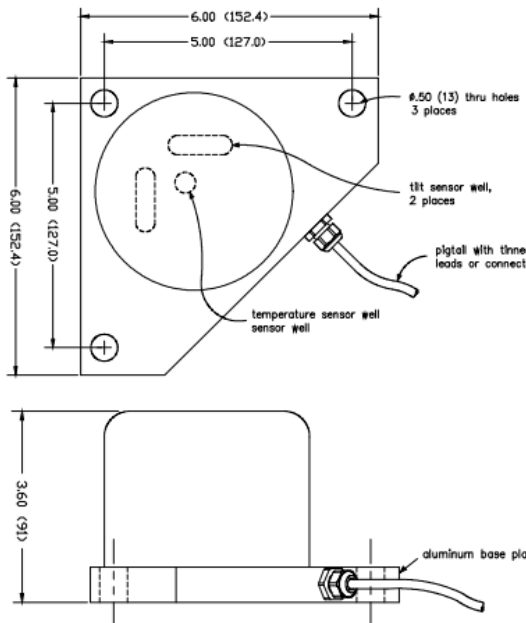


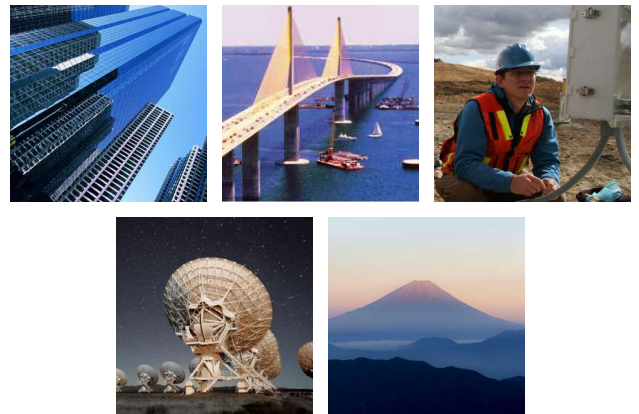
## D711-A/B/C

### 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  $\mu$ 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.



Dimensions: in [mm]



#### APPLICATIONS:

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

# PERFORMANCE SPECIFICATIONS

## PERFORMANCE

VERSION	D711-A (High-Gain)	D711-B (Mid-Range)	D711-C (Wide-Angle)
CALIBRATED LINEAR RANGE (°) <sup>1</sup>	±0.5°	±5.0°	±60°
NONLINEARITY (%FRO) <sup>2</sup> max	0.1%	0.1%	0.1%
NONREPEATABILITY	4 μradians (static)	10 μradians (static)	350 μradians
RESOLUTION	1 μradian	10 μradians	21 μradians
TIME CONSTANT	0.15 sec		
K <sub>z</sub> TEMP COEFFICIENT (°/°C)	±3.5 μradians/°C (typical)		±0.004°/°C (typical)
K <sub>s</sub> TEMP COEFFICIENT (%/°C)	±0.02%/°C (typical)		±0.05%/°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.		

## ELECTRICAL & ENVIRONMENTAL

NUMBER OF AXES	2
POWER	7-28 VDC @ 30mA, 250 mV ripple max, reverse polarity protected
OPERATING TEMPERATURE RANGE	-40° to +85° C
STORAGE TEMPERATURE RANGE	-40° to +85° C
RELATIVE HUMIDITY	95% at 30° C
MAX. ALTITUDE	> 3500m AMSL
WEIGHT	3 lb (1.4 kg)
MATERIALS	Anodized and painted aluminum
CABLE	3m (10 ft) multiconductor cable + overall shield, PVC jacket, connectors included
SEAL	IP65

## PIN OUT: TILTMETER END MATING CABLE (COMPUTER END)

CONNECTOR	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	-	-

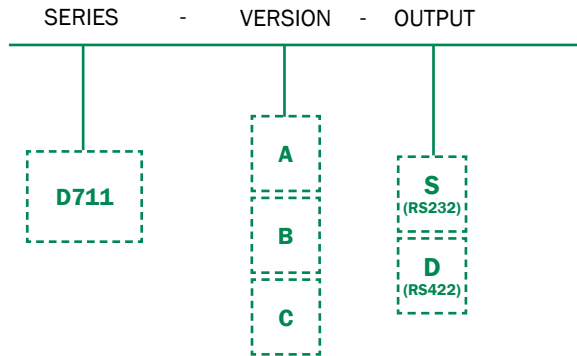
### NOTES:

1. Custom ranges available on request
2. Nonlinearity is specified as variation around the best straight line from null to full-range output.

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

# ORDERING INFORMATION

**HOW TO ORDER** Model Numbers are comprised of the series, angular range, and output interface.



MODEL #	PART #
D711-A-D	98005-03-ROHS
D711-A-S	98005-01-ROHS
D711-B-D	98005-04-ROHS
D711-B-S	98005-02-ROHS
D711-C-D	98005-06-ROHS
D711-C-S	98005-05-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