



Exhibit 12A Antenna Details

16th November 2022





Introduction

This document provides details of the antenna types shown in the table below utilised in the rescueME EPIRB3, SafeSea EPIRB3 PRO and GlobalFix V5 EPIRB products :

Antenna Product Summary Table

Ocean Signal Part Number	Antenna Type	Operating Frequency (MHz)	Gain dBi (Max)	Beacon Model
130S-01404	Retractable Monopole	121.5, 162, 406	1, -3, 6	rescueME EPIRB3
130S-03273	Fixed Monopole	121.5, 162, 406	1, -3, 6	SafeSea EPIRB3 Pro
130S-03877	Fixed Monopole	121.5, 162, 406	1, -3, 6	GlobalFix V5
380-01213	18x18x2mm Ceramic Patch GNSS	1575.42	2	rescueME EPIRB3, SafeSea EPIRB3 Pro, GlobalFix V5
381-04233	15x15mm -NFC (Near Field Communication)	13.56	N/A	

Details of the monopole antennas are shown on pages 3 to 7. Information regarding the GNSS and NFC antennas can be found on page 8.

Stainless Steel Monopole Antennas



Operating Frequencies:

121.5MHz

406MHz

162MHz (AIS)

The following images include CAD sections of the antenna connection methods for the EPIRB3, EPIRB3 PRO and GlobalFix V5.

The EPIRB3 and EPIRB3 Pro antennas are carryover designs from existing EPIRB1 and EPIRB1 Pro products.

The EPIRB3 Pro and GlobalFix V5 variants have fixed antennas whilst the EPIRB3 has a retractable antenna. All variants have comparable performance.

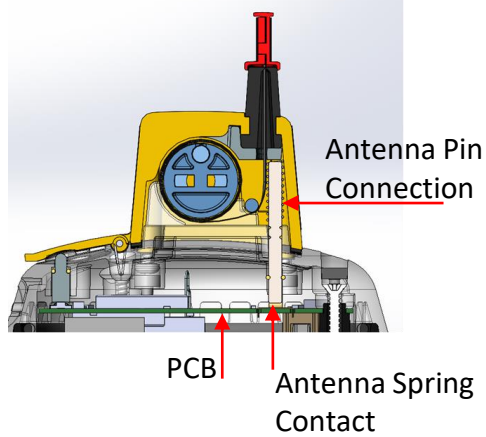
All beacon variants utilise identical PCBs.

All variants use the same pin to PCB spring contact feed method.

