



P1000 Handy Strain Gage Indicator

Strain Gage Indicator



Features:

- Strain gage or SG base transducer indicator
- ± 1 micro-strain resolution at Gage Factor = 2
- Quarter, half and full bridge circuitry
- Built-in bridge completion 120 Ω , 350 Ω dummy gages
- Automatic zero-balancing and calibration
- Actual load calibration or sensitivity registration calibration capability
- Gage resistance measuring for Quarter bridges connection
- Lead wire line resistance measuring for 3-wire Quarter bridges
- Enable reading in over 70 engineering unit
- Friendly intuitive, menu-driven operations
- Keypad operable
- Rugged, handy and lightweight
- Operates on 2 pieces of AA size dry cell or AC power adaptor
- Option 16-Bits analog output
- Option EIA-RS-232C or datum link

Applications:

- Material Test
- Strain Indicator
- Stress Indicator
- Material Elasticity Indicator
- Load Cell Indicator
- Force Indicator

- Torque Indicator
- Pressure Indicator
- Acceleration Indicator
- Micro-Resistance Indicator
- Semiconductor Strain Gage Indicator
- Strain/Stress Analysis

Description:

P1000 Strain Gage Indicator is an economical instrument with high accuracy and multiple functions.

It is a Strain Gage Indicator and also function as a Strain Gage Transducer Indicator.

As a Strain Gage Indicator, it can support 10 types of bridges and dummies. While if used as a Strain Gage Transducer Indicator, there are 24 bits A/D converts to make the measurement.

P1000 Data Logger RS-232

- Connect to maximum 8 units P1000.
- EIA-RS-232C datum link.
- Real Time Chart.
- Save Data File to Excel *.csv format.
- Free operating software.





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Specification:

- **Hardware Specifications**
All specifications nominal or typical at +23° C unless otherwise noted
 - **Inputs**
Highly reliable terminal accept independent bridge inputs.
Accommodates 16-30 AWG (1.5 to 0.14 mm diameter) wire.
(Option) D-Sub 9-pin terminal accept independent bridge or transducer inputs.
 - **Bridge Configurations**
Quarter-, half-, and full-bridge circuits.
Internal bridge completion provided for 120 Ω and 350 Ω on quarter-bridges; 60 Ω to 2 k Ω on half- or full-bridge
- **Display**
Full dot-matrix structure with 2 Row X 8 characters dots FSTN positive, gray translucence LCD with backlight.
Display update is once per second.
- **Data Conversion**
24-Bits high-resolution sigma-delta converter.
60 Hz and 50 Hz noise rejection.
- **Measurable Range**
± 20,000 με (± 1 με resolution)
at Gage Factor = 2.000
- **Accuracy**
± 0.1% of reading ± 3 counts. (Normal mode operation at Gage Factor = 2.000)
- **Gage Factor Settings** : Range 0.500 to 8.000
- **mV/V Settings** : Range 0.500 to 10.000
- **Balance**
Single key operation to initiate automatic software balance
- **Bridge Excitation** : 1.25VDC ± 0.04%.
- **Option Analog Output**
16-Bits DAC, Output 1.25 VDC ± 1.25V, Data rate 1 / 4.5 / 10 Hz.
- **Option Communication Interface**
EIA-RS-232C Serial Bus with D-type connector.
Used for data and firmware transferring.
- **Calibration**
Shunt calibration across each dummy resistor to simulate 5000 με (± 0.1%).
Remote calibration supported via accessible switch contacts at input female D-sub.
Gage resistance measuring for Quarter bridges connection
Lead wire line resistance measuring for 3-wire Quarter bridges
- **Power Requirement**
AA size dry cell × 2 or Optional AC-Power Adaptor (PN: P1000-ADP).
- **Dimension & Weight**
 - 6.3" X 3.4" X 1.2" (160 mm X 85 mm X 30 mm)
 - 0.65 Lb (280g) without batteries.
- **Operational Environment**
 - Operating temperature: -10° C ~ 50° C.
 - Storage temperature: -15° C ~ 55° C.
 - Humidity: Below 95% RH, non-condensing
- **Firmware Features**
 - Display Update Rate: 1 readings per second.
 - **Scaling**
Automatic scaling for micro-strain, based upon gage factor, with non-linearity correction based upon bridge type.
Automatic calculation of mV/V.
Linear scaling for other engineering units
 - **Units**
Strain, Stress, Weight, Force, Pressure, Torque, Length, Accelerator, Angle, Temperature, Resistance
 - **Bridge Types**
 - Quarter-bridge
 - Half-bridge, adjacent arms, equal and opposite strains
 - Half-bridge, opposite arms equal strains
 - Shear bridge, 2 active arms
 - Poisson half-bridge
 - Full-bridge 4 fully active arms
 - Shear bridge, 4 active arms
 - Full-bridge, Poisson gages in opposite arms
 - Full-bridge, Poisson gages in adjacent arms
 - Undefined full-bridge
 - Undefined half-bridge; quarter-bridge
 - **Bridge Balance**
 - Automatic
 - Manual offset adjustment
 - Disabled