Sensor Datasheet

Motion Monitoring Unit – USM140

USM-140

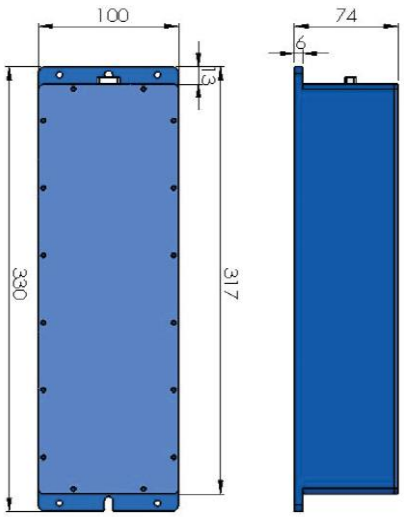
The USM-140 is part of Motion Monitoring Units Family (USM), a joint development between NAVCON and PETROBRAS, and is designed to measure angular and linear motion applications for monitoring of vessels.

Key Features

- Transfer the measurement point (correction for the center of mass)
- Static inclinations (pitch and roll)
- Dynamic inclinations (pitch and roll)
- Accelerations (3 axis)
- Angular rate (3 axis)
- Heave

Motion Monitoring Unit – USM140

MECHANICAL DRAWING



PARAMETER	SPECIFICATION
Physical and Electrical Data	
Dimension	100 x 74 x 330 mm
Weight	3.5 kg
Power Supply	18-30 Vdc
Maximum Power Drain	100 mA
Serial Data Interface	RS-232
Protocol	PETROBRAS NMEA and Proprietary Protocol
Static Inclination	
Range	± 90 °
Resolution	0.02 °
Accuracy	± 0.10 °
Dynamic Inclination (Roll and Pitch)	
Range	± 90 °
Resolution	0.02 °
Accuracy	± 0.15 °
Acceleration	
Range	± 2 g
Resolution	0.25 mg
Noise Density	< 18µg / √Hz
Angular Rate	
Range	± 150 °/s
Resolution	0.05 º/s
Noise Density	< 0.05 º/s / √Hz
Temperature Measurement	
Range	-10 to +100 ºC
Resolution	1 ºC
Heave	
Range	± 20 m (@ 0.05 Hz)
Periods	3 to 20 s
Dynamic Mean Accuracy	12cm or 10% whichever is highest

*The information in this datasheet can be changed without prior notice

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