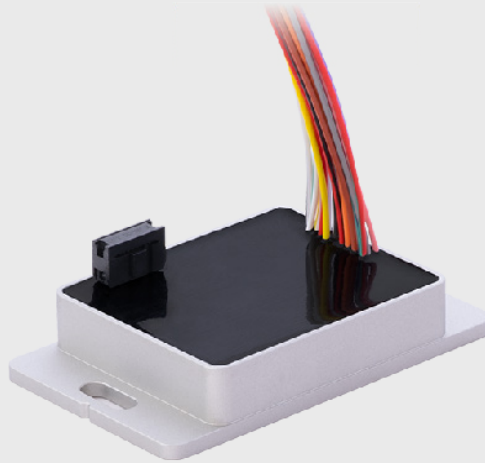


SMC-02 OEM

OEM Motion Reference Unit



The SMC-028 OEM MRU is designed for integration into third-party systems for the Marine, Dynamic Positioning, Offshore, and Hydrographic industry. The OEM provides high accuracy motion measurement data in dynamic environments in all areas from small vessels to large rigs in all weather conditions.

Application

Development over 20 years has produced a Motion Reference Unit for applications from Active Heave Compensation Crane systems, Dynamic Positioning systems, Helideck Monitoring and other various Roll, Pitch and Heave motion applications. The Motion Reference Unit data is suitable for any marine operation that requires attitude determination, motion compensation or dynamic positioning. The SMC Motion Sensors provide high accuracy motion measurements in all dynamic environments.

Function

Motion sensors or MRUs determine the orientation of an object relative to an inertial frame of reference or another body. The SMC Motion Sensor uses 3 accelerometers and 3 solid state MEMS gyroscopes which are integrated with a built-in multi-core processor, to output accurate real time pitch, roll and heave data with high dynamic accuracy when accelerations are present, in industry standard formats.

Calibration

All SMC-028 OEM Motion Reference Units are individually calibrated and tested with the use of a rate table with a controlled temperature chamber.

Communication

The SMC MRU communicates over multiple Ethernet TCP Client/Server, UDP and Modbus connections as well as RS232/RS422 Serial communication. The SMC MRU accepts velocity and heading inputs for aiding during vessel turns and 1PPS for time aiding.

Standard Supply

The SMC Motion Sensor is supplied with a data connection unit, cables and windows-based user configuration software.

Key Features

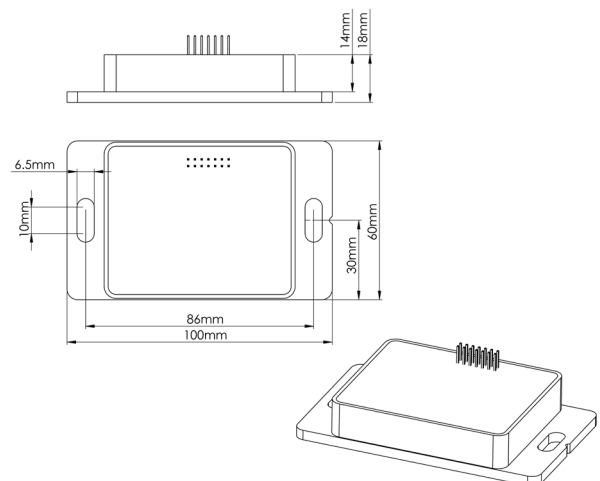
- Roll & Pitch 0.12° RMS, Heave 5 cm or 5 %
- Web Interface
- 3 Measurement Points
- 200 Hz Output Rate
- Serial and Ethernet UDP, TCP, Modbus
- Custom and Industry Standard Protocols
- 2 Years Warranty

Environmental

The SMC-028 OEM Motion Reference Unit is IP50 rated. The lightweight aluminium design, construction and assembly results in an OEM MRU with a high reliability in the most demanding marine environment.

About SMC

SMC is an ISO9001:2015 quality management certified company, manufacturing motion reference units, weather instruments and system integration software packages, such as Helideck Monitoring and Motion Monitoring systems, for the global marine industry.



Specification SMC-02 OEM

Model Features

	SMC-027	SMC-028
Roll / Pitch	Yes	Yes
Accelerations	Yes	Yes
Heave	N/A	Yes

Performance

Roll & Pitch Accuracy @ ±5° simultaneous roll and pitch	0.12° RMS	0.12° RMS
Angle range Roll/Pitch	± 30°	± 30°
Heave Accuracy	N/A	5cm or 5%
Acceleration accuracy	0.05 m/s ² RMS	0.05 m/s ² RMS

Communication

Ethernet: 100 Mbit. UDP, TCP/IP and Modbus, 20 user configurable output ports
Com1: RS232 Bi-Directional
Com2: RS422 Bi-Directional
Com3: RS232 Bi-Directional
Com4: RS232 Bi-Directional

Velocity and Heading input formats RMC, RMA, VTG, VHW, GGA, ZDA, HDT, HDG, 1PPS
SMC Configuration PC software included and Built-In Web Interface
User selectable and User configurable Output Protocols
User selectable Output Rate 1-200hz

Physical

Dimensions (W x D x H) 60 x 100 x 18 mm
Weight ~ 0.2 kg
Anodized Aluminium

Environmental

Temperature -20° to +55° Celsius, outside 0° to +55° Celsius
Storage Temperature -40° to +65° Celsius
MTBF (computed) 50 000 hours
IP50 rated
Mounting on Horizontal Surface

Electrical

Power requirements 12 - 30 VDC; 4 Watts
Standard Complies with the IEC 60945

Warranty & Support

2-year Hardware & Software Warranty
Free Technical & Hardware Support

