



Monitoring and control system for 4 and 8 point mooring

Barges - Oil Rigs - Accommodation Platforms - Pipe Laying Vessels -
Diving Vessels - Offshore Support Vessels

Length and Tension Monitoring

Graphic and numeric display of wire length and tension. Alarms on overload and if an anchor slips.

Anchor Position Display

Graphic display showing vessel and anchor positions.

Automatic Control

Automatic control of winch pull and speed to compensate for vessel movement, or to move vessel to new location.

Winch Control

Reliable and efficient control of all electric and hydraulic trawl winches.

iSPOOL

Computer controlled wire spooling can increase the life time of mooring wires by 50% or more.

User Friendly

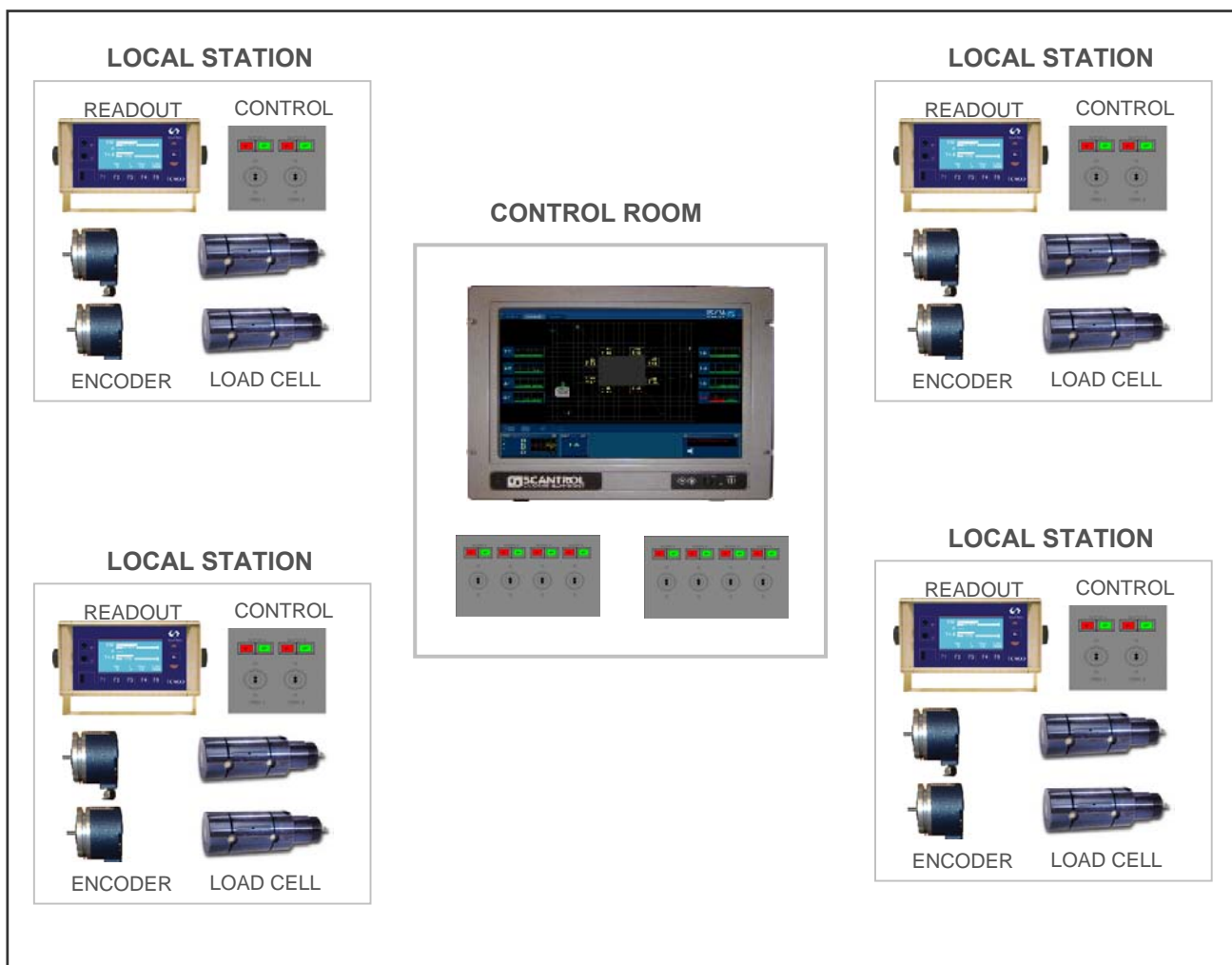
Graphics and operations are developed together with experienced skippers.

Data Logger

Simple access to historical data to let you monitor how a situation develops, or analyse previous recordings.

Hazardous Area

Sensors and activators available for Zone1 and Zone2 operation



ISYM Mooring Functions	Standard	Option
Wire length /Chain length monitoring	X	
Wire tension / Chain tension monitoring	X	
Winch speed monitoring	X	
Data logger	X	
Anchor position display	X	
Vessel position display (GPS)		X
Central monitoring and control station	X	
Local monitoring and control station		X
Manual winch control (central/ local)		X
Auto tension control (heave compensation)		X
Vessel position control (move to new location)		X
ISPOOL – Electronic wire spooling		X
Hazardous area operation. Zone 1 / Zone 2		X

Interface

iSYM measures wire length and tension and control winch speed and pull. iSYM includes simple and well arranged interface to most winch types.

iSYM can control following winches:

Hydraulic	Low Pressure
	Medium Pressure
	High Pressure
Electric	AC Motors
	DC Motors

iSYM Winch Interface:

Sensors	Wire Length
	Winch Speed
	Wire Tension
Controls	Winch Speed
	Winch Pull

Electronic Wire Spooling:

iSYM can be delivered with program for electronic wire spooling (iSPOOL). The spooling gear is computer controlled to get exact spooling even with varying wire diameter. You will save time spooling on the wires, and the wire life can be extended by more than 50%

The picture shows Aker Brattvaag Winch on board f/v Atlantic Enterprise. One winch with electronic spooling.



Upgrading

The flexibility of the iSYM system makes it easy to upgrade existing load monitoring systems.

Existing sensors can be used if in good condition, or replaced if required.

There are also various solutions for readout stations locally by the winch, in the control room, or on the bridge.

iSYM has NMEA and Ethernet ports for easy interface to other systems on board.

Sensors for tension and length measurement

Various sensor configurations are possible:

Tension measurement

- Load cell in fairlead
- Load cell in deflector sheave
- Load cell in winch foundation
- Load cell in winch brake
- Hydraulic pressure
- Electric motor current

Length measurement:

- Encoder or pickup on fairlead
- Encoder or Pickup on deflector sheave
- Encoder or pickup on winch drum