

Model D711-A/B/C

Digital Floor-mount Tiltmeter



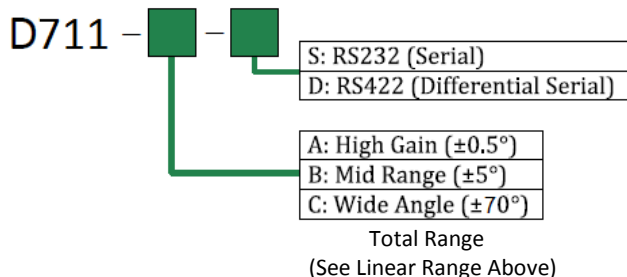
The model D711 Floor-mount Tiltmeter is a rugged, high-precision instrument with advanced digital firmware. Output is RS232 or RS422 (RS485 full duplex). The D711 bolts or clamps to any horizontal surface, and is well suited for areas of heavy traffic or vibration. Utilizing a high-precision electrolytic sensor element, units deliver up to 1 μ radian resolution with virtually zero long-term drift. Programmable firmware controls include sample averaging, auto-zero (tare), baud/output rate, temperature compensation and more. The D711 also includes on-board memory, with storage capacity up to 22,000 samples. Use the D711 for volcano monitoring, geotechnical engineering, structural monitoring, platform leveling, and more.



| | D711-A (High-gain) | D711-B (Mid-range) | D711-C (Wide-angle) |
|---|---|---------------------------|--|
| Total Range | $\pm 0.5^\circ$ | $\pm 5.0^\circ$ | $\pm 70^\circ$ |
| Calibrated Linear Range | $\pm 0.5^\circ$ | $\pm 5.0^\circ$ | $\pm 60^\circ$ |
| Resolution | 1 μ radian | 10 μ radian | 21 μ radians |
| Repeatability | 4 μ radians (static) | 15 μ radians (static) | 350 μ radians |
| Non-Linearity | 0.4% | 0.1% | 0.1% |
| Time Constant | 0.15 sec | | 0.15 sec |
| Kz Temp Coefficient (bias/ $^\circ$ C) ¹ | $\pm 3.5 \mu$ radians/ $^\circ$ C (typical) | | $\pm 0.004^\circ$ / $^\circ$ C (typical) |
| Ks Temp Coefficient (%/ $^\circ$ C) ¹ | $\pm 0.02\%$ / $^\circ$ C (typical) | | $\pm 0.05\%$ / $^\circ$ C (typical) |
| Output | RS232, RS422 (RS485 full duplex) | | |
| Output Format | NMEA XDR, Trimble TCM, Ashtec compatible, Simple (default: X, Y, Temp., S/N) | | |
| Baud Rate | 9600 (default), 19200, 28800, 57600, 115200, 230400 | | |
| Channels | X-tilt, Y-tilt, Temperature, Serial No. | | |
| Power | 7-28 VDC @ 30mA, 250 mV ripple max, reverse polarity protected | | |
| Environmental | -40 to +85 C operation and storage; IP65 | | |
| Dimensions | 6 x 6 x 4 inches (15 x 15 x 10 cm), 3 lb (1.4 kg) | | |
| Materials | Anodized and painted aluminum | | |
| Cable | 3m (10 ft) multiconductor cable + overall shield, PVC jacket, connectors included | | |

**Specifications subject to change without notice on account of continued product development. ¹For exact Kz & Ks coefficients, we can offer custom temperature characterization for multiple temperature points (additional changes will apply, please contact Jewell for details)*

