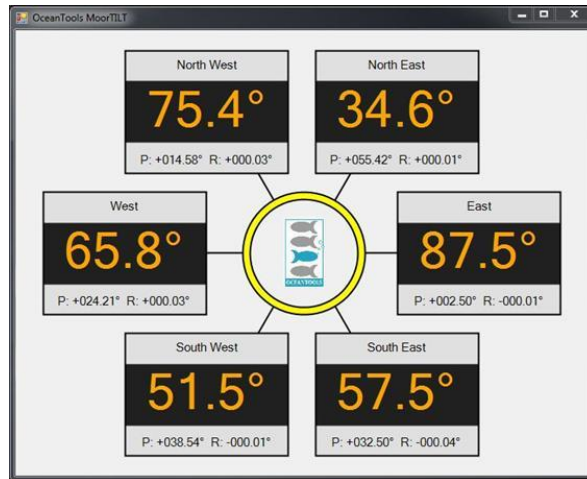


# OceanTools

## MCIS

# Mooring Chain Inclination System

The **Mooring Chain Inclination System** uses precision inclinometers to measure the angle of elevation of mooring chains on a single point mooring (SPM) or similar mooring system.



## Overview

Pitch and roll from an **OceanTILT** inclinometer are used to determine the angle of elevation of a single mooring chain. Custom mounting brackets that clamp onto the mooring chains are engineered for easy installation and retrieval by divers. Alternatively, sensors may be clamped to the chain support assembly above the waterline.

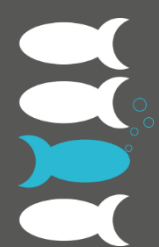
A Surface Interface Box (SIB) distributes power and manages serial communications to sensors on multiple chains via an array of umbilical cables. An **OceanCELL** battery pack can power the entire system if there is no existing power source. A more resilient system can be specified with two separately powered SIBs to offer redundancy.

Software allows the operator to control and monitor the inclinometers and display the angles of elevation of between 2 and 8 mooring chains (or more on request) radiating from a central point.



*System of 3 sensors undergoing a bench test*





## Key Features

The system comprises the following components:

- **OceanTILT** precision dual axis subsea inclinometers
- Custom engineered mounting brackets
- Umbilical cables
- Surface Interface Box
- Optional **OceanCELL** battery pack
- Intuitive display software



Typical mooring chain mounting bracket

Specifications	
Pitch and roll range	±90°
Pitch and roll accuracy (horizontal or vertical ±10°)	0.05°
Pitch and roll accuracy (other angles)	0.2°
Elevation range	0–90°
Elevation resolution	0.1°
Maximum sensor count	8 (more on request)
Input voltage	10–30VDC
Operating current (per sensor)	27mA @ 24VDC
Cabling and connectors	To client requirements
Standard depth rating	1000m

## Related Products

The **OceanTILT** dual axis inclinometer is available as a stand-alone sensor, and is central to our range of integrated attitude and inclinometer packages.

The **C-Level** subsea digital level display combines the functionality of an **OceanTILT** inclinometer and **OceanDISP** display in a single diver held or ROV deployable package.

Product datasheets, GA drawings, case studies and other supporting documents are available to download from [data.oceantools.co.uk](http://data.oceantools.co.uk)

All specifications are subject to change without notice. E&OE.

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