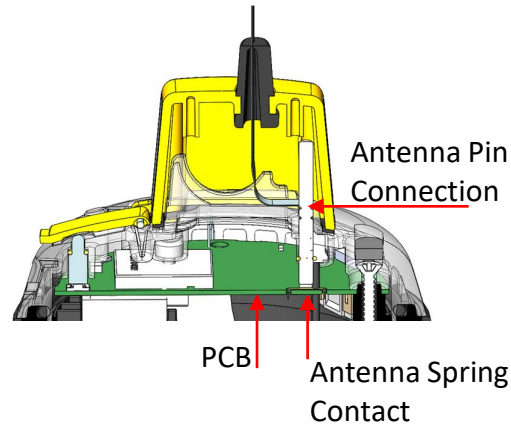


Monopole Antenna Feed Connection Detail

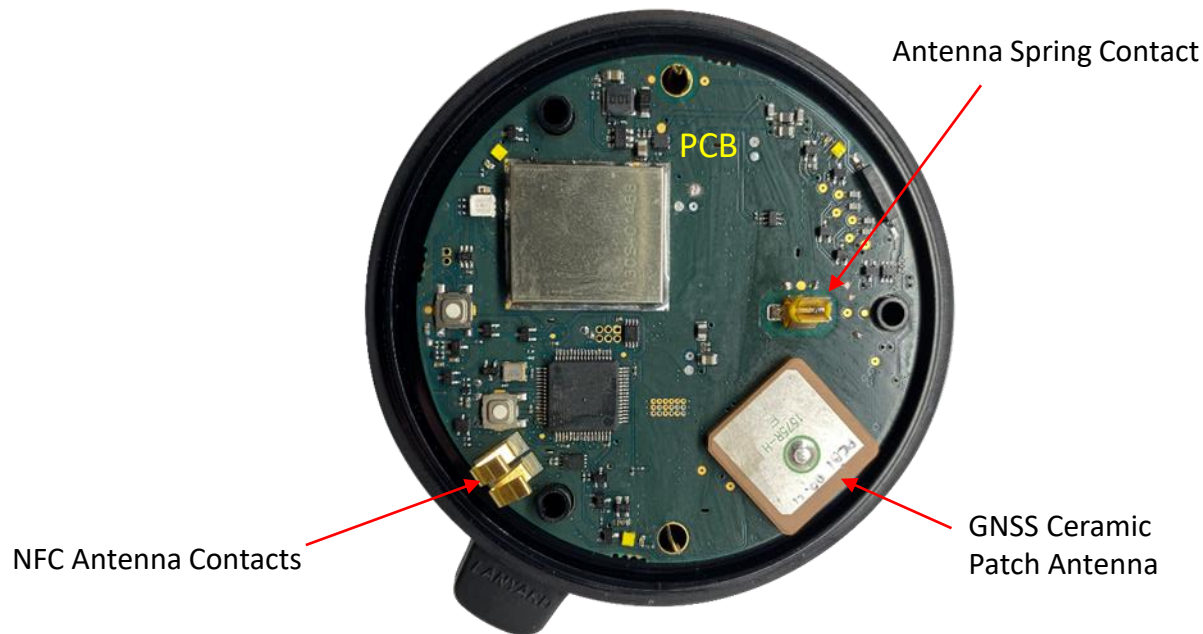
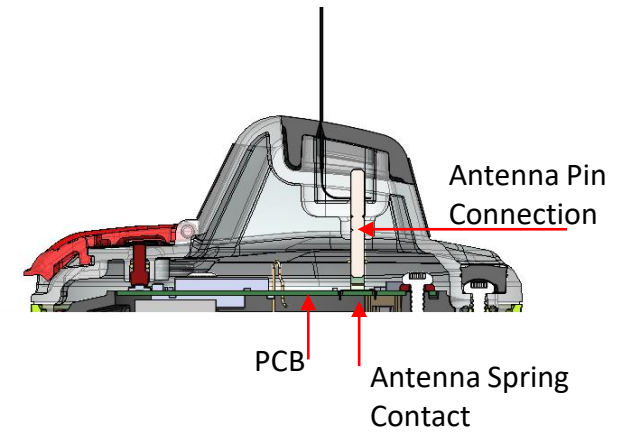
EPIRB3 (Retractable Antenna)



EPIRB3 Pro (Fixed Antenna)



GlobalFix V5 (Fixed Antenna)



All beacon variants utilise identical PCBs.

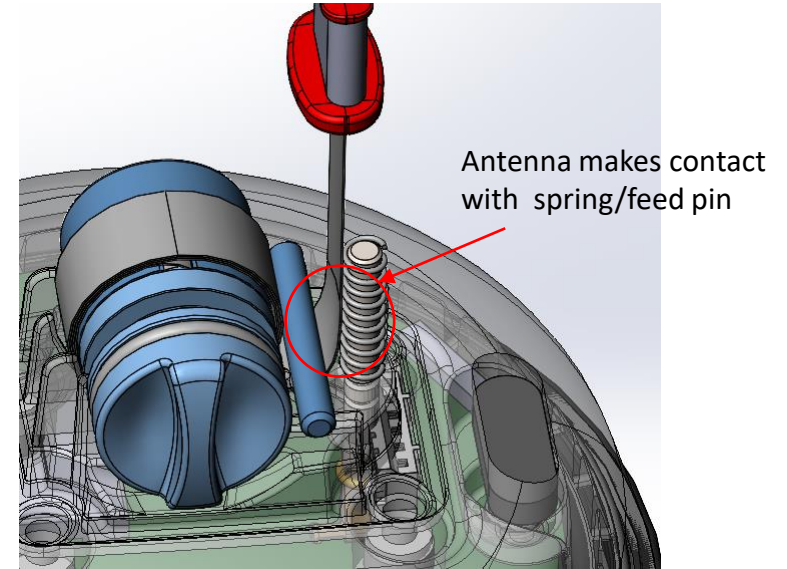
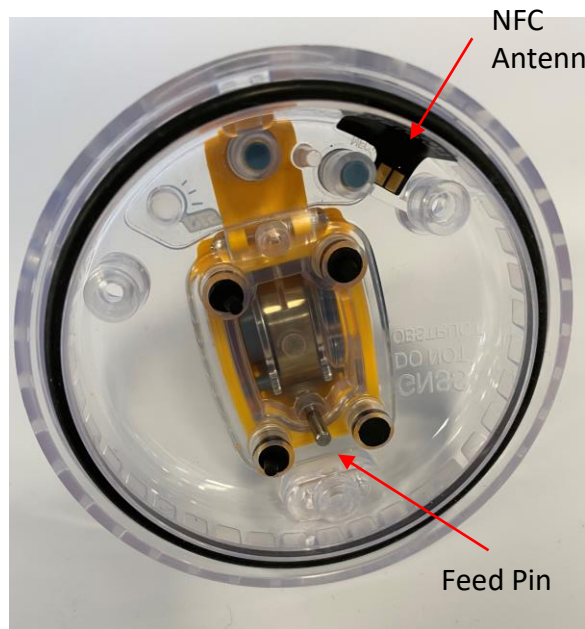
All variants use the same pin to spring contact method between antenna and PCB.



