

TUFF TILT 801 - Uniaxial Tiltmeter



PRECISION & DURABILITY
ELECTROLYTIC TILT TRANSDUCER
RUGGED WEATHERPROOF ENCLOSURE

The **TUFF TILT 801** uniaxial tiltmeter combines precision and durability in an economical instrument for a wide variety of monitoring and measurement applications

Description

The **TUFF TILT 801** is an economical uniaxial tiltmeter for a wide variety of monitoring and measurement applications. It incorporates a gravity-referenced electrolytic tilt transducer as the internal sensing element, offering unrivaled precision and long-term stability. Housed in a rugged NEMA 4X enclosure, this analog output tiltmeter may be used outdoors and in other wet or harsh environments, although the unit is not submersible.

The **TUFF TILT** Uniaxial Tiltmeter is ideal for structural load testing, monitoring of walls and foundation movement, surveillance of natural and manmade structures (bridges, dams, etc.) and machine positioning and control.



Key Features

- Easy to install
- Long-term stability
- High dynamic range
- Precision and durability

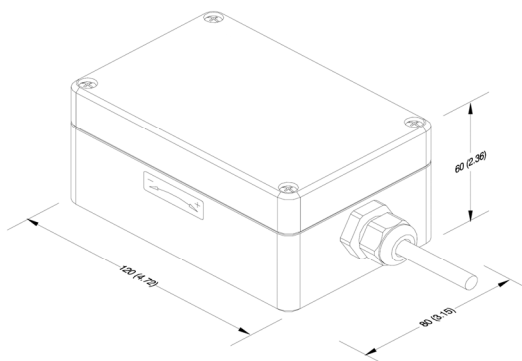
Applications

- Dams
- Bridges
- Structural load testing
- Monitoring of walls and foundation movement
- Machine positioning

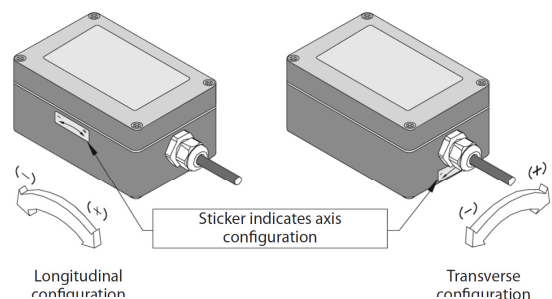
TUFF TILT 801 - Uniaxial Tiltmeter

Specifications

Model	801-H	801-S	801-W
	HIGH-GAIN VERSION	STANDARD VERSION	WIDE-ANGLE VERSION
Angular range	±0.5°	±3°	±50°*
Scale factor	0.1°/ volt (single-ended)	0.6°/ volt (single-ended)	10°/ volt (single-ended)
Resolution	0.0001° (1.75 μradian)	0.0006° (10.5 μradian)	0.01°
Repeatability	0.0002°	0.001°	0.02°
Linearity	1% of F.S., typical	<2% of F.S., typical	0.5% of F.S., typical
Temperature coefficient			
Scale factor	Ks < 0.02% / °C, typ.	Ks < 0.02% / °C, typ.	Ks < 0.02% / °C, typ.
Zero shift	Kz = ±0.0002° / °C, typ.	Kz = ±0.0002° / °C, typ.	Kz = ±0.0002° / °C, typ.
Time constant (T)	1.75 s (2-pole Butterworth low-pass filter) (801-H and 801-S), 0.15 s (801-W)		
Power requirements	+8 to +18 VDC @ 8 mA, 250 mV peak-to-peak ripple max., reverse polarity protected		
Output channels			
Tilt	±5 VDC single-ended, ±10 VDC differential (both are provided)		
Temperature	-400 to +1000 mV, single-ended. Scale factor of temperature sensor = 0.1°C / mV, 0 mV = 0°C		
Operating temperature	-25 to +70°C NEMA 4X (IP-65) rated enclosure for outdoor applications		
Storage temperature	-30 to +100°C		
Cable	3 m, 6-conductor + one overall shield, PVC jacket, tinned ends		
Enclosure & Mounting	Painted, die-cast aluminum box, 120 × 80 × 60 mm Four 4.4 mm dia. mounting holes on 107 × 67 mm pattern		
Weight	0.6 kg		



Dimensions: mm (In.)



Longitudinal and Transverse Configurations