

Datasheet

RovNav Mk4 LBL Transceiver (Discontinued)



Description

Sonardyne's RovNav Mk4 is an underwater Long BaseLine (LBL) acoustic transceiver designed to accurately and rapidly position Remotely Operated Vehicle's (ROV's) and towfish. By measuring ranges to a seabed transponder array and calculating the time taken to receive each reply, the position of the mobile relative to the array can be determined. A digital link with the survey computer ensures fast position updates and that reliable communications with the RovNav can be maintained even down long umbilical in deepwater.

Depending on the positioning accuracy and range required, RovNav is available in three frequency versions. Medium Frequency (16-36kHz) gives ranges of up to 3km and a relative positioning accuracy of $\pm 0.15\text{m}$. Extra High Frequency (50-110kHz) gives ranges to 1km with relative positioning accuracies of $\pm 0.05\text{m}$ whilst Low Frequency (8-16kHz) can range up to 10km.

Note: All ranges are dependant upon on local operating conditions and water depth.

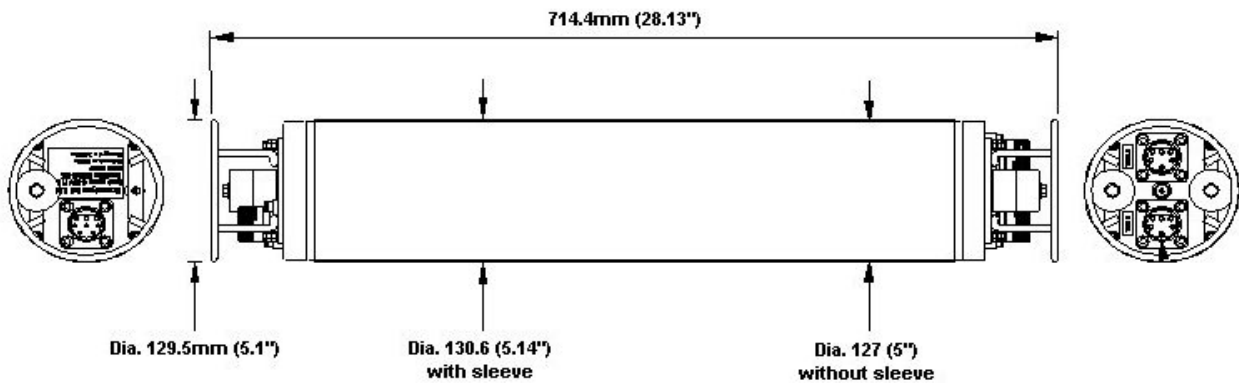
Key Features

- Depth rated up to 4,000 Metres (MF)
- Baseline measurements <5cm (EHF)
- 12 channel receiver for fast position updates
- RS 232/RS485 half duplex communications via ROV's umbilical
- Two remote transducers enable sequential position fixing
- Compact and rugged design
- Incorporates depth, temperature and salinity sensors (optional)

RovNav features a 121 channel receiver for ranging to LBL transponder arrays and the command set is Sonardyne PAN compatible. Two transducers can be connected to the RovNav for added redundancy or sequential position fixing. In the event of power failure, the unit automatically reverts to transponder mode to enable the emergency relocation of the lost ROV or towfish.

Specification

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Feature	Type 7807	Type 7808
Depth Rating	4,000 Metres	2,500 Metres
Operating Frequency	MF (18-36kHz)	EHF (50-110kHz)
Transducer Beam Shape	Directional or Omni-Directional	Omni-Directional
Typical Accuracy	0.15-1 Metres	0.02-0.15 Metres
Source Level Vertical	200db re 1µPa @1m	190db re 1µPa @1m
Source Level Horizontal	185dB re 1µPa @1m	190db re 1µPa @1m
Receiver Threshold	<95dB re 1µPa	<100dB re 1µPa
Pulse Length	4ms	1ms
Number of Replies (Battery Option)	200 X 10 ³	750 X 10 ³
Mechanical Construction	Aluminium Alloy Hard Anodised	Aluminium Alloy Hard Anodised
Dimensions (LxDia)	714.4mm (28.1") x 130.6mm (5.1")	714.4mm (28.1") x 130.6mm (5.1")
Weight in Air	RovNav Remote Tdr	15kg 4.5kg
Weight in Water	RovNav Remote Tdr	6.6kg 2.5kg
Sensor Options	Depth Temperature Salinity	Digiquartz or Strain Gauge PRT Conductivity