

Datasheet

P-DORT Acoustic Release Transponder



Description

The Type 8048-000-03 Programmable Deep Oceanographic Release Transponder (P-DORT) combines the features of a heavy duty acoustic release transponder with hardware to allow automatic release at depth.

The P-DORT has two modes of basic operation. Firstly, like a standard DORT, it responds to securely coded acoustic commands from the surface in the LF (9-13 kHz) frequency band.

Secondly, it can be pre-programmed prior to deployment to automatically release when it reaches a certain depth. This allows heavy items, such as submarine cables for example, to be lowered precisely to the seabed and then the lowering apparatus recovered after an automatic release. The acoustic ranging function within the P-DORT can also be used to relocate the equipment should the lowering cable fail.

There are two options for setting the 'release at depth' option. In the primary mode, a depth is set and once the unit passes that depth, the unit will immediately release. The secondary mode allows for shallower depth to be set for when the primary release depth has been erroneously set to greater than the actual water depth. Then, if the unit passes that depth but remains stationary (i.e. on the seabed) for a specified time, it will release.

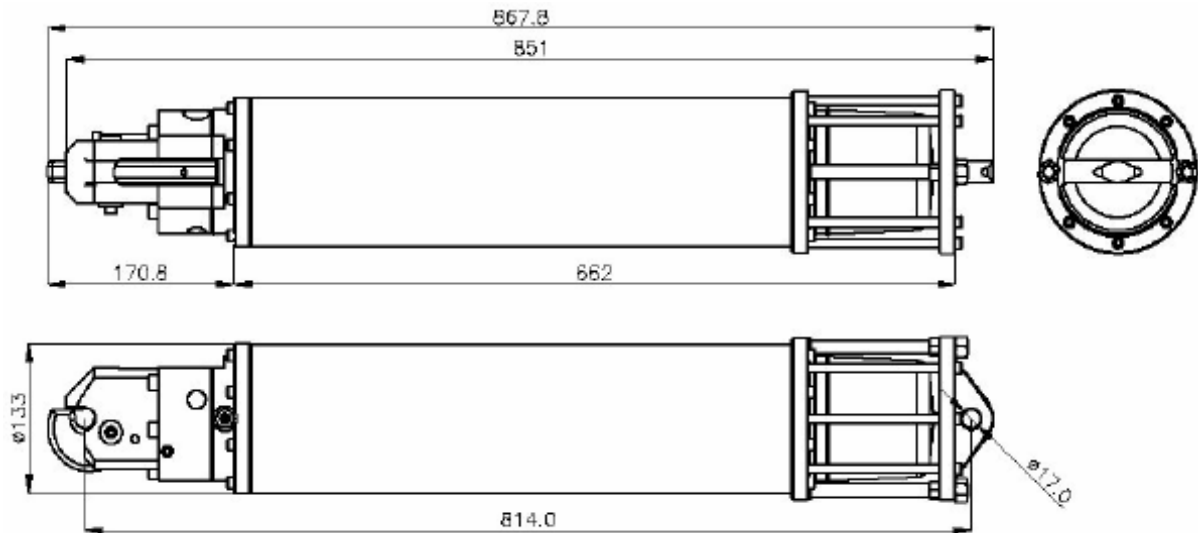
Key Features

- Acoustic and automatic 'Release at Depth' operating modes
- Safe Working Load of 2½ Tonnes (Options for heavier loads)
- Depth rated to 7,000 metres
- Highly reliable, proven release mechanism
- Up to 12 months deployment
- Excellent corrosion resistance - Ferralium 255
- Compact and rugged design

The Windows-based control software for the automatic depth mode runs on a standard PC running Windows 98, ME, 2000 or XP and is connected to the P-DORT using a serial cable and interface box

Specifications

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Feature	Type 8048-000-03		
Depth Rating	7,000 Metres		
Operating Frequency	LF (7.5–15kHz)		
Transducer Beamshape	Hemispherical		
Transmit Source Level (dB re 1µPa @1m)	190dB Alkaline, 184dB Lithium		
Receive Threshold (dB re 1µPa)	85dB		
Safe Working Load (4:1)	2,500Kg		
Max Safe Release Load	2,500Kg		
Breaking Load	10,000Kg		
Battery Life (Listening)	Alkaline 3 months	Lithium 8 months	Long-life Lithium 12 months
Mechanical Construction	Ferralium 255		
Dimensions (LxDia)	868mm (34.2") x 145mm (5.7")		
Weight in Air	39.2kg		
Weight in Water	30.2kg		
Deck Unit	Type 7667 LF Lightweight Command Unit		

Definitions

Safe Working Load - The maximum recommended working load. This is set as a quarter (1/4) of the Breaking Load and makes an allowance for factors such as corrosion, fatigue and dynamic loads.

Release Load - The maximum in-line load that the whole assembly can release whilst guaranteeing safe and reliable operation. Note that as the load is released in water, this is determined by the maximum upthrust from the buoyancy when used in a mooring operation.

Breaking Load - The load that induces structural failure in one or more parts of the instrument causing the load to part from the release mechanism.