

深圳市诗拓浦仪器仪表有限公司

SHOWA 动态应变放大器 5783



型号:

5783

5793

特征:

1, 5783 型交流应变放大器 , 具有高灵敏度、高稳定性和抗噪声能力, 确保应变片的测量。

称重传感器 | 控制表 | 应变测仪

深圳市诗拓浦仪器仪表有限公司

2, 5683 型电桥电源采用 5KHz 的频率, 保证了从直流到 2KHz 的响应特性。

3, 5684 型采用 2khz 的频率在其桥电源, 这确保了从直流到 10khz 的响应特性。

4, 在平衡电路上安装了自动音量消除功能。

5, 系统上配备了桥接电路断开检查功能, 可在测量过程中轻松实现无故障操作 (5793 型通用)。

6, 5793 型直流应变放大器, 适用于使用应变式传感器的高精度测量 (用于测量负载、压力、扭矩、加速度等)。它的桥式电源采用 2、3、5、9 或 10V 的稳定电压, 使高响应频率的直流电达到 100kHz。自动平衡功能安装在平衡电路上, 能够以高精度瞬间执行初始平衡操作。

规格:

1, 电桥电阻: 60Ω to 1kΩ

2, 量规因数: 2.00

3, 电桥电源; AC0.5V, 2V 5kHz 正弦波。同步输入/输出信号
2.5Vac

4, 断开检查功能: 检测输入桥电路断线、短路并用 led 显示检测结果

5, 平衡调节范围 (自动平衡): 电阻值偏差: $\pm 2\%$ (应变为 $\pm 10000 \times 10^{-6}$) 电容不平衡: 约 2000pF

6, 平衡调节精度: 应变在 $\pm 0.4 \times 10^{-6}$ 以内 (范围=200, 无细纹, bv=2v)

称重传感器 | 控制表 | 应变测仪

深圳市诗拓浦仪器仪表有限公司

7, 最大输入范围: $\pm 200,000 \times 10^{-6}$ in strain

(RANGE=20k, FINE= $\times 2.5$, BV=0.5V)

8, 电压灵敏度: $\pm 10V$ within $\pm 200 \times 10^{-6}$ in strain

(RANGE=200, without FINE, BV=2V)

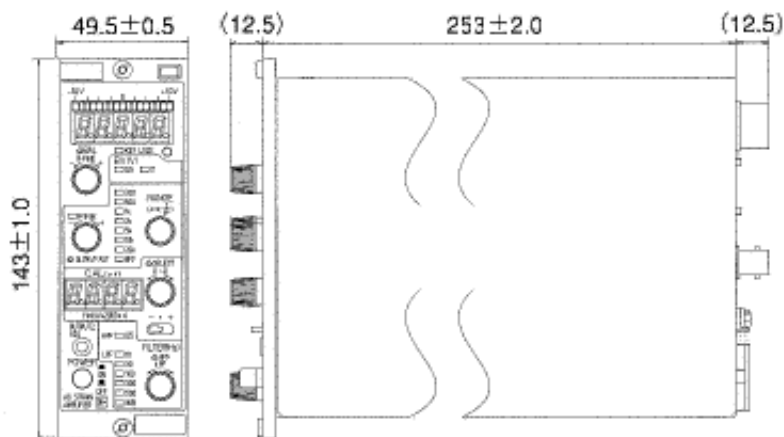
9, 测量范围变化: 200500、1K、2K、5K、10K、20K ($\times 10^{-6}$ 应变, $\times 2/bv$ 值)

9, 微调: 在精细范围内可连续变化, 可选择 2 步变化量

10, 内部校准器: 设定值: 应变为 ± 1 至 $\pm 9999 \times 10^{-6}$, 精度:

(0.5%RDG + 0.5×10^{-6} 应变)

产品相关图片



称重传感器 | 控制表 | 应变测仪

深圳市诗拓浦仪器仪表有限公司

Item	Description
Input impedance	Approx. 10M Ω + Approx. 10M Ω (DC)
Zero adjustment range	± 10 m V (RTI,BV=2V)
Balancing adjustment resolution	Within $\pm 1\mu$ V(RTI,RANGE=1k,without FINE,BV=2V)
Measuring range	± 125 mV(RANGE=50 k ,FINE= x 2.5,BV=2V)
Gain	10,000x(RANGE=1k),5,000 x (2k),2,000 x (5k),1,000 x (10k),500 x (20k),200 x (50k),Without FINE
Gain resolution	$\pm 0.1\%$
Common mode rejection ratio(CMRR)	70dB or more(50Hz or 60Hz) at 1k Ω balanced input
Maximum allowable input voltage	± 8 VDC or AC peak value
Common mode allowable input voltage	± 5 VDC or AC peak value
Internal calibrator	Set value: ± 0.01 to 99.99mV(± 0.01 to 59.99mV at BV=2V) Accuracy: $\pm 0.2\%$ rdg + 5 μ V
Linearity	Within $\pm 0.05\%$ FS
Stability	Zero point: Within $\pm 1\mu$ V/ $^{\circ}$ C, $\pm 5\mu$ V/24 hours Sensitivity: Within $\pm 0.01\%$ / $^{\circ}$ C, $\pm 0.05\%$ /24 hours
Noise	50 μ Vp-p(RTI,W/B,RANGE=2k(10,000x),without FINE,BV=2V) 20 μ Vp-p(RTI,DC to 30kHz,RANGE=12,without FINE,BV=2V)

