



AB Series Strain Indicator Calibrator



Features:

- True Wheatstone bridge circuitry
- Independent model AB-120 for 120 Ω , and model AB-350 for 350 Ω
- Simulates quarter, half, and full-bridge
- 12 position preset range
- Quarter-bridge strain range direct reading: ± 200 to $\pm 100\,000\ \mu\epsilon$.
- Half and Full-bridge strain range direct reading: ± 200 to $\pm 100\,000\ \mu\epsilon$
- Transducer range: $\pm 0.2\ \text{mV/V}$ to $\pm 100\ \text{mV/V}$
- Reversing switch for plus and minus calibration
- High precision resistors used throughout to ensure excellent stability
- Accuracy 0.02 percent

Applications:

- Strain Indicator Calibrator
- Stress Indicator Calibrator
- Material elasticity Indicator Calibrator
- Load Cell Indicator Calibrator
- Micro-Resistance Indicator Calibrator
- Load Cell Signal Conditioning Calibrator
- Foil Strain Gage Signal Conditioning Calibrator
- Semiconductor Strain Gage Signal Conditioning Calibrator

Description:

The Model AB calibrator is a Wheatstone bridge and generates a true change of resistance in one arms of the bridge.

It simulates the actual behavior of a strain gage in negative strain calibrator based on the Wheatstone bridge principle requires stable components.

Multiple ultra-stable and hi-stable precision resistors are used in the Model AB calibrator to provide the stability, repeatability and accuracy required in a laboratory strain gages instrument.



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Special Purpose Instrument

Specification:

- Accuracy
 - 0.02% of setting $\pm 0.2 \mu\epsilon$ (0.0001 mV/V), full bridge
 - 0.02% of setting $\pm 1.0 \mu\epsilon$ (0.0001 mV/V), quarter bridge and half bridge
- Repeatability
 - $\pm 1 \mu\epsilon$ (0.0001 mV/V), maximum
- Stability
 - (0.02% of setting $\pm 0.2 \mu\epsilon$) /° C, maximum
- Thermal EMF
 - 1.0 μ V/V of excitation, maximum
- Bridge Resistances
 - Model AB-120 for 120 Ω
 - Model AB-350 for 350 Ω
- Output Resistance
 - $\pm 0.02\%$, maximum, from nominal at "0" $\mu\epsilon$
 - $\pm 10.0\%$ at $\pm 100,000 \mu\epsilon$ (Quarter Bridge)
- Circuit
 - True $\pm\Delta R$ in two adjacent arms , plus two fixed arms for bridge completion
- Simulation
 - Quarter bridge, one active arm
 - Half bridge, two active arm
 - Full bridge, two active arm
- Range
 - Two Active Arm 0 to $\pm 100000 \mu\epsilon$
 - Quarter, Half and Full bridge, two Active Arm:
0, ± 200 , ± 500 , $\pm 1,000$, $\pm 2,000$, $\pm 3,000$, $\pm 4,000$,
 $\pm 5,000$, $\pm 10,000$, $\pm 20,000$, $\pm 50,000$, $\pm 100,000 \mu\epsilon$
@ G. F. = 2.000/ Active Arm
 - Half and Full bridge: transducer
0.000, ± 0.200 , ± 0.500 , ± 1.000 , ± 2.000 , ± 3.000 ,
 ± 4.000 , ± 5.000 , ± 10.000 , ± 20.000 , ± 50.000 ,
 ± 100.00 mV/V
- Excitation
 - To Meet Accuracy and Repeatability Specifications
 - 120 Ω : up to 7 VDC
 - 350 Ω : up to 10 VDC
 - Maximum Permissible
 - 120 Ω : 10V AC or DC
 - 350 Ω : 17V AC or DC
- Output @ 0
 - 150 $\mu\epsilon$ (0.075 mV/V), maximum in full-bridge mode
- Environment
 - Temperature
 - $+10^{\circ}$ C to $+38^{\circ}$ C ($+50^{\circ}$ F to $+100^{\circ}$ F)
 - Humidity
 - Up to 70% RH, non-condensing
- Dimension
 - Aluminum case
 - 170 \times 94 \times 115 mm (6.7 L \times 3.7 W \times 4.6 H in)
- Weight
 - < 0.7 kg (< 1.6 LB)
 - All specifications are nominal or typical at $+23^{\circ}$ C unless noted.
- Model Options
 - AB-120 for 120 Ω
 - AB-350 for 350 Ω