

# E-Inclinometer Online Stability Monitoring

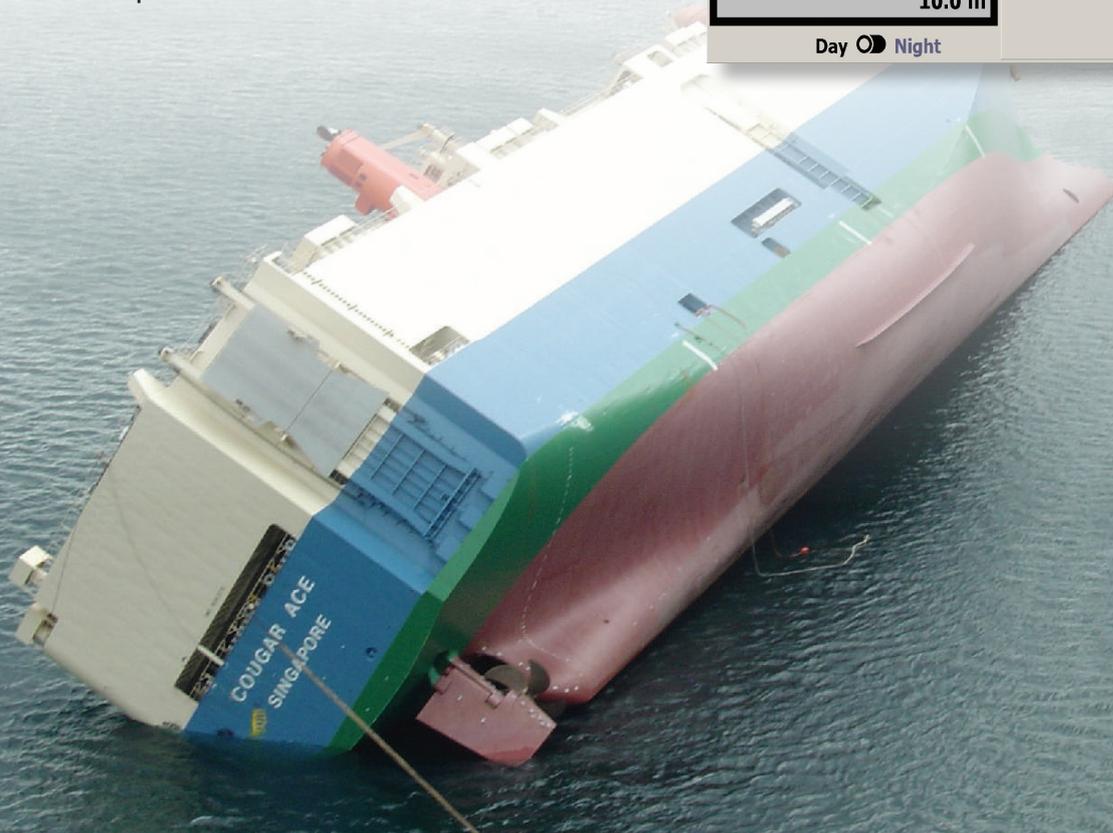
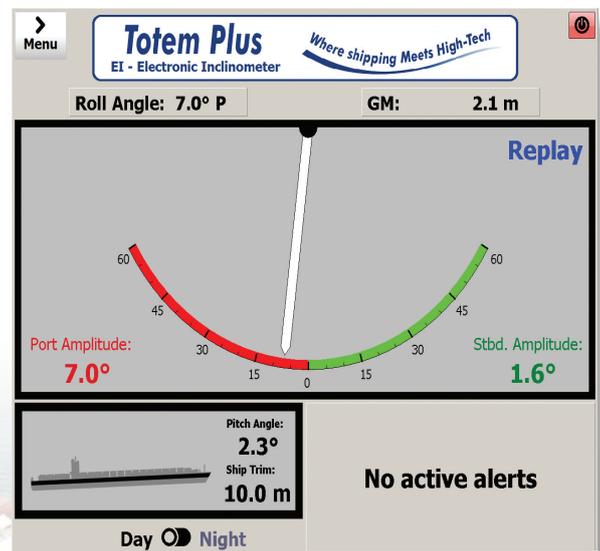
## TotemPlus E-Inclinometer

Totem Plus Electronic Inclinometer is fully compliant and exceeding IMO MSC.363(92) resolution requirements. It provides highly accurate measurement of Heel and Trim (Roll and Pitch) and has the ability to calculate **Rolling Period**, Transverse Stability (**GM**) and to predict the risk of **Parametric Rolling**.

The use of Totem E-Inclinometer will provide better understanding of vessel's movements. It will give added value information on transverse stability at sea, and will assist in decision making for determination and avoidance of possibly dangerous situations on board.

### Features:

- ▶ Measurement of pitch/roll at  $0.1^\circ$
- ▶ GM automatic Calculation & monitoring
- ▶ Parametric Rolling calculations and Alert
- ▶ One Year Log
- ▶ Serial interface to VDR, BAMS (Bridge Alert Management System) DP, etc.
- ▶ Color display and graphic trends
- ▶ Simple installation
- ▶ Additional Touch Monitors for better view and control - optional



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**TotemPlus**  
E-Inclinometer

## “Assumed weights” impact on Stability

The risk of losing transverse stability during a voyage should never be ignored or be based on scanty information. Accurate calculations of stability parameters, mostly done with the aid of a loading computer, are a mandatory procedure but are often misleading. Loading computer results are based on “Assumed Weights” which in many cases can be wrong - container weights or even amount of liquids in tanks can be significantly different than assumed. Consequently, MEASURING of the stability parameters (GM) at **real time**, and comparing it with the Loading Computer calculations, can be crucial for the safety of the vessel.

## Real Time, All the Time: GM in real time

Totem Plus method for calculating GM while the vessel is at sea requires no user intervention or assumptions. The ship’s heeling angle is constantly monitored, and the rolling and pitching periods are calculated by advanced mathematical algorithms. From these Values the metacentric height (GM) and the probability of Parametric Rolling are determined and the user is informed accordingly.

Specification	
Measuring range	$\pm 60^\circ$ $\pm 16g$ $\pm 2000^\circ/s$
Alerts	Heel Trim angle exceeded/ Reduced Stability (GM)/ Poor Balance/ Parametric Rolling/ Sensor Fault
Trend Plot	1 to 60 minutes
Display	9" 1024x768 high brightness touch
Communication	2x IEC61162-1/2 and 2x Ethernet IEC61162-450
Supported NMEA	HRM, ALR, ALF, XDR
Supply voltage	9-36 VDC (battery ready) ( normally 24VDC)
Operating Temperature	-15 °C ....+55 °C
Weight	1.5Kg



**TotemPlus**  
Where Shipping Meets High-Tech