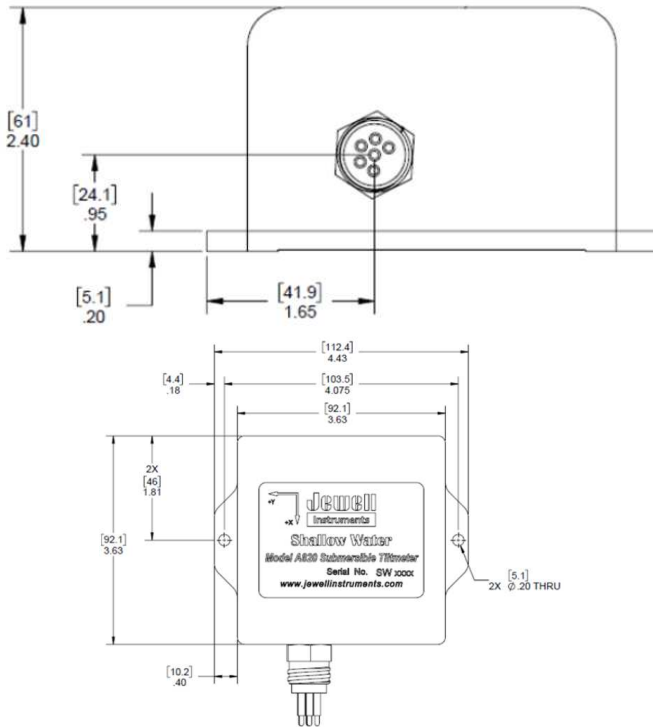
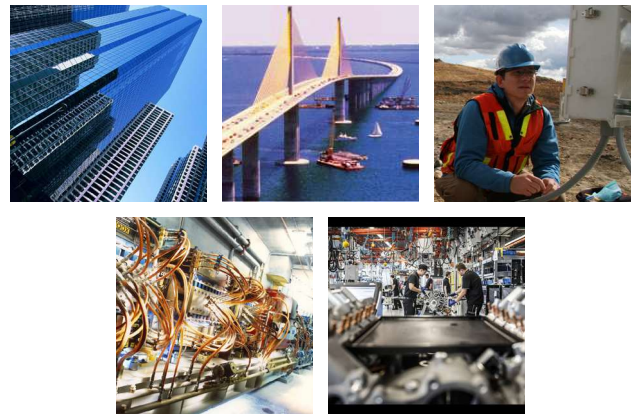


Model D820 Shallow Water Analog Tiltmeter

The model D820 Shallow Water is a high-precision submersible tiltmeter for use in fresh and salt water applications with RS232 or RS422 digital output. Using an absolute gravity referenced electrolytic sensor, the D820 delivers superior measurement accuracy with virtually no long-term drift. High-gain units are sensitive to <math><0.0017\text{ mm/m}</math> or better. All units are rated to 200 meters (656.2 ft) waterproof for advanced protection from the elements. Use the D820 "Shallow Water" for structural monitoring, angle measurement and control, platform leveling and more.

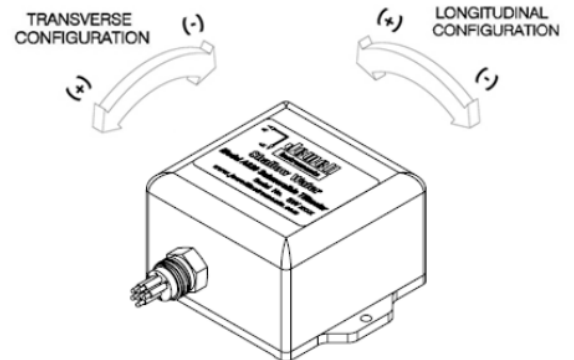


Dimensions: in [mm]



APPLICATIONS:

- Structural Monitoring
- Platform Leveling
- Industrial Measurement & Control



PERFORMANCE SPECIFICATIONS

PERFORMANCE

ANGULAR RANGE (°) ¹	±0.5°	±3°	±50°
RESOLUTION	<0.0001°	0.002°	0.02°
NONREPEATABILITY (° max)	0.0003°	0.0003°	0.004°
NONLINEARITY (%FRO) ² max	0.1		
SCALE FACTOR	0.0625°/mA	0.375°/mA	6.25°/mA
TIME CONSTANT	0.15 sec		
Kz TEMP COEFFICIENT (°/C)	±0.0002 °/°C (typical)		±0.002 °/°C (typical)
OUTPUT	RS232, RS422		
OUTPUT FORMAT	NMEA XDR, Trimble TCM, Ashtec compatible, Simple (default: X, Y, Temp., S/N)		
BAUD RATE	9600 (default), 19200, 28800, 57600, 115200, 130400		
CHANNELS	X-tilt, Y-tilt, Temperature		

