

Tuff Tilt Model 801 Uniaxial Tiltmeter

The Model 801 *Tuff Tilt* Uniaxial Tiltmeter combines precision and durability in an economical instrument. It incorporates a gravity-referenced electrolytic tilt transducer as the internal sensing element, delivering high dynamic range and long-term stability. Housed in a rugged weatherproof enclosure, this analog output tiltmeter may be used outdoors and in other wet environments.

Tuff Tilt applications include:

- Antenna leveling and tracking (Model 801-H)
- Monitoring of bridges and structures (Model 801-S)
- Rotary position of dam gates and other machinery (Model 801-W)



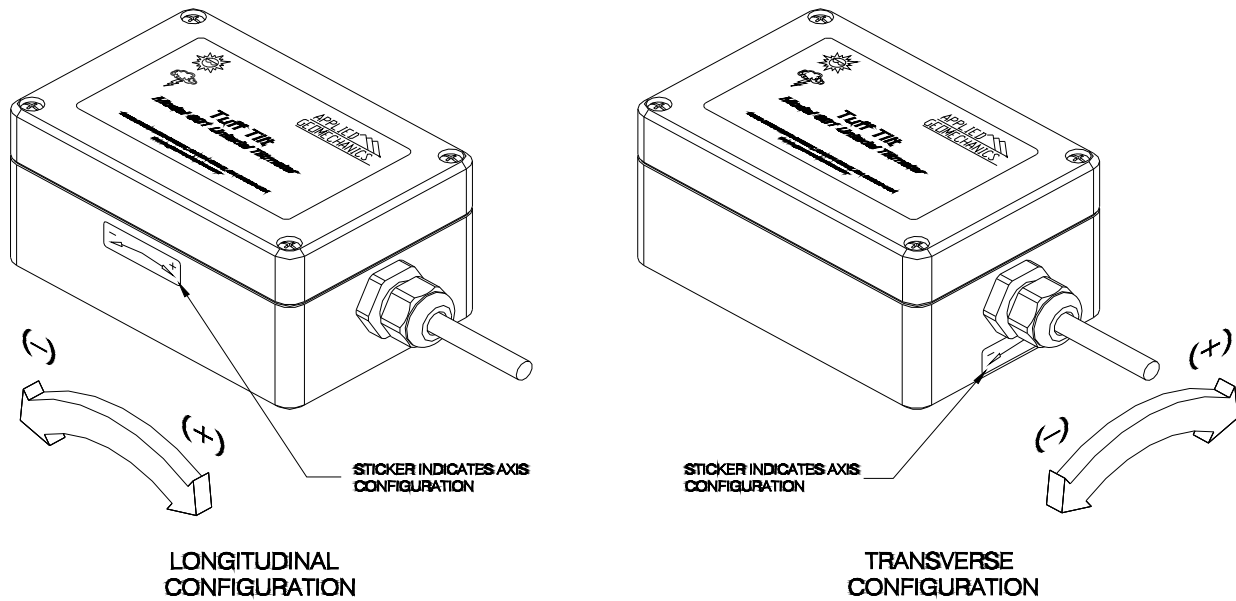
	Model 801-H High-Gain Version	Model 801-S Standard Version	Model 801-W Wide-Angle Version
ANGULAR RANGE	±0.5 degrees	±3 degrees	±50 degrees*
SCALE FACTOR†	0.1°/ volt (single-ended)	0.6°/ volt (single-ended)	10°/ volt (single-ended)
RESOLUTION	<0.0001 degree (<1.75 μradians)	0.0006 degree (10.5 μradians)	0.01 degree
REPEATABILITY	<0.0002 degree	0.001 degree	0.02 degree
LINEARITY	1% of full span typical	<2% of full span typical	0.5% of full span typical
TEMPERATURE COEF.	Scale factor: $K_S < 0.02\%/^{\circ}\text{C}$ typ. Zero shift: $K_Z = \pm 0.0002$ degree/ $^{\circ}\text{C}$	$K_S < 0.02\%/^{\circ}\text{C}$ typ. $K_Z = \pm 0.0002$ degree/ $^{\circ}\text{C}$ typ.	$K_S < 0.02\%/^{\circ}\text{C}$ typ. $K_Z = \pm 0.002$ degree/ $^{\circ}\text{C}$ typ.
TIME CONSTANT, T	1.75 seconds (2-pole Butterworth low-pass filter), faster response available		0.15 second
TILT OUTPUT	± 5 VDC single-ended, ±10 VDC differential (both provided)		
TEMPERATURE OUTPUT	0.1°C/mV (single-ended), -40° to +100°C, ±0.75°C accuracy, 0°C = 0 mV		
OUTPUT IMPEDANCE	270 Ohms, short circuit and surge protected		
POWER REQ'TS.	+8 to +18 VDC @ 8 mA, 250 mV peak-to-peak ripple max., reverse polarity protected		
ENVIRONMENTAL	-25° to +70° C operating, -30° to +100° C storage; NEMA 4X (IP-65) (wet conditions, nonsubmersible)		
ENCLOSURE & MOUNTING	Painted, die-cast aluminum box, 120 x 80 x 60 mm. Four 4.4 mm dia. mounting holes on 107 x 67 mm (4.21 x 2.64 in) centers		
CABLE	3m (10 ft), 6-conductor + one overall shield, PVC jacket, tinned ends		
WEIGHT	0.6 kg (1.5 lb)		

* greater range available

† Divide by 2 for differential scale factor.

Call today for application notes, additional details or to place an order.

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Wire Color	Function	Connector Pin
Red	+12 VDC	A
White	Signal Ground	B
Black	Power Ground	C
Green	+Tilt Out	D
Blue	-Tilt Out	E
Yellow	Temperature Out	F

Ordering Information

Model 801-H/L	High-Gain Version, Longitudinal
Model 801-H/T	High-Gain Version, Transverse
Model 801-S/L	Standard Version, Longitudinal
Model 801-S/T	Standard Version, Transverse
Model 801-W/L	Wide-Angle Version, Longitudinal
Model 801-W/T	Wide-Angle Version, Transverse

Useful Accessories

Part No.	Feature
70369	Additional cable, please specify length
62204	6-pin male receptacle (connector) for tiltmeter cable
62202	6-socket female plug (mates to P/N 62204)
81439	Mounting bracket for vertical surfaces, with mounting hardware
84051	Horizontal mounting plate (speeds installation) with mounting hardware
Model 870	Readout module for digital display (requires P/N 62204 & multimeter)
ADVisor	Handheld readout unit & datalogger

Conversion Factors: 1 degree = 3600 arc seconds = 17453 microradians