Ordering Code



Accessories

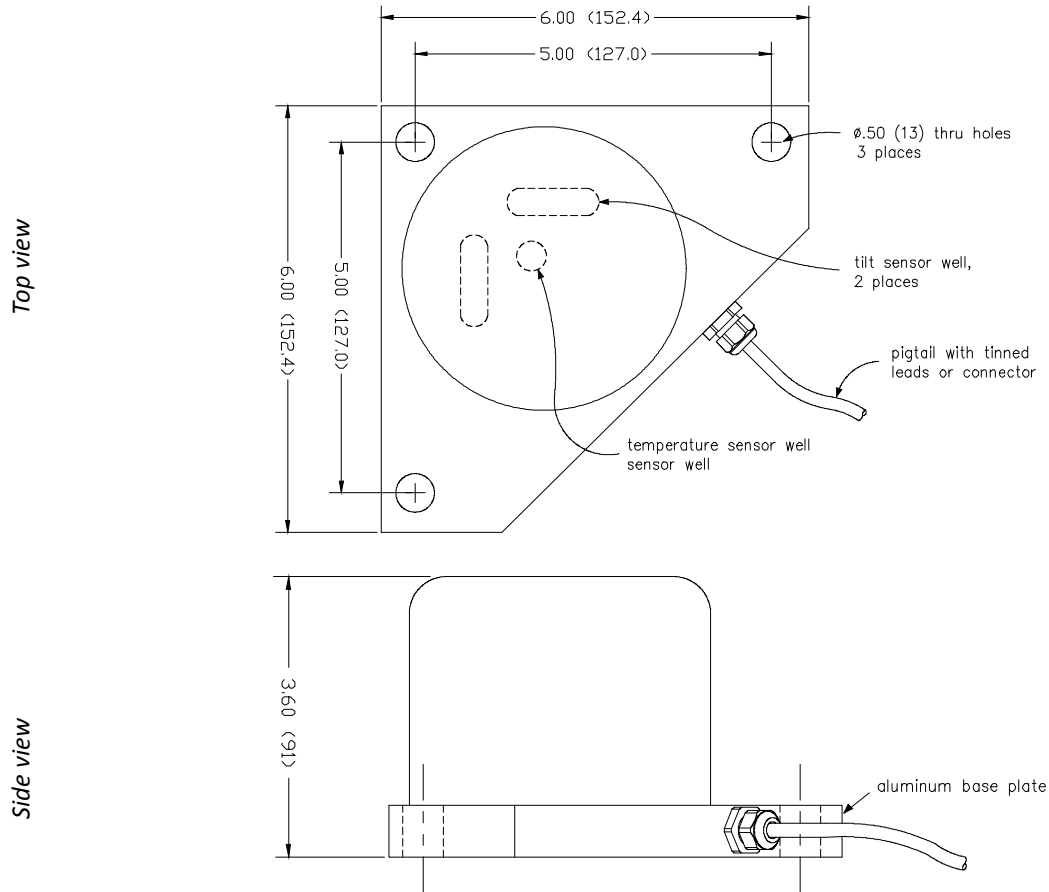
| Part No. | Description |
|----------|--|
| 70304 | Power/signal cable, 10-conductor (specify total length on order) |
| 62401 | Extra female panel receptacle (one included with tiltmeter) |
| 719-AL | Vertical mounting bracket (L-bracket) |
| 718-AL | Horizontal mounting plate |

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Dimensions:



Dimensions in inches (mm)

Wiring/Pin-out:

| Wire Color | Tiltmeter End | | Mating Cable (Computer End) | |
|------------|---------------|---------------|-----------------------------|-----------------|
| | Function | Connector Pin | DB9 Pin (RS422) | DB9 Pin (RS232) |
| Red | Power | H | --- | --- |
| Black | Ground | A | 1 | 5 |
| Blue | TX (RS232) | E | --- | 2 |
| Green | RX (RS232) | G | --- | 3 |
| Orange | TX+ (RS485) | D | 4 | --- |
| Gray | TX- (RS485) | J | 5 | --- |
| Yellow | RX- (RS485) | C | 9 | --- |
| Brown | RX+ (RS485) | B | 8 | --- |
| Drain Wire | Cable Shield | F | --- | --- |