称重传感器 | 控制表 | 应变测仪

深圳市诗拓浦仪器仪表有限公司

Item	AC Strain Amplifier Model 5783	DC Strain Amplifier Model 5793
Number of Channels	1 channel/unit	←
Bridge resistance	60Ω to 1kΩ	←
Gage Factor	2.00	←
Bridge power voltage supply	AC0.5V,2V 5kHz sine wave. Sync input/output signal 2.5VAC	DC 2V,3V,5V,9V,10V
Disconnection check function	Detecting disconnection and short of input bridge circuit and displaying checked result by LED	←
Balance adjusting range(Auto-balance)	Deviation of resistive value:±2%(±10,000×10 ⁻⁶ in strain) Capacitive imbalance:Approx.2,000pF	Deviation of resistive value:±2%(±10,000×10 ⁻⁶ in strain)
Balance adjusting accuracy	Within ±0.4×10 ⁻⁶ in strain (RANGE=200,Without FINE,BV=2V)	Within ±1×10 ⁻⁶ in strain (RANGE=1k,without FINE,BV=2V)
Maximum input range	±200,000×10 ⁻⁶ in strain (RANGE=20k,FINE=×2.5,BV=0.5V)	±125,000×10 ⁻⁶ in strain (RANGE=50k,FINE=×2.5,BV=2V)
Voltage sensitivity	±10V within ±200×10 ⁻⁶ in strain (RANGE=200,without FINE,BV=2V)	±10V within ±1000×10 ⁻⁶ in strain (RANGE=1k,without FINE,BV=2V)
Measurement range change	200,500,1k,2k,5k,10k,20k(×10 ⁻⁶ in strain,×2/BV in value),OFF	1k,2k,5k,10k,20k,50k(×10 ⁻⁶ in strain,×2/BV in value),OFF
Fine adjustment	Continuously chnangeable in FINE RANGE,2step changing amount ca be selected	←
Internal calibrator	Set value: ±1 to ±9,999×10 ⁻⁶ in strain, Accuracy: ±(0.5%rdg + 0.5×10 ⁻⁶ in strain)	Set value: ±1 to 9,999×10 ⁻⁶ in strain Accuracy: ±(0.2%rdg + 0.5×10 ⁻⁶ in strain)
Nonlinearity	±0.1%FS	±0.05%FS
Frequency response	DC to 2kHz±10%	DC to100kHz、+1, -3dB
High pass filter	0.5Hz: 2-pole Butterworth type (Filter descent response: -12dB/oct)	0.5Hz: 2-pole Bessel type (Filter descent response: -12dB/oct)
Low-pass filter	10,30,100,300,500Hz 4-pole Butterworth type (Filter descent: -24dB/oct)	10,30,100,1k,30kHz 4-pole Bessel type (Filter descent: -24dB/oct)
Stability	Zero drift: Within ±0.1×10 ⁻⁶ in strain/°C,Within ±0.5×10 ⁻⁶ in strain/24h Sensitivity: Within ±0.05%/°C,within ±0.2%/24h	Zero drift: Within ±1×10 ⁻⁶ in strain/°C以内,within ±5×10 ⁻⁶ in strain/24h Sensitivity: Within ±0.01%/°C,within ±0.05%/24h
Noise level	2.0×10 ⁻⁶ in strain p-p RTI(W/B,RANGE=200,Without FINE,BV=2V,120Ω in bridge) 0.6×10 ⁻⁶ in strain p-p RTI(DC to 100Hz,RANGE=200,Without FINE,BV=2V,120Ω in bridge)	50×10 ⁻⁶ in strain p-p RTI(W/B,RANGE=2k,Without FINE,BV=2V,120Ω in bridge) 20×10 ⁻⁶ in strain p-p RTI(DC to 30kHz,RANGE=2k,Without FINE,BV=2V,120Ω in bridge)

称重传感器 | 控制表 | 应变测仪

深圳市诗拓浦仪器仪表有限公司

Output	OUTPUT1: $\pm 10V, \pm 5mA$ OUTPUT2: $\pm 10V, \pm 10mA$	←
Output adjustment	OUTPUT2 ADJ(Can be independently varied continuously from 1 to 1/10)	←
Output monitor display	17-od LED display(OUTPUT1 monitor) LED at both ends blink when voltage is greater than approximately $\pm 10.5 V$.	←
Digitl display	4 1/2 digital display(OUTPUT2 monitor),Scaling display available with OUTPUT2 ADJ, Displaying location of decimal point can be changed by using the bottom setting SW.	←
Key lock function	Turning the key lock ON/OFF by pressing the key lock button approximately for one second. (Except CAL switch and BV selection switch)	←
Setting value saving	Saving the value in flush memory(Can be held without back-up battery)	←
Resistance to vibration	$29.4m/s^2$	←
Withstand Voltage (Insulation resistance)	1 kVAC, 1 minute, between each input terminal(A, B, C, D, E), output and housing case. 1.5 kVAC, 1 minute, between AC power input and output or housing case(Includes surge resistor). 1 kVAC, 1 minute, between DC power input and input. 500VAC, 1 minute, between DC power input and output or housing case.	1.5 kVAC, 1 minute, between AC power input and output or housing case(Includes surge resistor). 1 kVAC, 1 minute, between DC power input and input. 500VAC, 1 minute, between DC power input and output or housing case.
Ac power supply	85 to 132 VAC/180 to 264 VAC(Internal switch must be changed), 9VA or less	85 to 132 VAC/180 to 264 VAC(Internal switch must be changed), 10VA or less
DC power supply	10 to 30 VDC, 6VA or less	10 to 30 VDC, 7VA or less
Operating environmental conditions	-10 to 50°C, Within 20 to 85%RH without condensation	←
Outline dimension	H143(± 1.0) $\times$ W49.5(± 0.5) $\times$ D253(± 2.0)mm *Excluding protrusion	←
Weight	Within 1.35kg	Within 1.4kg

称重传感器 | 控制表 | 应变测仪