

## KYOWA KV-25B 裂痕用應變規

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### 目的

- 設備經長時間使用可能會產生細小裂痕，將該型式的應變規黏貼於裂痕處，用來了解裂痕成長的情況及速率。

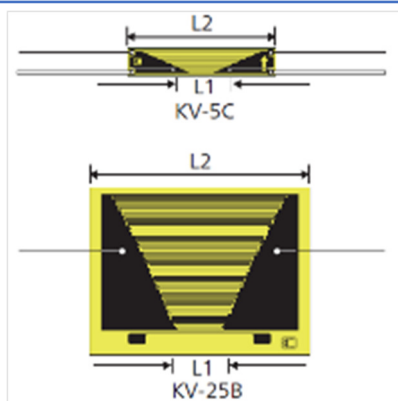
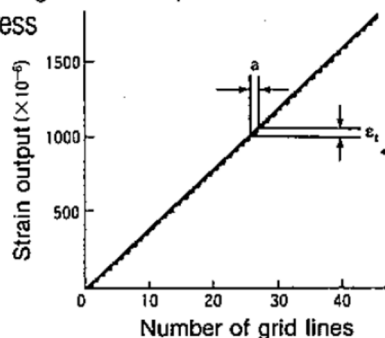
### 量測設備

- KYOWA PCD-400AM2 資料擷取器 (4 to 16 類比通道)
- KV-25B 應變規
- KVA-1A 轉接器
- CC-33A 專用膠水
- DCS-100A 擷取軟體

### 量測方法

- KV-25B 應變規使用 CC-33A 膠水確實黏貼於裂痕處
- KV-25B 連接 KVA-1A 後再連接至 PCD-400AM2，於 DCS-100A 內進行歸零設定，使用刀片切斷上方第一階電阻線，讀取 DCS-100A 的應變值  $\mu\text{m}/\text{m}$
- 假設每閘輸出為  $50\mu\text{m}/\text{m}$  那總輸出 =  $50 \times 26$  閘 =  $1300\mu\text{m}/\text{m}$ ，DCS-100A 上設定量測範圍為  $5\text{kum}/\text{m}$  = PCD-400AM2 輸出電壓 5V 的，那每閘對應輸出電壓則為  $50\text{mV}$ ，總輸出為  $1300\text{mV} = 1.3\text{V}$
- 若是想要以閘數來作顯示的話，則需要在 DCS-100A 軟體設定為：每 1 閘 =  $50\mu\text{m}/\text{m}$ ，calibration constant =  $1/50 = 0.02$ ，選擇不用小數點，自訂單位 lines

strains using a strain amplifier and find the length of a crack in progress



### Specifications

Models	Resistance ( $\Omega$ )	Base size (mm)	Grid size (mm)				Qty of grids
			L1	L2	W	Pitch	
KV-5C	Approx.1	30x5	5.4	25.2	4.6	0.1	46
KV-25B	Approx.1	42x32	9	33.6	25.2	1	26

DCS-100A - PCD-400A Series - Test0000.KS2

File Edit View Set Measurement DIAdem Window Version

Connect Envr. Open Save Print **CH Cond.** Meas. Cond.

Measure Mode **Manual**

Sampling Frequency 1kHz

Graph 1 Y-Time 1Graph/32CH

Set CH Condition ( Number of Meas CHs : 4 )

Model	CH	Measurement	Mode	Strain Mode	Gage Factor	Range
PCD-400A	01	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m
	02	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m
	03	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m
	04	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m

DCS-100A - PCD-400A Series - Test0000.KS2

File Edit View Set Measurement DIAdem Window Version

Connect Envr. Open Save Print CH Cond. Meas. Cond.

Measure Mode **Manual**

Sampling Frequency 1kHz

Graph Set Environment

General Connect Display Details Option

Record

After the measurement, data is automatically converted into CSV Format File. Set Automatic Conversion...

Unit

Set User's Unit: **lines**   The entered User's unit is reflected on the Set Unit screen.

OK Cancel

DCS-100A - PCD-400A Series - Test0000.KS2

File Edit View Set Measurement DIAdem Window Version

Connect Envr. Open Save Print **CH Cond.** Meas. Cond. Chk. Data Del. Data

Measure Mode **Manual**

Sampling Frequency 1kHz

Set CH Condition ( Number of Meas CHs : 4 )

Model	CH	Measurement	Mode	Strain Mode	Gage Factor	Range	LPF	Balance	Calibr. const.	Unit	Deci Digits
PCD-400A	01	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m	FLAT	<input checked="" type="checkbox"/>	0.02	lines	0 (*****)
	02	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m	FLAT	<input checked="" type="checkbox"/>	1.0	um/m	0 (*****)
	03	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m	FLAT	<input checked="" type="checkbox"/>	1.0	um/m	0 (*****)
	04	<input checked="" type="checkbox"/>	Strain	1G3W	2.00	5kum/m	FLAT	<input checked="" type="checkbox"/>	1.0	um/m	0 (*****)