



EWS TMT

Telemetry Tilt Meter

Overview

The **EWS Telemetry Tilt Meter** integrates the power of EWS wireless IoT monitoring technology with a highly accurate in-built triaxial tilt sensor for remote monitoring of a range of geotechnical and structural applications. The EWS Telemetry Tilt Meter devices log and transmit tilt data independently and do not rely on radio transmission to a centralised gateway eliminating the risk of single-point failure. The device is plug and play and multi-communication enabled with transmission available over 4GLTE and uniquely over Satellite allowing the devices to be deployed in the most remote locations on Earth and still provide connectivity to important data. The EWS TMT presents a world first in satellite enabled tilt monitoring and opens opportunities to remotely monitor areas that were previously impossible.

Features

- ✓ Worlds first satellite communication enabled wireless tiltmeter.
- ✓ Multi-Communications options; Send data via Satellite (Iridium, Swarm, Myriota) or 4GLTE.
- ✓ Highly accurate triaxial MEMS tilt sensor.
- ✓ Ultra-Low power draw with internal long-life lithium batteries.
- ✓ Configure using Bluetooth mobile app (available on Apple and Android).
- ✓ Remotely change settings with two-way communications including via Iridium.
- ✓ Out-of Cycle "Event" transmission.
- ✓ Compact form factor 45mmx110mm x 180mm.
- ✓ Rugged and robust for harsh environments - IP68.
- ✓ Encoding scheme for compression of data packet size.
- ✓ Automatic data upload directly to Orion Cloud.
- ✓ Internal storage of up to 260,000 events.

Benefits

- ✓ Ideal for a range of remote slope stability, slip detection, rail and structural monitoring applications.
- ✓ Each device independently logs and transmits data.
- ✓ No gateway or further communication infrastructure required.
- ✓ Compact and discreet, reducing installation time and footprint.
- ✓ Designed and Manufactured in Australia.
- ✓ Rugged and robust - deigned for harsh remote environments.
- ✓ Plug and play setup onsite.
- ✓ Very straightforward and scalable for fast deployments and large monitoring campaigns.
- ✓ Make remote configuration changes over the air.



Specifications subject to change without notice.

MECHANICAL

Size	Width 110mm Height 45mm	Length 180 mm
Weight		
Weather protection	IP68	

BUILT-IN TRIAXIAL TILT SENSOR CHANNEL

MEMS Triaxial Accelerometer		
Range	-15°	+15° Degrees
Resolution	0.001°	
Sensitivity	0.001°	
Repeatability	-0.002°	+0.002° Degrees
Non-Linearity	-0.002 °	+0.002° Degrees

ENVIRONMENTAL

Operating Temperature	-20 60 °C
Storage Temperature	-40 65 °C
Humidity	5 95 % Re

POWER

External Power Supply Input			
Input Voltage	12		24 V
Input Current	700 mA		
Internal Battery (Rechargeable)			
Chemistry	Lion		
Terminal Voltage	6.8	7.8	8.4 V
Capacity	1.8/4.8 Ahr		
Internal Battery (Non-rechargeable)			
Chemistry	LiMnO2		
Terminal Voltage	6.8	7.8	8.4 V
Capacity	4.8 Ahr		
Sensor Power Output			
Output Voltage	11	12	13 V
Output Current	500 mA		
Digital Output			
Output Voltage	11	12	13
Estimated Battery Life	5	-	10 Years

STORAGE

Non-volatile-Log	
Size	4 MB
Events	256000 Events

BLUETOOTH SUPPORT

Bluetooth Standard	5.0
Data Rate	2.5 kbps

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CLOCK

RTC		
Accuracy (-10 to 70°C)	20	70 ppm
Network Time Sync Support		
Supported Networks	Iridium	
Cellular		

TELEMETRY SUPPORT

Iridium	
Protocols	Short Burst Data
Coverage	Worldwide
4G Cellular LTE-M/NB-IOT	
Protocols	MQTT
Email	
Network Support	Telstra
Coverage	4 million Sqr km
Myriota	
Protocol	AWS Lambda
Coverage	Australia Wide