rescueME EPIRB3 – Retractable Monopole



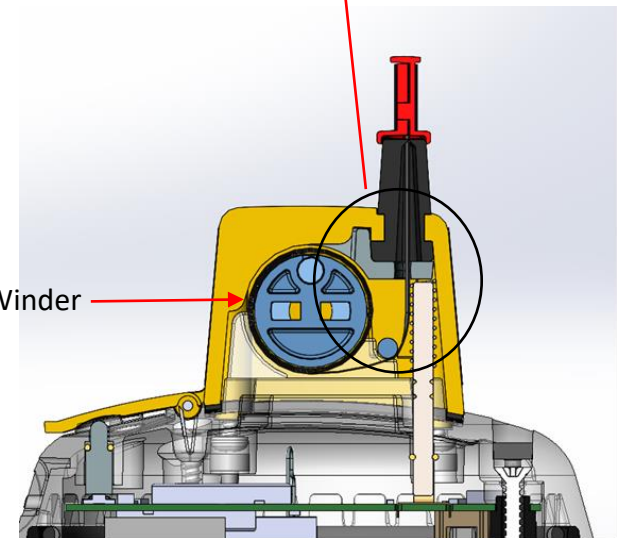
Antenna Extended



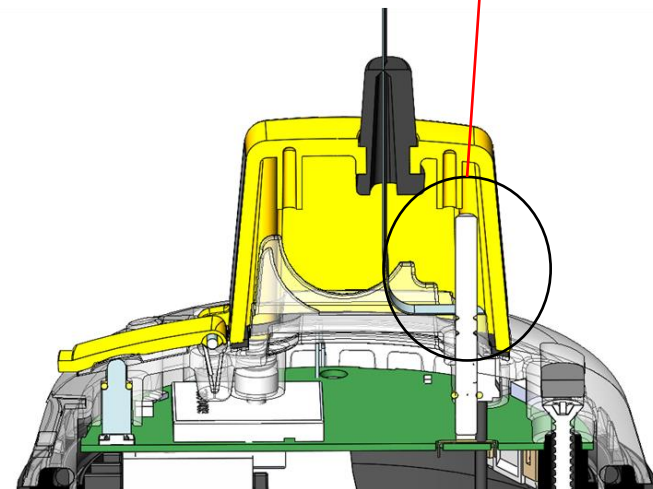
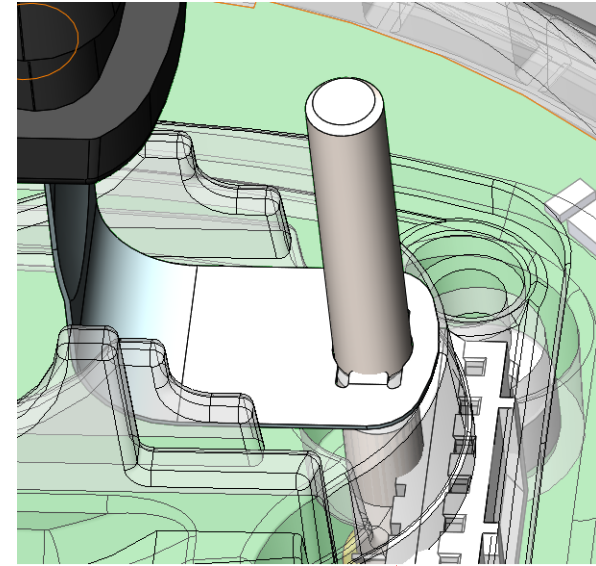
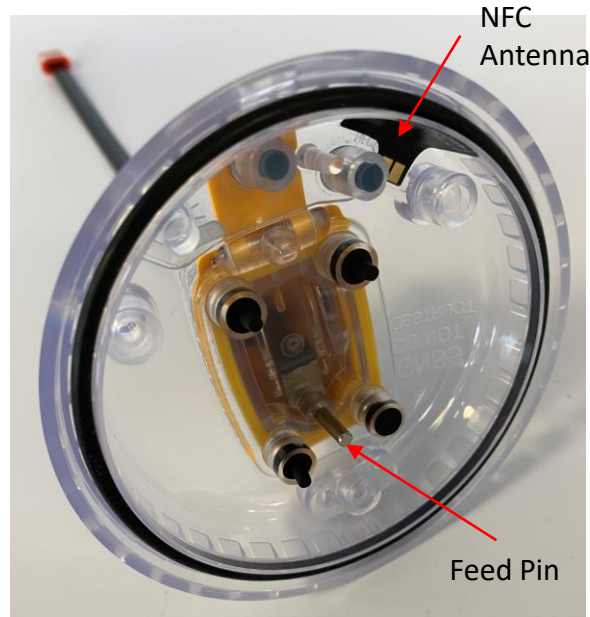
Antenna (Retracted)



