ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Vishay Measurements 1550A* at our website: ***Click HERE***

Strain Indicator Calibrator

FEATURES

- True Wheatstone bridge circuitry
- Simulates quarter, half, and full bridge—both 120Ω/350Ω
- Three decades of push buttons
- Strain range direct reading: ±99 900 με. . .increments of 100 με
- Transducer range: ±49.95 mV/V. . . increments of 0.05 mV/V
- Reversing switch for plus and minus calibration
- High precision resistors used throughout to ensure excellent stability
- Accuracy 0.025 percent—traceable to the U.S. National Institute of Standards and Technology



A laboratory standard for verifying the calibration of strain and transducer indicators.

DESCRIPTION

Sound engineering and laboratory practices require that the instrumentation used to make critical strain measurements be periodically calibrated to verify that it is within the manufacturer's original speci□cations. Additionally, each type of strain indicator exhibits some degree of nonlinearity, especially for large strains during quarter-bridge operation. Since this is the most common stress analysis application of strain gages, it is important that the strain indicator be calibrated in this mode. Instrumentation span should also be checked at a number of points before each important test to avoid inaccurate data.

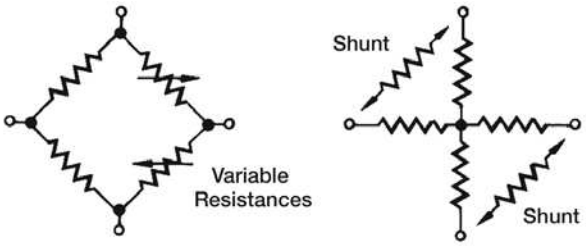
The Model 1550B calibrator is a Wheatstone bridge and generates a true change of resistance in one or two arms of the bridge. It simulates the actual behavior of a strain gage in both positive and negative strain.

The 'star network' used in certain other commercial calibrators provides a substantially lower cost instrument design, because component speci□cations are less critical, and fewer components are required.

However, the 'star network' cannot simulate quarter-bridge strain gage behavior, and cannot simulate positive strain. Another serious problem with this circuit is that the bridge input and output resistances change in an abnormal manner, leading to inaccuracies in calibration under some conditions.

A calibrator based on the Wheatstone bridge principle requires stable components. A total of 66 ultra-stable precision resistors are used in the Model 1550B calibrator to provide the stability, repeatability, accuracy and incremental steps required in a laboratory standards instrument.

WHEATSTONE BRIDGE / STAR NETWORK



SPECIFICATIONS

ACCURACY

0.025% of setting ±1 με (0.0005 mV/V), maximum

Traceable to United States National Institute of Standards and Technology

REPEATABILITY

±1 με (0.0005 mV/V), maximum

STABILITY

(0.001% of setting ±1 με)/°C, maximum

THERMAL EMF

0.5 μV/V of excitation, maximum

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Strain Indicator Calibrator

BRIDGE RESISTANCES

120Ω and 350Ω

INPUT RESISTANCE

±0.05%, maximum, from nominal at all output settings

OUTPUT RESISTANCE

±0.05%, maximum, from nominal at “000” με

–0.25% at ±99 900 με

CIRCUIT

True ±ΔR in two adjacent arms (opposite signs), plus two □xed arms for bridge completion

SIMULATION

Quarter bridge, one active arm

Half bridge, one or two active arms

Full bridge, two active arms

RANGE

Two Active Arms

0 to ±99,900 με in steps of 100 με @GF = 2.00

0 to ±49.95 mV/V in steps of 0.05 mV/V

One Active Arm

0 to ±49,950 με in steps of 50 με @GF = 2.00

EXCITATION

To Meet Accuracy and Repeatability Speci□cations

120Ω: up to 10 VDC

350Ω: up to 15 VDC

Maximum Permissible

120Ω: 25V AC or DC

350Ω: 25V AC or DC

OUTPUT @000

50 με (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

SIZE

Aluminum case (separable lid)

5-3/4 H x 8-1/4 W x 7-3/4 D in (145 x 210 x 195 mm)

WEIGHT

4.8 lb (2.2 kg)

All speci□cations are nominal or typical at +73°F (+23°C) unless noted.



A certi□cate of calibration is provided with each Model 1550B Calibrator

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "VPG"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. To the maximum extent permitted by applicable law, VPG disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on VPG's knowledge of typical requirements that are often placed on VPG products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at vpgsensors.com.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of VPG.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling VPG products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify VPG for any damages arising or resulting from such use or sale. Please contact authorized VPG personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP