

DynaTension ALM 400

Mooring Tension Monitoring Systems

DynaTension Mooring Monitoring Systems monitor tension in mooring cables or chains. The MTMS is unique and advanced yet simple in concept. Maintenance free operation is assured with this simple yet accurate DynaTension system.

No other method provides the cost effectiveness, dependability and accuracy of DynaTension. It pays for itself in as little as 24 months!

How It Works

DynaTension infers line tension from the frequency of vibration of a portion, or span, of the cable or chain line. An electromagnetic exciter initiates and maintains vibration of each span. A variable inductance sensor produces an electrical analog of the vibration.

Electronic circuitry in the Signal Processor Unit analyzes the signal, computes and displays the corresponding line tension in real time.

The DynaTension Mooring Tension Monitoring System works with all or partially submerged spans by applying a correction factor based on percent of span immersion.

DynaTension provides unequalled long term reliability and dependability needed by the offshore drilling and production industry.

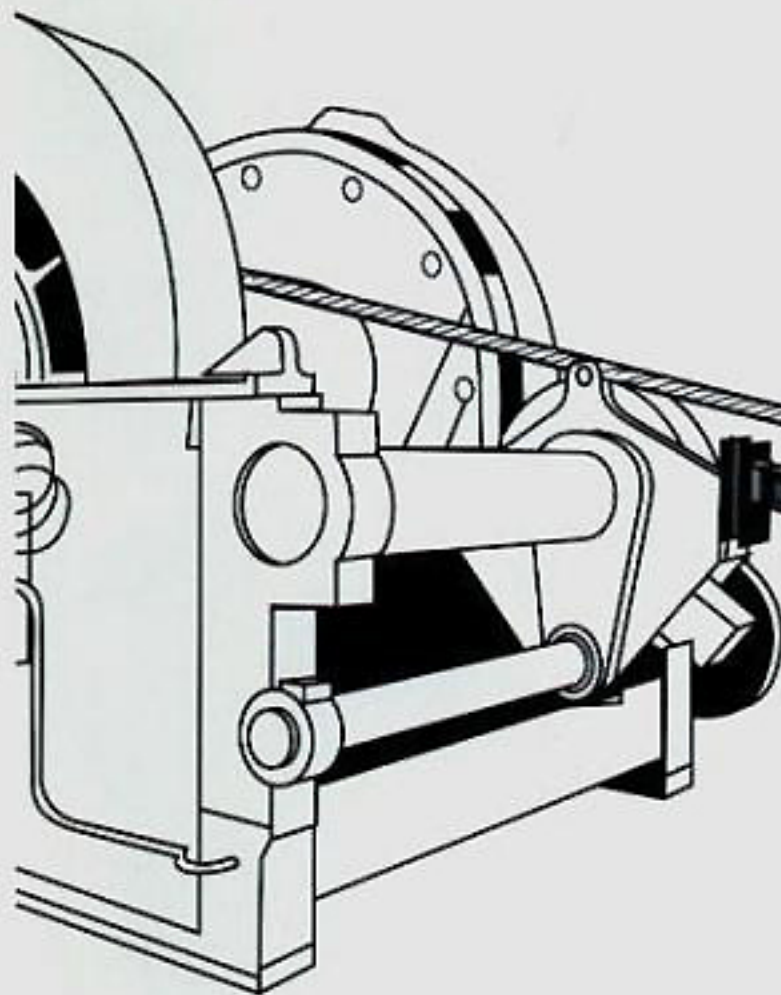


Features and Benefits

- **Ready to operate** No field calibration required
- **Simple installation** No in-line installation
- **Accurate** Zero wear, zero drift
±2% of readout
- **Reliable** Field proven reliability
Immune to EMI
- **Versatile** Senses cable or chain vibration
Provides both analog & digital readouts
Local & remote readouts available
- **Safe** Both overload and underload alarms
Not damaged by fluctuations or overloads

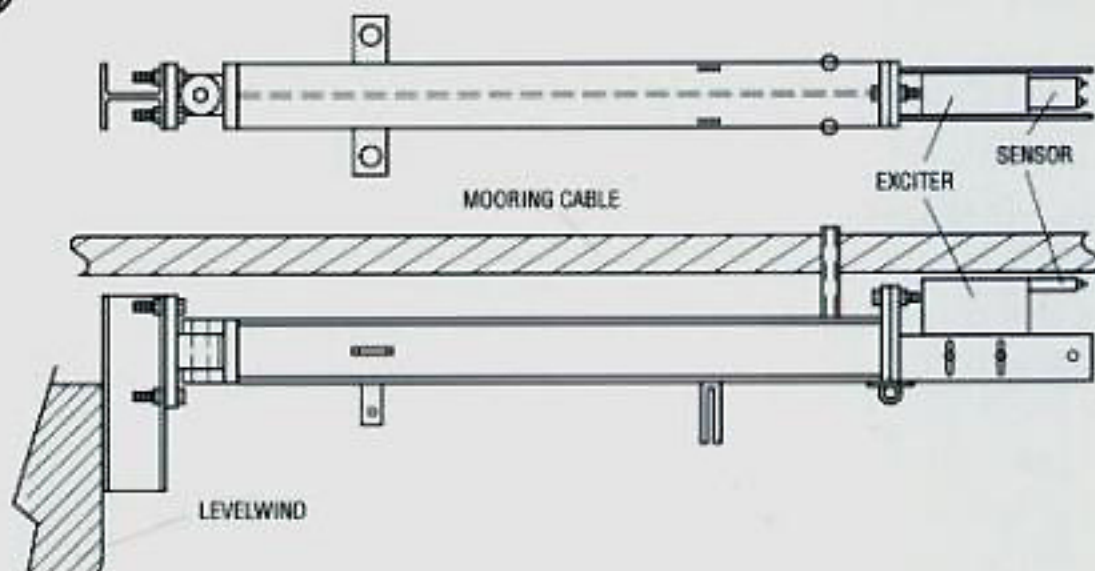
DynaTension ALM 400

Mooring Tension Monitoring System



In the typical configuration shown, the sheave of the level-wind and the fairlead sheave define the span of vibration. The Exciter/Sensor Assembly (ESA) is attached to an arm that travels with the winch level-wind during cable take-up. The arm may pivot about a pin at the "shoulder" end as the angle of the fairlead sheave changes. Use of a stainless steel pivot pin and phosphor bronze bushing optimizes resistance to corrosion.

The wildcat and fairlead sheave define the span in chain systems. Two orthogonally mounted ESA's assure proper spacing between ESA and chain, regardless of link orientation. The ESA's are mounted such that they can swing out of the way as the chain is being deployed.



MTMS Specifications

Tension Range	5% SWL To 400% SWL	Input/Output programmable as either English or Metric
Accuracy	2% of Readout	Calibration requires only cable weight/ft and span length input via a hand held terminal
Input Power Options	115Vac - 50/60hz; 220 Vac - 50/60hz	No calibration adjustments required
Power Required	Cable - 160 Watts/Line at 1500 KIPS Chain - 175 Watts/Line at 1500 KIPS	Programmable averaging
Output Options	0 - 10 VDC 4 - 20 MA RS-232 RS-422	No in-line installation required
Operating Temperature Range	-40° C to 85° C	Transient suppression on all signal and power cables
		NEMA - 4x enclosures (Exciter and sensor are fully encapsulated)
		Warranted for four years