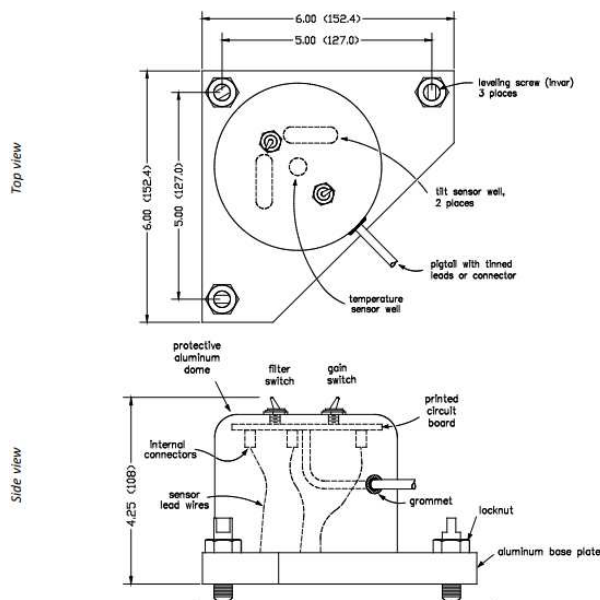


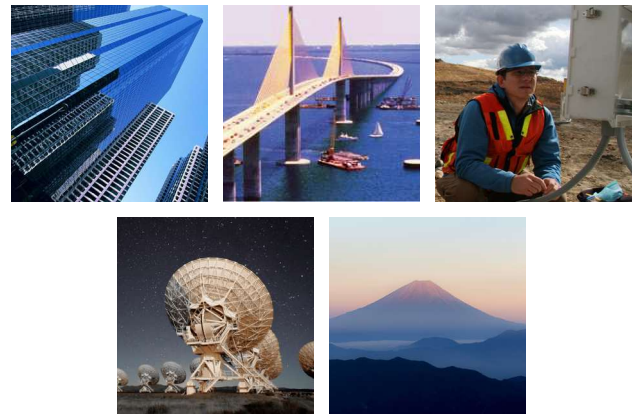
A701-2A/2B

High-Precision Platform Inclinometer

The model A701-2 Platform mount tiltmeter is our most popular design for high precision tilt measurements. Units come with built in invar leveling legs, for easy installation on any horizontal surface. The A701-2 also includes two switchable gains and two low-pass filter settings. Using an absolute gravity referenced electrolytic sensor, the A701 delivers ultra-high sensitivity to $<0.1 \mu\text{rad}$ with virtually zero long-term drift. Output is a stable ± 8 DC voltage (± 16 VDC differential). Rugged, reliable, and extremely accurate, the A701-2 is the preferred choice for volcano monitoring, high-precision geotechnical engineering, bridge deflection monitoring, precision metrology, radar platform leveling, and high-accuracy tilt monitoring applications worldwide.



Dimensions: in [mm]



APPLICATIONS:

- Volcano monitoring
- Geotechnical engineering
- Bridge deflection monitoring
- Precision metrology
- Radar platform leveling

PERFORMANCE SPECIFICATIONS

PERFORMANCE

| VERSION | A701-2A (High-Gain) | A701-2B (Mid-Range) |
|--|--|--|
| LINEAR RANGE (°)¹ | HIGH-GAIN: ±0.046° LOW-GAIN: ±0.46° | ±0.8° ±8.0° |
| SCALE FACTOR | HIGH-GAIN: 0.1 μradian/mV LOW-GAIN: 1 μradian/mV | 0.1°/V 1°/V |
| NONLINEARITY (%FRO)² max | HIGH-GAIN: 0.2% LOW-GAIN: 2% | 0.2% 1.5% |
| NONREPEATABILITY | 1 μradians (static) | 2 μradians (static) |
| RESOLUTION | 0.1 μradians | 1.0 μradians |
| TIME CONSTANT | Filter on: 7.5 sec; Filter off 0.5 sec | Filter on: 7.5 sec; Filter off 0.4 sec |
| K_Z TEMP COEFFICIENT (°/°C) | ±3 μradians/°C (typical) | ±0.001°/°C (typical) |
| K_S TEMP COEFFICIENT (%/°C) | 0.05%/°C (typical) | |
| OUTPUT CHANNELS | ±8VDC (single ended); ±16VDC (differential) X-tilt, Y-tilt, Temperature | |

ELECTRICAL & ENVIRONMENTAL

| | |
|---|---|
| NUMBER OF AXES | 2 |
| OUTPUT IMPEDANCE (Ohms, nominal) | 270 |
| TEMPERATURE OUTPUT | 0.1 °C/mV typical (single ended; 0 °C = 0mV) |
| POWER | ±11 to ±15 VDC @ +11 and -6mA, 250 mV ripple max, reverse polarity protected |
| OPERATING TEMPERATURE RANGE | -25° to +70 °C |
| STORAGE TEMPERATURE RANGE | -30° to +100 °C |
| WEIGHT | 3 lb (1.4 kg) |
| MATERIALS | Anodized and painted aluminum |
| CABLE | 3m (10 ft) multiconductor cable + overall shield, PVC jacket, connectors included |

PIN OUT:

| CONNECTOR | FUNCTION |
|-----------|-------------------|
| RED | +12 TO +15V PWR |
| BLACK | PWR GND |
| VIOLET | -12 TO -15V POWER |
| BLUE | +Y-TILT OUT |
| BROWN | -Y-TILT OUT |
| GRAY | -X-TILT OUT |
| GREEN | +X-TILT OUT |
| WHITE | SIG GND |
| YELLOW | TEMP OUT |

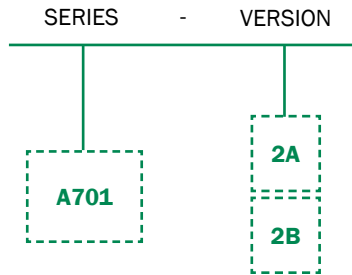
NOTES:

1. Custom ranges available on request
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment

Specifications are subject to change without notice due to continued product development

ORDERING INFORMATION

HOW TO ORDER Model Numbers are comprised of the series, the number of axes, and the angular range.



| MODEL # | PART # |
|---------|----------------|
| A701-2A | 98024-01-R0-IS |
| A701-2B | 98024-02-ROHS |

Accessories:

| PART # | DESCRIPTION |
|----------|---|
| 01456 | Compact Mounting Plate for Model 711 Type Tiltmeters, 6.0 x 7.5 x 0.375 inches |
| 01224-01 | Horizontal Mounting Plate for Model 711 Type Tiltmeters, 8.5 x 9.0 x 0.5 inches |
| 01157-01 | Vertical Mounting Bracket for Model 711 Type Tiltmeters, L-bracket style |
| 70304 | Power/Signal Cable, 10-conductor, 24 AWG, Polypropylene Jacket: 500, 700 & 800 Series Dual Axis Tiltmeters, price per ft. |
| 89062 | Extra RS422 Test Cable, 6-ft (1.8 m) for use with D701 and D711 Digital Tiltmeters |
| 89063 | Extra RS232 Test Cable, 6-ft (1.8 m) for use with D701 and D711 Digital Tiltmeters |
| 00254-02 | Transformer, 100-240 VAC to 12VDC, Single-ended, for Analog and Digital Tiltmeters |

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