

Student Strain Gage Data Acquisition Device

FEATURES

- Single-channel strain gage data acquisition
- Hardware and software support for full-bridge, half-bridge, and quarter-bridge circuits
- Built-in bridge completion
- 3-wire strain gage connection
- 80-Hz data rate
- Fixed excitation of 2.5 V
- Input range of $\pm 16,000 \mu\epsilon$
- Powered via the USB interface
- Intuitive, user-friendly software
- No calibration is needed
- Units: $\mu\epsilon$, mV/V, and engineering units (user defined)
- Time stamped recorded data

DESCRIPTION

The Student Data Acquisition Device is a single-channel, USB-powered measurement device for use with resistive strain gages. Internal bridge completion supports full-, half-, and quarter-bridge configurations.

Model	3-Wire Quarter Bridge
MM01-120	120 Ω
MM01-350	350 Ω
MM01-1K	1000 Ω

This device is designed for use in applications where a convenient, low-cost, easy-to-use strain gage measurement is required. It is ideal for classroom environments or gage installation verification.

Operation of the StudentDAQ is performed with commands sent via a USB connection. User-friendly application software is provided to control the StudentDAQ with a Microsoft® Windows®-based personal computer. Complete source code, written in National Instruments® LabVIEW® is provided. A .NET interface is also included.



SPECIFICATIONS

Input Connections

Type: RJ-45 Modular

Quantity: 1

Bridge Configurations

Types: Quarter, half, and full bridges

Internal bridge completion:

Quarter bridge: 120 Ω , 350 Ω , 1000 Ω

Half bridge: 1000 Ω

Data Conversion

A/D converter:

24-bit delta-sigma with a low-noise amplifier (gain of 50)

Measurement Range

Strain range: $\pm 16,000 \mu\epsilon$ at GF=2.000

Resolution: $1 \mu\epsilon$ (GF = 2.000)

Accuracy: 1% of reading (GF = 2.000)

Balance Control

Type: Software

Control: Manual

Bridge Excitation

Value: 2.5 VDC nominal

Control: Fixed

Communication Interface

Universal serial bus (USB)

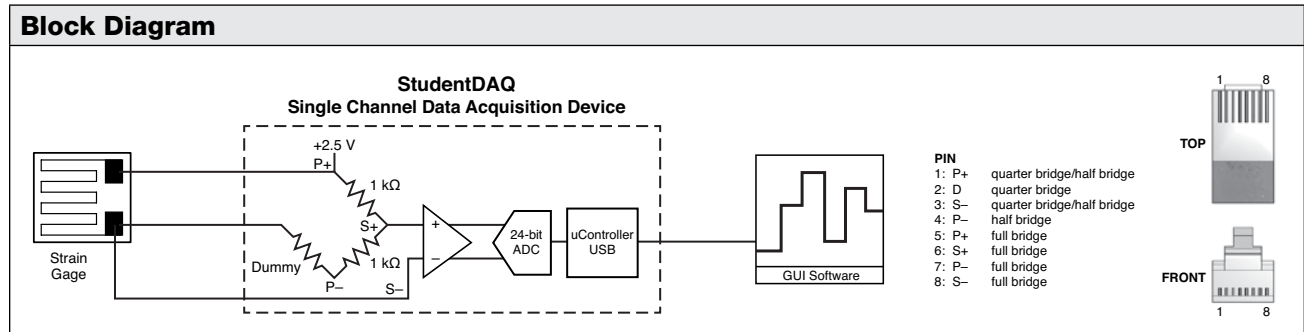
Case material:

Plastic

Size and Weight:

1.0 W x 1.0 H x 3.5 L inches (25.4 x 25.4 x 88.9 mm)

0.05 lb (0.023 kg)





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.