Antenna Winder

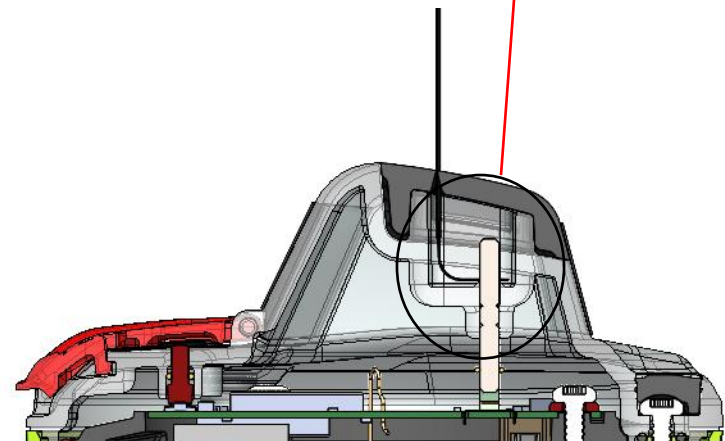
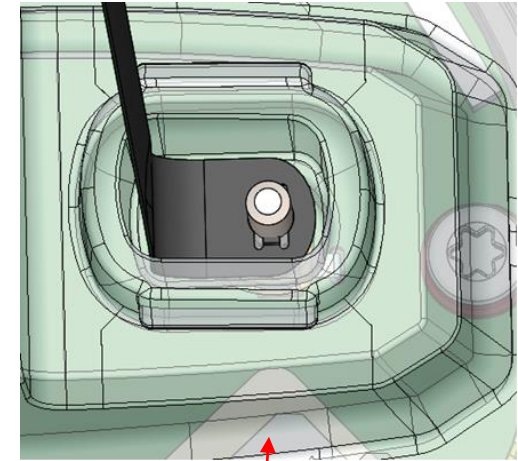
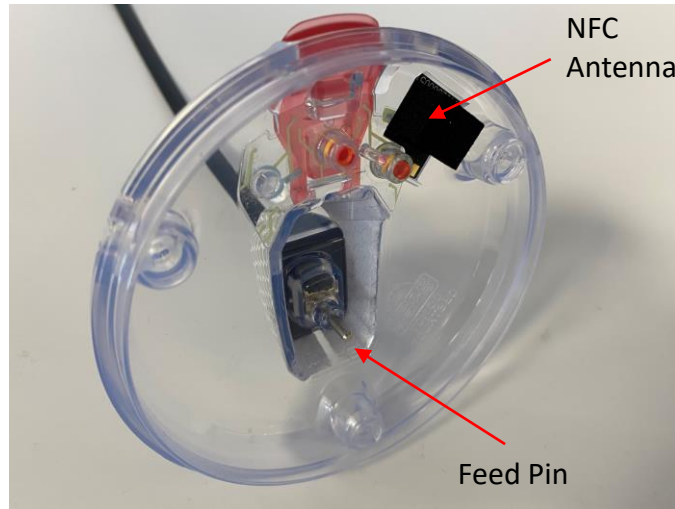


