	E4	6	0.27	13	5	4 gages/ pkg	
Uniaxial 350Ω gage	Resistance: 350Ω Gage factor: Appr	ox. 160						
	KSPB-1-350-	E4	1	0.25	6.6	4	4 gages/ pkg	
Uniaxial 1000Ω gage	Resistance: 1000 G Gage factor: Appr							Strain Gages
	KSPB-2-1K-E	4	2	0.2	7.7	4	4 gages/ pkg	Strain dages
Uniaxial, 2-element	Resistance: 120 Ω Gage factor: Appr	ox. 235		N0.83				Outline
****	KSPB-3-120-	F2-11	3	P0.47	10	4	2 gages/ pkg	Lead-wire cable
Patterns, Gage Resistance, Gage Factor	M	odels	Gage	(Grid)	ons (mm) Bas	e	Remarks	General
Length Width Length Width KSNB Series Self-temperature-compensation Semiconductor Strain Gages								
CSINB Series Self-temp		ies gages use a						Waterproof
NEV	control the re		erature co	efficien	t of the m	nateria	l according to	
RoH	- f + l 11 - 1	induced resista	ance is min	imized.	(Excludir	ng E5)		Concrete
	у фринципа	Opera	ating Temp					Composite material
Uniaxial Resistance: 120 Ω	EP-340	-50	ing the Adh 0 to 150°C	esive				PCB Plastics
Gage factor: Approx	100 CC-33A CC-36		0 to 120°C 0 to 100°C					Ultra-small strain
*The above picture is KSNB-2-120-E3-11.	KSNB-2-120- KSNB-2-120-		2	0.3	5	3	4 gages/ pkg	High temp. Low temp.
Uniaxial Resistance: 120 Ω Gage factor: Approx. –								High elongation
*The above picture is KSNB-2-120-E4-11.	KSNB-2-120- KSNB-2-120-		2	0.3	7.7	4	4 gages/ pkg	Non- magnetoresistive
Uniaxial Resistance: 120 Ω							A magazi plan	Hydrogen gas
Gage factor: Approx. –	KSNB-2-120-	E5-11		0.0			4 gages/ pkg Oxygen-free tin-plated	Bending
*The above picture is KSNB-2-120-E5-11."	KSNB-2-120-		2	0.3	_		copper wires 40 mm long	Mith protector
	sistance: 120 Ω age factor: Approx	. –100						With protector Embedded
6.00	4 5.							Crack
*The above picture is KSNB-2-120-F3-11.	KSNB-2-120- KSNB-2-120-		2	0.3	φ1	1	2 gages/ pkg	Adhesive Coating agent
	sistance: 350 Ω age factor: Approx	. –100						Custom-
ATT I I - KCAUD C 350 54 45	KSNB-6-350-		6	0.31	13	5	4 gages/ pkg	designed
*The above picture is KSNB-6-350-E4-11.	KSNB-6-350-	E4-16						1-36

Outline

Strain Gage:

Waterproof

Composite material PCB Plastics

Ultra-small strain High temp. Low temp.

High elongation

magnetoresistive

Hydrogen gas Bending

With protector

Coating agent

Custom-designed

Gages for Ultra-small Strain Measurement (KSPH & KSPLB)

		Dimensions (mm)					
Patterns,	Models	Gage (Grid) Base	Remarks				
Gage Resistance, Gage Factor	ivioueis	Length Width Length Width					
	The KSPH series gages have high resistance, thereby making high excitation voltage applicable to obtain high output voltage. Applicable Adhesives Operating Temp. after Curing the Adhesive CC-33A						
	KSPH-4-2K-E4	4 0.73 11 4	4 gages/ pkg				
Uniaxial 10000Ω gage Resistance: 10000 Ω Gage factor: Approx. 170 KSPH-9-10K-E4 9 0.58 16 5 4 gages/ pkg							
2		Dimensions (mm)					
Patterns,	Models	Gage (Grid) Base	Remarks				
Gage Resistance, Gage Factor		Length Width Length Width					
KSPLB Ultra Linear Semiconductor Strain Gage							
The KSPLB gage features a superior linearity of resistance change against strain in a comparatively wide range, thereby making it suitable as a sensing element of transducers. Applicable Adhesives Operating Temp after Curing the Adhesive							
Gage factor: Approx. 90	CC-33A						

Encapsulated Gages

Encapsulated Gages ■MI cable length codes and optional accessories

E.g. 1) KHCS-10-120-G12B-11 C5M for KHCS with 5 m long MI cable. 2) KHCS-10-120-G12B-11 C2MV for KHCS with 2 m long MI cable and a bridge adapter pre-attached.

Optional Accessories

■Bridge box DB-120A/L

Connect KHCV or KCW to form the Wheatstone bridge



●DB-120A

Cable: Chloroprene-coated 5 m long, terminated with a connector (NDIS4102 (7 pins)). Dimensions: $60 \times 42 \times 25$ mm Weight: Approx. 600 g (Including cable)

●DB-120L (Compact plug-in type) Cable: Removable type 5 m long terminated with a connector (NDIS4102 (7 pins)).
Dimensions: 60 × 20 × 20 mm Weight: Approx. 60 g (Excluding cable)

■Compression fitting

For fixing MI cables. When ordering, specify it. Hermetically sealed weldable strain gages are consist of sensing part and cable. When ordering, specify the model together with code of the desired MI cable length, suffixed with a space in between. The suffix may include codes of the optional bridge adapter and compression fitting (see table below.) In all case, the length of soft cable is 50 cm. (For extension, contact us.)

14

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MI cable length	Code of MI cable length	Bridge adapter A	Compression fitting B	A & B
1 m	C1M	C1MV	C1MF	C1MFV
2 m (Std.)	C2M	C2MV	C2MF	C2MFV
3 m	C3M	C3MV	C3MF	C3MFV
4 m	C4M	C4MV	C4MF	C4MFV
5 m	C5M	C5MV	C5MF	C5MFV
6 m	C6M	C6MV	C6MF	C6MFV
8 m	C8M	C8MV	C8MF	C8MFV
10 m	C10M	C10MV	C10MF	C10MFV

■Sensing part (2-element)



■Half bridge adapter Equipped with optimum temperature compensation resistors for the operating temperature range. When delivered, it is per-attached to the soft cable to prevent erroneous wring and ensures

Bridge adapter Transparent heat-shrink tube Shield Output labor saving.

■Quarter bridge adapter

A dedicated adapter to the KHCV, enables easy selection of the cutoff frequencies (1.6, 7.23, 16 Hz, and flat) as well as easy connection to the measuring instrument to prevent erroneous wring.

