



Unique Group

Strength in Depth

LTW Mk 15B

Light Weight Taut Wire Mk 15B

Position-reference system

The Light Weight Taut Wire Mk 15B is a position-reference system designed to provide accurate data of a surface vessel's movement with respect to the position of a depressor weight on the sea floor.



Features

- Cost-effective main or supplementary position-reference system
- Well-proven and reliable technology
- Highly stable A-frame construction
- Separate control electronics for all-weather operations (ice-free)
- Operational water depth up to 300 m
- Tension monitoring

Options

- Operational water depth up to 500 m by changing depressor weight
- Remote Control panel (wall-mounted or brackets)
- Taut Wire computer for enhanced accuracy in water depths above 200m

Description

The Light Weight Taut Wire Mk 15B is a position-reference system designed for use in deck-mounted port or starboard position on surface vessels. Its purpose is to provide accurate data of a surface vessel's movements with respect to the position of a depressor weight on the sea floor.

A wire is maintained at a constant tension by means of a depressor weight on the sea-bed and a pneumatic and electric servo-assisted "mooring" system. Any movement of the vessel will cause the tensioned wire to deviate from its initial inclination. This movement activates potentiometers mounted in the gimbal (sensor) head and produces changes of analogue signals directly proportional to the deviation in inclination.

System Specifications

System Accuracy

		DEVIATION IN METRES					
		0 m/s			0.5 m/s		
CURRENT AT SEA SURFACE		0 m/s			0.5 m/s		
CURRENT AT SEABED		0 m/s			0.5 m/s		
WIRE ANGLE		0°	10°	20°	0°	10°	20°
200 kP MOORING TENSION	WATER DEPTH						
	100	0	0.6	1.2	2.4	2.9	3.5
	200	0	1.8	3.5	9.3	11.2	13.0
	300	0	3.5	7.6	20.2	23.3	28.0
300 kP MOORING TENSION	WATER DEPTH						
	100	0	0.5	1.0	2.0	2.5	3.0
	200	0	1.5	3.0	8.0	9.5	11.0
	300	0	3.0	6.6	18.0	20.0	24.0
	400	0	5.0	11.0	31.0	36.0	41.0

Dimensions

Deck equipment

Height:	3550 mm (parked) 1665 mm (operational)
Width:	1400 mm
Length:	1700 mm (parked) 5115 mm (operational)
Weight:	2530 kg including depressor weight (360 kg)
Support frame:	1700 mm x 1300 mm

Electronics cabinet

Height:	1900 mm
Width:	800 mm
Depth:	510 mm
Weight:	250 kg

NOTE:

The distance between the Deck equipment and the Electrical cabinet must not exceed 50 m.

Electrical

Input voltages:

- 440 VAC +20%/-30%, 3-phase, 50 to 60 Hz
- 220 VAC, single phase, 50 to 60 Hz, (from UPS)

Power consumption:

440 VAC input:	22 kW (continuous load) 36 kW (peak load, maximum 30 minutes)
220 VAC input:	500 W

Models

Unit Name

LTW Mk 15B

SDP System Interface

Three (3) digital and four (4) analogue input channels are required.

Pressurized Air

Maximum pressure:	10 bar
Minimum pressure :	6 bar
Minimum flow:	5 Nm ³ /h
Purity (in accordance with ISO 8573-1)	
solid contamination:	class 5
water:	class 3
oil:	class 5

Environmental

Ambient temperature	
operational:	
- cabinet:	0 to +55° C
- deck equipment:	-15 to +65° C, no ice* (see Note: *)
storage:	25 to +70° C
Ambient humidity	
operational:	20 to 100% relative humidity
storage:	0 to 100% relative humidity (sealed in aluminium foil)
Operating wind strength:	0 to 80 knots
Ice thickness	
operational:	none*
parked:	up to 100 mm thick** (see Note: * and **)
Acoustic noise:	less than 90 dBA at 1 m
Protection standard	
cabinet:	IP22
deck equipment:	IP56
Surfaces:	surface treated and painted steel.

NOTE:

- * Any ice on the deck equipment must be removed before the equipment is operated.
- ** A build-up of ice, over 100 mm thick, may cause damage to the deck equipment structure.

Unique System FZE

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