

Digital Indicator

AD-4531A

High Performance Digital Indicator for Strain Gauge Sensors: Weight, Pressure, Displacement, Torque, Tension and Acceleration applications



- Digitally processed signals with 16 times/s A/D and D/A conversion
- Peak hold and hold capability
- "Hold Mode" data stored digitally to prevent drooping on display and analog output
- Comparator function and output
- Analog output with scaling and offset functions



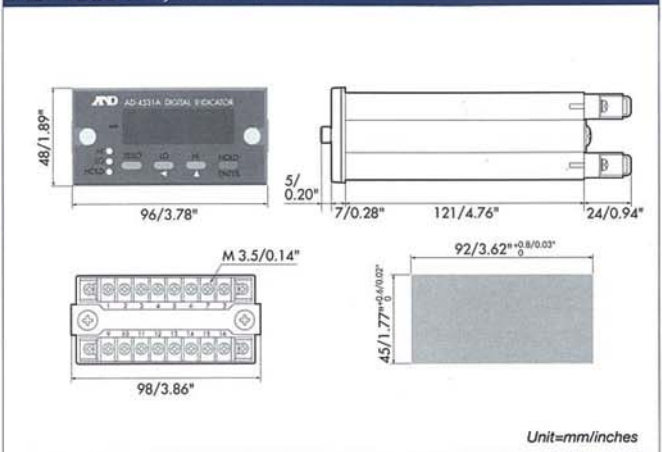
AND ...Clearly a Better Value
A&D Company, Limited

- Full digital calibration-Digitally span calibrated by entering a sensor output voltage through the keypad or input using the optional RS-232C interface
- Data digitally held in memory. Hold value and analog output are stored without any drooping
- Easy digital key operation relieves user of repetitive adjustments
- Compact DIN size body for greater installation flexibility
- Averaging time and display update rate can be selected for various applications
- Digital display hold, peak hold and bottom hold
- Replace circuit board and front key board without disconnecting any wires. Easy, fast and low-cost maintenance
- Analog output with offset and scaling functions
- Variety of data outputs: Average, Digital Peak Hold, Analog, Hysteresis compensation comparison
- Analog low-pass filter removes noise from signal inputs
- RFI/EMI screened to comply with U.S., Canadian and other international regulations

Specifications

| | |
|------------------------------|--|
| Number of Measurement Points | — 1 |
| Sensor Type | — Strain gauge sensors (Bridge resistance: 120Ω ~ 1kΩ) |
| Sensor Power Supply | — (Bridge voltage: Adjustable with on-board switch) |
| (1) 350Ω Sensor | — Voltage applied: 5 VDC (Up to four sensors can be connected.) |
| (2) 120Ω Sensor | — Voltage applied: 5 VDC. (Only one sensor can be connected.) |
| Calibration Method | — Digital calibration (Full Digital Calibration) |
| Measurement Ranges | |
| Zero Calibration Range | — - 0.3 ~ 3 mV/V |
| Span Calibration Range | — 0.5 ~ 3 mV/V |
| Minimum Input Sensitivity | — 1.2 μV/d |
| Maximum Display | — ± 9995 |
| Display Resolution | — 2,000 counts (Max.) |
| Linearity | — 0.1% F.S. ± 1 digit |
| A/D Conversion | — 16 times/s |
| Temperature Coefficients | |
| Zero | — 0.5 μV/°C (Typ.) |
| Span | — 30 ppm/°C (Typ.) |
| Display Panel | |
| Measurement Data Display | — 7-segment, 4-digit, red LED display with 14mm character size. One polarity indicator LED. |
| Status Indicator | — Three red LEDs representing measurement status (HI, LO and HOLD) |

AD-4531A Physical Dimensions



- Either standard data or digital peak data outputs are available through optional RS-232C, Current Loop or 4 ~20mA analog output interface

Functions

| | |
|-------------------------|--|
| Comparator Function | — Allows upper and lower limits to be set and HI and LO signals to be output from the output terminal (isolated open collector) Capacity: 40mA at 30 VDC |
| Digital Hold Modes | — Peak hold, Bottom hold, Display hold |
| Analog Output | — Max. +2 V (Scaling is enabled by setting values.) |
| Output Resolution | — Max. 1/2000 |
| Temperature Coefficient | — 100 ppm/°C |
| Others | — *Zero and hold by contact input *Key disabling function *Span mode calibration — Key in CAL. data without test weights *Full Digital Calibration (FDC) *Zero or Span calibration |

General Specifications

| | |
|--------------------------|---|
| Power | — 100, 120, 200, 220, 240 VAC+10%-15% 50/60 Hz, 10 VA (factory preset) |
| Weight | — Approximately 500g (1.10 lb) |
| Operating Temperature | — -5°C to +40°C/23°F to 104°F |
| Operating Humidity | — Less than 85% RH (Non-Condensing) |
| Physical Dimensions | — 96(W) × 157(D) × 48(H) mm 3.78(W) × 6.16(D) × 1.89(H) inches |
| Panel Cut out Dimensions | — 92+0.8/-0 × 45+0.6/-0mm 3.62+0.03/-0 × 1.77 +0.02/-0 inches |
| Standard Accessories | — Manual and fuse |

Options

- OP-04 — RS-232C interface (output)
 - OP-05 — Current Loop output (passive)
 - OP-07 — 4-20 mA analog output (passive)
- *Only one output can be selected from standard analog output, OP-04, OP-05 and OP-07

*Specifications are subject to change without notice.

A&D

...Clearly a Better Value

A&D Company, Limited
3-23-14 Higashi-Ikebukuro, Toshima-ku, Tokyo 170-0013 JAPAN
Telephone: [81] (3) 5391-6132 Fax: [81] (3) 5391-6148
http://www.aandd.co.jp

A&D ENGINEERING, INC.
1555 McCandless Drive, Milpitas, CA. 95035 U.S.A.
Telephone: [1] (408) 263-5333 Fax: [1] (408) 263-0119

A&D MERCURY PTY. LTD.
32 Dew Street, Thebarton, South Australia 5031 AUSTRALIA
Telephone: [61] (88) 352-3033 Fax: [61] (88) 352-7409

A&D INSTRUMENTS LTD.
Abingdon Science Park, Abingdon, Oxford OX14 3YS ENGLAND
Telephone: [44] (1235) 550420 Fax: [44] (1235) 550485
< German Sales Office >
Genfer Straße 6, 60437 Frankfurt/Main 50 GERMANY
Telephone: [49] (69) 507 1017 Fax: [49] (69) 507 2054

A&D KOREA Limited
Manhattan Bldg. 8F, 36-2 Yoido-dong, Youngdeungpo-gu, Seoul, KOREA
Telephone: [82] (2) 780-4101 Fax: [82] (2) 782-4280

*AD4531A-990205-04H3