ELECTRICAL & ENVIRONMENTAL

NUMBER OF AXES	1 or 2
OUTPUT IMPEDANCE (Ohms, nominal)	270
TEMPERATURE OUTPUT	Temperature is measured with a 2500 Ohm thermistor, -50° to 150°C range
POWER	7-28 VDC @ 30mA, 250 mV ripple max, reverse polarity protected
OPERATING TEMPERATURE RANGE	-4° to +60°C
STORAGE TEMPERATURE RANGE	-30° to +100°C
WEIGHT	5 kg (11 lb)
MATERIALS	316 stainless steel
SEAL	Submersible to 200 meters (656.2 ft)
CABLE	6-conductor unshielded, 20AWG female receptacle with locking sleeve, neoprene jacket. Charged separately. Specify cable length per unit on order

PIN OUT:

RS232 Wiring

WIRE COLOR	FUNCTION
BLACK	PWR GND
WHITE	-
RED	PWR
GREEN	RxD
YELLOW	-
BLUE	TxD

RS422 Wiring

WIRE COLOR	FUNCTION
BLACK	PWR GND
RED	TX-
YELLOW	PWR
BLUE	TX+
GREEN	RX-
WHITE	RX+

NOTES:

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

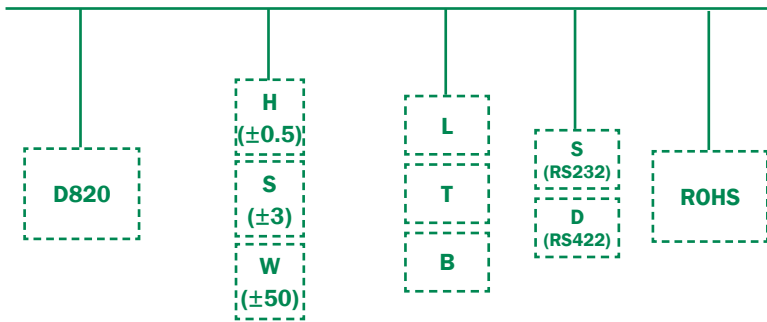
Specifications are subject to change without notice due to continued product development



ORDERING INFORMATION

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

SERIES - ANGULAR RANGE - AXIS - OUTPUT - RoHS



Accessories:

PART #	DESCRIPTION
00389	Extra 8-socket Female in-line connector, Neoprene, on 24-inch (60 cm) Cable Whip (bare wire leads)
00359	Extra Delrin Locking Sleeve (locks 00358 and 00389 in-line connector to Male bulkhead)
00358-xxx	Extra 6-socket Female in-line connector, Neoprene, (bare wire leads) price per foot

	MODEL #	PART #
±0.5	D820-HL-S-ROHS	98821-07-ROHS
	D820-HL-D-ROHS	98822-07-ROHS
	D820-HT-S-ROHS	98821-04-ROHS
	D820-HT-D-ROHS	98822-04-ROHS
	D820-HB-S-ROHS	98821-01-ROHS
	D820-HB-D-ROHS	98822-01-ROHS
±3	D820-SL-S-ROHS	98821-08-ROHS
	D820-SL-D-ROHS	98822-08-ROHS
	D820-ST-S-ROHS	98821-05-ROHS
	D820-ST-D-ROHS	98822-05-ROHS
	D820-SB-S-ROHS	98821-02-ROHS
	D820-SB-D-ROHS	98822-02-ROHS
±50	D820-WL-S-ROHS	98821-09-ROHS
	D820-WL-D-ROHS	98822-09-ROHS
	D820-WT-S-ROHS	98821-06-ROHS
	D820-WT-D-ROHS	98822-06-ROHS
	D820-WB-S-ROHS	98821-03-ROHS
	D820-WB-D-ROHS	98822-03-ROHS