



AE Series Strain Indicator Calibrator



Features:

- True Wheatstone bridge circuitry
- Independent model AE-120 for 120 Ω , and model AE-350 for 350 Ω
- Simulates quarter, half, and full-bridge
- 12 position preset range
- Quarter-bridge strain range direct reading: -100 to +100 000 με .
- Half and Full-bridge strain range direct reading: ± 100 to ± 100 000 με .
- Transducer range: ± 0.5 mV/V to ± 50 mV/V
- Reversing switch for plus and minus calibration
- High precision resistors used throughout to ensure excellent stability
- Accuracy 0.3 percent

Applications:

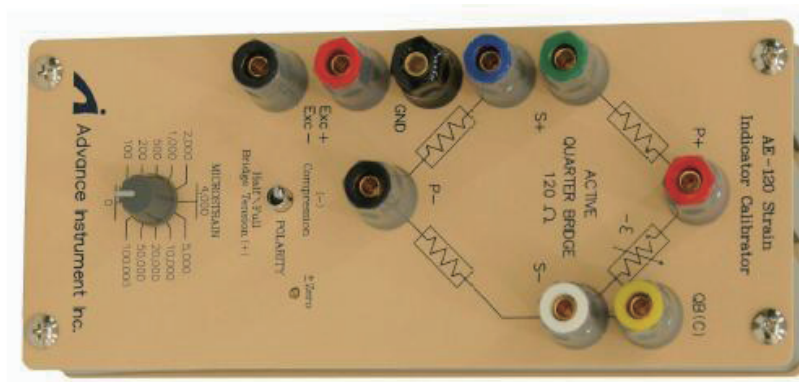
- Strain Indicator Calibrator
- Stress Indicator Calibrator
- Material elasticity Indicator Calibrator
- Load Cell Indicator Calibrator
- Micro-Resistance Indicator Calibrator
- Load Cell Signal Conditioning Calibrator
- Foil Strain Gage Signal Conditioning Calibrator
- Semiconductor Strain Gage Signal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

Description:

The Model AE 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 AE calibrator to provide the stability, repeatability and accuracy required in a laboratory strain gages instrument.





AE Series Strain Indicator Calibrator

1-4

Special Purpose Strain Gage Instrument

Specification:

- Accuracy
 - 0.3% of setting $\pm 3 \mu\epsilon$ (0.0015 mV/V), maximum
- Repeatability
 - $\pm 3 \mu\epsilon$ (0.0015 mV/V), maximum
- Stability
 - (0.3% of setting $\pm 3 \mu\epsilon$) / ° C, maximum
- Thermal EMF
 - 1.0 μ V/V of excitation, maximum
- Bridge Resistances
 - Model AE-120 for 120 Ω
 - Model AE-350 for 350 Ω
- Output Resistance
 - $\pm 0.05\%$, maximum, from nominal at "0" $\mu\epsilon$
 - -20.0% at -100000 $\mu\epsilon$ (Quarter Bridge)
- Circuit
 - True - ΔR in one adjacent arms , plus three fixed arms for bridge completion
- Simulation
 - Quarter bridge, one active arm
 - Half bridge, one active arm
 - Full bridge, one active arm
- Range
 - One Active Arms 0 to -100000 $\mu\epsilon$
 - Quarter bridge:
0, -100, -200, -500, -1000, -2000, -4,000, -5,000,
-10,000, -20,000, -50,000, -100,000 $\mu\epsilon$
@ G. F. = 2.000
 - Half and Full bridge:
0, ± 100 , ± 200 , ± 500 , ± 1000 , ± 2000 , $\pm 4,000$,
 $\pm 5,000$, $\pm 10,000$, $\pm 20,000$, $\pm 50,000$, $\pm 100,000 \mu\epsilon$
@ G. F. = 2.000
 - Half and Full bridge: transducer
0 to ± 50 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
 - 50 $\mu\epsilon$ (0.025 mV/V), maximum in full-bridge mode
- Environment
 - Temperature
 - +50° F to +100° F (+10° C to +38° C)
 - Humidity
 - Up to 70% RH, non-condensing
- Dimension
 - Aluminum case (separable lid)
 - 202 × 87 × 60 mm (8 L x 3.5 W x 2.4 H in)
- Weight
 - < 1.3 kg (< 2.9 LB)
 - All specifications are nominal or typical at +23° C unless noted.
- Model Options
 - AE-120 for 120 Ω
 - AE-350 for 350 Ω