



# Departure Angle Measurement System

Measure departure angle while laying cables

## Introducing the Pliant DAMS

Pliant's latest product in offshore is our DAMS (Departure Angle Measurement System).

Designed for cable laying vessels, it allows accurate, reliable and responsive measurement of the departure angle of cables. It has successfully proven its value during automated cable laying processes and cable loading. We integrated an advanced 3D engine with optimal tracking and optimized filtering algorithms, exceeding all available existing systems on the market. The system has proven to be extremely reliable, both in simulated stress-tests as well in actual fully automated cable laying for hundreds of kilometers in all kinds of weather conditions.

The system allows full automation of the cable laying and thereby improves the speed and reduces down-time. It provides valuable logging information for events and incidents, making it indispensable for survey and reporting. It adds instant value for process automation or survey applications.



### Key Features

- Reliable in all weather conditions
- Extremely accurate, exceeding conventional laser measurements
- Non-destructive measurements
- Plug-and-play commissioning
- Supports multiple ship configurations
- Proven in automated cable laying
- Fully configurable for severe conditions, redundancy or extreme performance
- DAMS service software, for on-site service and remote support

### Specifications

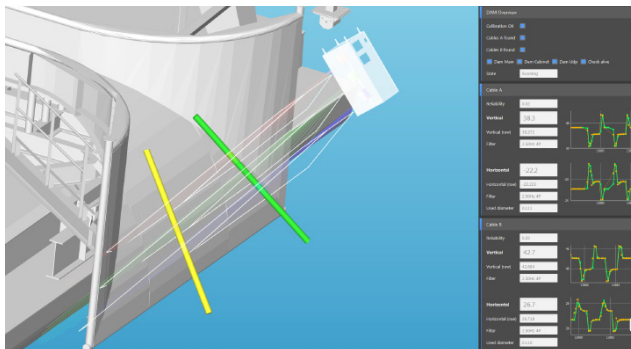
- Up to 25Hz, <100 ms latency
- 2 or 3 SICK LMS Lidar Sensors
- Accuracy up to 0.2° in full field-of-view
- Typical field-of-view 10x4x3 m
- IP66 water tight and sea water proof
- Auto-detect misaligned of calibration
- Dimensions: 1200 x 600 x 650 mm

### Robust

The Pliant DAMS is built using only high-grade offshore-proof materials to ensure durability. The device has an internal climate controlled environment, sealed in an airtight stainless steel box for maximum robustness in demanding offshore conditions.

### Plug and Play

The Pliant DAMS is a Plug-and-Play device. The advanced calibration functionality allows easy configuration with a single mouse click in the DAMS service software. Multiple vessel configurations can be stored parallel and easily switched if the DAMS is mounted on another vessel.



### Non-Destructive Measurements

The infrared laser technology ensures that no physical contact with the cable is required. Compared to mechanical measurement systems, there is no risk of physical damage to the cable.

### Accurate

The DAMS is accurate up to 0.2° over the entire field of view for vertical angles, horizontal up to 0.5°. The DAMS accuracy outperforms other available system due to its advanced 3D engine. Depending on the placement of the DAMS the accuracy can vary and increased even further.

### Fast

The Pliant DAMS is very suitable for cable laying automation, by direct control of cable tensioners. The optimized low-latency filters produce a reliable and stable signal up to 25Hz.

\* Additional configurations and editions are available on request. Angle accuracies are estimates for typical installations.

## BASIC

The basic edition is a cost-effective solution for angle measurements. The DAMS operates at 5 Hz, extremely valuable for survey or registration purposes. The basic edition is upgradable to the standard or premium edition.

- 5 Hz
- ± 0.5° vertical angle
- ± 1.5° horizontal angle
- 2x SICK Lidar Sensors
- Single cooling/heating unit

## STANDARD

The standard edition is an accurate and responsive solution for angle measurements. It can be used for the automated cable laying process. The standard edition is upgradable to the premium edition.

- 10 Hz
- ± 0.4° vertical angle
- ± 1.0° horizontal angle
- 2x SICK Lidar Sensors
- Single cooling/heating unit

## PREMIUM

The premium edition features the most accurate measurements with the lowest latency. Laser measurements, power supplies and climate control are all redundant to ensure the system can be used at any time for fully automated cable laying control.

- 25 Hz
- ± 0.2° vertical angle
- ± 0.5° horizontal angle
- 3x SICK Lidar Sensors
- Dual cooling/heating unit
- Redundant power supply

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