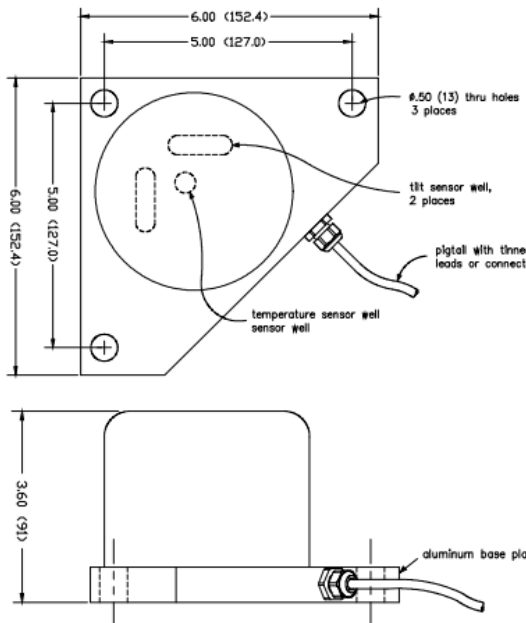


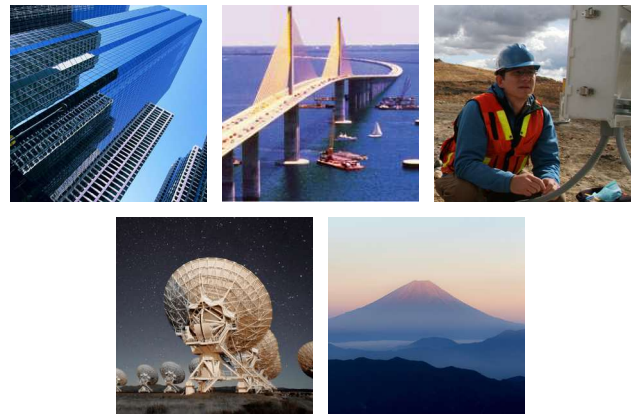
D701-A/B

Digital Platform Tiltmeter

The model D701 Digital Platform Tiltmeter is a high-precision instrument with advanced firmware features. Output is RS232 or RS422 (RS485 full duplex). The D701 also includes invar leveling feet for easy installation on any horizontal surface. Using a high-precision electrolytic sensor element, units deliver up to $1 \mu\text{radian}$ resolution with virtually zero long-term drift. Programmable firmware controls include sample averaging, auto-zero (tare), baud/output rate, temperature compensation* and more. The D701 also has 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	D701-A (High-Gain)	D701-B (Mid-Range)
ANGULAR RANGE (°) ¹	±0.5°	±5.0°
NONLINEARITY (%FRO) ² max	0.4%	0.1%
NONREPEATABILITY	4 μradians (static)	10 μradians (static)
RESOLUTION	<1 μradian	10 μradians
TIME CONSTANT	0.15 sec	2 sec
Kz TEMP COEFFICIENT (°/°C)	±3.5 μradians/°C (typical)	
Ks TEMP COEFFICIENT (%/°C)	±0.02%/°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
OUTPUT IMPEDANCE (Ohms, nominal)	270
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
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:

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

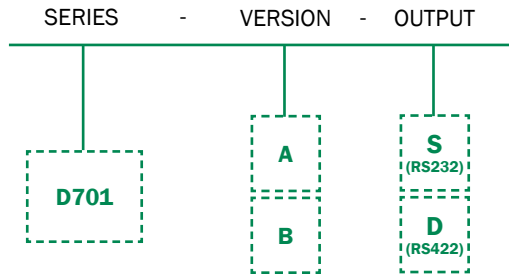
NOTES:

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 #
D701-A-D	98023-03-ROHS
D701-A-S	98023-01-ROHS
D701-B-D	98023-04-RO HS
D701-B-S	98023-02-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

850 Perimeter Road Manchester, NH 03103 USA

SENSORS: 800.227.5955

www.jewellinstruments.com | sensors@jewellinstruments.com

© Jewell Instruments 2020

Jewell
Instruments

ISO9001
CERTIFIED