

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



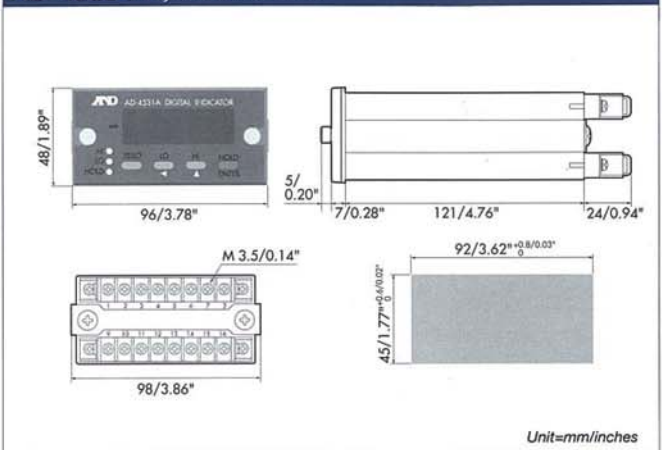
**AND** ...Clearly a Better Value  
A&D Company, Limited

- 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.

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