SafeSea EPIRB3 Pro – Fixed Monopole





GlobalFix V5 (RLB-44) Fixed Monopole





GNSS and NFC Antenna Data Sheets



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Antenna Specification:

1 SCOPE

This specification shall cover the characteristics of the dielectric antenna element with the type A1573M753000L001

2 PART NO.

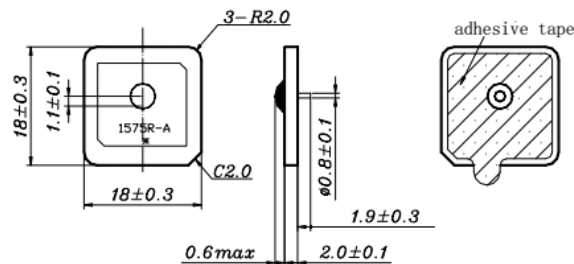
PART NUMBER	CUSTOMER PART NO	SPECIFICATION NO
A1573M753000L001		

3 OUTLINE DRAWING AND DIMENSIONS

3.1 Appearance: No visible damage and dirt.

3.2 The products conform to the RoHS directive and national environment protection law.

3.3 Dimensions



*: ELAJ Monthly Code

4 ELECTRICAL SPECIFICATIONS

4.1 Performance Characteristics

Items	Content
Nominal frequency MHz	1575.42 ± 1.023
*Center frequency (with tape on 20×20mm ground plane)	1568.5 ± 3.0
Real Part Ω	95 ± 15

Both GPS and Galileo constellations are utilized for position fixing and RLS functionality respectively.



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PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: **1462360051**
Status: **Active**
Overview: Near Field Communication (NFC) Antennas
Description: Rectangular Near Field Communication (NFC) Antenna, without Ferrite, 15.00mm by 15.00mm by 0.17mm



Documents:
[3D Model](#)
[3D Model \(PDF\)](#)
[Drawing \(PDF\)](#)
[Product Specification 1462360001-PS \(PDF\)](#)
[Application Specification 1462360001-AS \(PDF\)](#)
[Packaging Specification 1462360001-PK \(PDF\)](#)
[Datasheet \(PDF\)](#)
[RoHS Certificate of Compliance \(PDF\)](#)

General
 Product Family: Antennas
 Series: 146236
 Component Type: FPC Coil Antenna
 Function: Signal
 Near Field Communication: Yes
 Overview: Near Field Communication (NFC) Antennas
 Product Name: NFC Antenna
 Protocol: NFC
 Type: NFC Antenna
 UPC: 193264146420

Physical
 Length: 15.00mm
 Mounting Style: Adhesive
 Net Weight: 0.083g
 Packaging Type: PET Film
 Thickness: 0.17mm
 Width: 15.00mm

Electrical
 Electrical Connectivity: Copper Flex
 Frequency: 13.56 MHz
 Inductance: 1.40 μH

Material Info

Reference - Drawing Numbers
 Application Specification: 1462360001-AS
 Packaging Specification: 1462360001-PK
 Product Specification: 1462360001-PS
 Sales Drawing: 1462360001-000

EU ELV
 Not Relevant

EU RoHS
 Compliant

REACH SVHC
 Contained Per - D(2020)9139-DC (19 Jan 2021)
 2-methyl-1-(4-methylthiophenyl)-2-morpholinoprop
Halogen-Free Status
 Low-Halogen

For more information, please visit [Contact US](#)

China RoHS: Green Image
 ELV: Not Relevant
 RoHS Phthalates: Not Contained

Search Parts in this Series
[146236 Series](#)

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The beacon products are capable of connection to mobile devices (via a proprietary mobile app) using Near Field Communication (NFC). This enables the user to view limited but useful information about their product.

NFC technology allows communication between two electronic devices over a distance of 4cm (1.5") or less.